



NATURAL MEDICINE RESEARCH

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Below you will find compelling research hard-referenced to peer-reviewed biomedical research sourced from the US National Library of Medicine.

These Results Are Based on the Following Terms

- [Chemotherapy-Induced Toxicity](#)
 - [subtype\(s\) of Chemotherapy-Induced Toxicity:](#)
 - [Cardiotoxicity: Chemotherapy-Induced](#)
 - [Chemotherapy Induced Myelotoxicity](#)
 - [Chemotherapy-Induced Liver Toxicity](#)
 - [Chemotherapy-Induced Toxicity: Cyclophosphamide](#)
 - [Chemotherapy-Induced Toxicity: 5-fluorouracil](#)
 - [Chemotherapy-Induced Toxicity: Adriamycin](#)
 - [Chemotherapy-Induced Toxicity: Arsenic Trioxide](#)
 - [Chemotherapy-Induced Toxicity: Bleomycin](#)
 - [Chemotherapy-Induced Toxicity: Cisplatin](#)
 - [Chemotherapy-Induced Toxicity: Doxorubicin](#)
 - [Chemotherapy-Induced Toxicity: Epirubicin](#)
 - [Chemotherapy-Induced Toxicity: FOLFOX](#)
- [Chemosensitizer](#)

57 Relevant Results for Diseases

Disease/Symptom	Substance Name	Cumulative Article Knowledge Count	
Chemotherapy-Induced Toxicity	• Cardiotoxicity: Chemotherapy-Induced	294	61
	• Chemosensitizer		
	• Chemotherapy Induced Myelotoxicity		
	• Chemotherapy-Induced Liver Toxicity		
	• Chemotherapy-Induced Toxicity: Adriamycin		
	• Chemotherapy-Induced Toxicity: Bleomycin		
	• Chemotherapy-Induced Toxicity: Cisplatin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Epirubicin		
	• Chemotherapy-Induced Toxicity: FOLFOX		
Oxidative Stress	• Cardiotoxicity: Chemotherapy-Induced	39	16
	• Chemosensitizer		
	• Chemotherapy-Induced Toxicity		
	• Chemotherapy-Induced Toxicity: Cyclophosphamide		
	• Chemotherapy-Induced Toxicity: Adriamycin		
	• Chemotherapy-Induced Toxicity: Bleomycin		
	• Chemotherapy-Induced Toxicity: Cisplatin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		

DNA damage	• Cardiotoxicity: Chemotherapy-Induced	15	10
	• Chemosensitizer		
	• Chemotherapy Induced Myelotoxicity		
	• Chemotherapy-Induced Toxicity		
	• Chemotherapy-Induced Toxicity: Cyclophosphamide		
	• Chemotherapy-Induced Toxicity: Cisplatin		
Breast Cancer	• Chemotherapy-Induced Toxicity: Doxorubicin	65	23
	• Chemosensitizer		
	• Chemotherapy Induced Myelotoxicity		
	• Chemotherapy-Induced Toxicity		
	• Chemotherapy-Induced Toxicity: Cisplatin		
	• Chemotherapy-Induced Toxicity: Epirubicin		
Radiation Induced Illness	• Chemosensitizer	64	8
	• Chemotherapy-Induced Toxicity		
	• Chemotherapy-Induced Toxicity: Cyclophosphamide		
	• Chemotherapy-Induced Toxicity: Cisplatin		
	• Chemosensitizer		
	• Chemotherapy Induced Myelotoxicity		
Chemotherapy-Induced Toxicity: Cisplatin	• Chemotherapy-Induced Toxicity	165	66
Cancers: All	• Chemosensitizer	64	17
	• Chemotherapy-Induced Toxicity		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Cardiotoxicity: Chemotherapy-Induced		
	• Chemosensitizer		
	• Chemotherapy-Induced Toxicity		
Chemotherapy-Induced Toxicity: Doxorubicin	• Chemotherapy Induced Myelotoxicity	59	25
Cancers: Multi-Drug Resistant	• Chemosensitizer	43	39
	• Chemotherapy Induced Myelotoxicity		
	• Chemotherapy-Induced Toxicity		
	• Chemotherapy-Induced Toxicity: Adriamycin		
	• Chemotherapy-Induced Toxicity: Bleomycin		
	• Chemotherapy Induced Myelotoxicity		
Pulmonary Fibrosis	• Chemotherapy-Induced Toxicity	34	17
	• Chemotherapy-Induced Toxicity: Cisplatin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Epirubicin		
	• Chemotherapy-Induced Toxicity: Cyclophosphamide		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
Neutropenia: Chemotherapy Induced	• Chemotherapy-Induced Toxicity: Doxorubicin	32	5
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
Gastric Cancer	• Chemotherapy-Induced Toxicity: Doxorubicin	23	5
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
Myelotoxicity	• Chemotherapy-Induced Toxicity: Doxorubicin	19	6
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
Lymphoma	• Chemotherapy-Induced Toxicity: Doxorubicin	15	5
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		

Symptoms	Chemotherapy-Induced Toxicity: Cisplatin	10	5
Myelodysplastic Syndrome	Chemosensitizer Chemotherapy Induced Myelotoxicity Chemotherapy-Induced Toxicity: Cyclophosphamide	13	3
Chemotherapy-Induced Toxicity: Paclitaxel	Chemotherapy Induced Myelotoxicity Chemotherapy-Induced Toxicity Chemotherapy-Induced Toxicity: Cisplatin	12	2
Kidney Damage: Drug-Induced	Chemotherapy Induced Myelotoxicity Chemotherapy-Induced Toxicity: Adriamycin Chemotherapy-Induced Toxicity: Cisplatin	10	5
Lipid Peroxidation	Chemotherapy-Induced Toxicity: Cyclophosphamide Chemotherapy-Induced Toxicity: Adriamycin Chemotherapy-Induced Toxicity: Doxorubicin	8	4
Ovarian Cancer	Chemosensitizer Chemotherapy-Induced Toxicity: Cisplatin Chemotherapy-Induced Toxicity: Doxorubicin	8	7
Tumors	Chemosensitizer Chemotherapy-Induced Toxicity Chemotherapy-Induced Toxicity: Cisplatin	6	5
Chemotherapy-Induced Toxicity: Mitomycin-C	Chemosensitizer Chemotherapy Induced Myelotoxicity Chemotherapy-Induced Toxicity	3	2
Cancers: Drug Resistant	Chemosensitizer Chemotherapy-Induced Toxicity: Cisplatin	56	51
Chemotherapy-Induced Toxicity: Bleomycin	Chemotherapy-Induced Toxicity Chemotherapy-Induced Toxicity: Adriamycin	50	21
Chemotherapy Induced Myelotoxicity	Chemotherapy-Induced Toxicity Chemotherapy-Induced Toxicity: Cisplatin	48	13
Chemotherapy	Chemosensitizer Chemotherapy-Induced Toxicity	39	9
Esophageal Cancer	Chemosensitizer Chemotherapy-Induced Toxicity: Cisplatin	31	4
Mucositis	Chemotherapy Induced Myelotoxicity Chemotherapy-Induced Toxicity	23	4
Inflammation	Chemotherapy-Induced Toxicity Chemotherapy-Induced Toxicity: Cisplatin	22	2
	Chemosensitizer		

Lung Cancer	•	Chemotherapy-Induced Toxicity: Cisplatin	21	11
Chemotherapy-Induced Toxicity: Adriamycin	•	Chemotherapy-Induced Toxicity: Bleomycin	17	10
Leukemia: Acute myelogenous leukemia (AML)	•	Chemotherapeutic agent		
	•	Chemotherapy-Induced Toxicity: Cyclophosphamide	15	5
Melanoma	•	Chemotherapeutic agent		
	•	Chemotherapy-Induced Toxicity: Bleomycin	14	5
Acute lymphoblastic leukemia (ALL)	•	Chemotherapeutic agent		
	•	Chemotherapy-Induced Toxicity	13	3
Neuroblastoma	•	Chemotherapeutic agent		
	•	Chemotherapy-Induced Toxicity	13	3
Cardiotoxicity: Chemotherapy-Induced	•	Chemotherapy-Induced Toxicity: Doxorubicin	12	6
Pancreatic Cancer	•	Chemotherapeutic agent		
	•	Chemotherapy-Induced Toxicity: Cisplatin	12	10
Leukopenia: Chemotherapy Induced	•	Chemotherapy-Induced Toxicity: Cisplatin	11	2
Liver Cancer	•	Chemotherapeutic agent		
	•	Chemotherapy-Induced Toxicity: Cisplatin	11	9
Neutropenia	•	Chemotherapy-Induced Toxicity: Cisplatin	11	2
Hypertension	•	Chemotherapy-Induced Toxicity: Doxorubicin	10	1
Prostate Cancer	•	Chemotherapeutic agent		
	•	Chemotherapy-Induced Toxicity: Cisplatin	10	8
Cervical Cancer	•	Chemotherapeutic agent		
	•	Chemotherapy-Induced Toxicity: Cisplatin	4	4
Chemically-Induced Liver Damage	•	Chemotherapy-Induced Toxicity: Cisplatin		
	•	Chemotherapy-Induced Toxicity: Doxorubicin	4	2
Colon Cancer	•	Chemotherapeutic agent		
	•	Chemotherapy-Induced Toxicity: Cisplatin	4	4
Nephropathy	•	Chemotherapy-Induced Toxicity: Adriamycin		
	•	Chemotherapy-Induced Toxicity: Cisplatin	4	2
	•	Chemotherapeutic agent		

Cancer Metastasis	• Chemotherapy-Induced Toxicity: Cisplatin	3	2
Uterine Cancer	• Chemotherapeutic Agent • Chemotherapy-Induced Toxicity: Doxorubicin	3	2
Brain Injury: Hippocampal Damage	• Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Doxorubicin	2	1
Chemotherapy-Induced Toxicity: Oxaliplatin	• Chemotherapy-Induced Liver Toxicity • Chemotherapy-Induced Toxicity	2	1
Cognitive Decline/Dysfunction	• Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Doxorubicin	2	1
Fatty Liver	• Chemotherapy-Induced Liver Toxicity • Chemotherapy-Induced Toxicity	2	1
Fibrosarcoma	• Chemotherapeutic Agent • Chemotherapy-Induced Toxicity: Cisplatin	2	1
Kidney Damage	• Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin	2	1
Skin Cancer: Squamous Cell	• Chemotherapeutic Agent • Chemotherapy-Induced Toxicity: Cisplatin	2	2
Gallbladder Cancer	• Chemotherapeutic Agent • Chemotherapy-Induced Toxicity: Cisplatin	1	1
Mesothelioma	• Chemotherapeutic Agent • Chemotherapy-Induced Toxicity: Cisplatin	1	1
Neutropenia: Cyclic	• Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin	1	1

55 Relevant Results for Substances

Substance Name	Disease/Symptom	Cumulative Article Knowledge Count	
Curcumin	• Chemotherapeutic Agent • Chemotherapy Induced Myelotoxicity • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cyclophosphamide • Chemotherapy-Induced Toxicity: Adriamycin • Chemotherapy-Induced Toxicity: Bleomycin • Chemotherapy-Induced Toxicity: Cisplatin • Chemotherapy-Induced Toxicity: Doxorubicin	109	82
Resveratrol	• Chemotherapeutic Agent • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Adriamycin • Chemotherapy-Induced Toxicity: Arsenic Trioxide • Chemotherapy-Induced Toxicity: Bleomycin • Chemotherapy-Induced Toxicity: Cisplatin • Chemotherapy-Induced Toxicity: Doxorubicin	34	26

Vitamin E	• Chemosensitizer • Chemotherapy Induced Myelotoxicity • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin	26	6
Ginger	• Chemosensitizer • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin • Chemotherapy-Induced Toxicity: Doxorubicin	17	5
Sulforaphane	• Chemosensitizer • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin • Chemotherapy-Induced Toxicity: Doxorubicin	16	11
Grape Seed Extract	• Cardiotoxicity: Chemotherapy-Induced • Chemotherapy Induced Myelotoxicity • Chemotherapy-Induced Toxicity: Cisplatin • Chemotherapy-Induced Toxicity: Doxorubicin	8	4
Maitake Mushroom	• Chemotherapy Induced Myelotoxicity • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin • Chemotherapy-Induced Toxicity: Doxorubicin	6	4
Melatonin	• Chemosensitizer • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Arsenic Trioxide • Chemotherapy-Induced Toxicity: Cisplatin	6	5
Caffeic acid phenethyl ester	• Cardiotoxicity: Chemotherapy-Induced • Chemosensitizer • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Doxorubicin	5	3
Oleuropein	• Cardiotoxicity: Chemotherapy-Induced • Chemosensitizer • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Doxorubicin	5	3
Genistein	• Chemosensitizer • Chemotherapy Induced Myelotoxicity • Chemotherapy-Induced Toxicity: Cisplatin	25	14
Carnitine	• Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Bleomycin • Chemotherapy-Induced Toxicity: Epirubicin	14	3
Garlic	• Chemotherapy-Induced Toxicity: Cyclophosphamide • Chemotherapy-Induced Toxicity: Adriamycin • Chemotherapy-Induced Toxicity: Doxorubicin	7	4
AHCC	• Chemotherapy Induced Myelotoxicity • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin	6	3
Beta-glucan	• Chemotherapy Induced Myelotoxicity • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin	4	2
Saffron	• Chemotherapy-Induced Liver Toxicity • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin	4	2
	• Chemotherapy-Induced Toxicity		

Schisandra	• Chemotherapy-Induced Toxicity: Adriamycin • Chemotherapy-Induced Toxicity: Doxorubicin	3	2
Bee Propolis	• Cardiotoxicity: Chemotherapy-Induced • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Doxorubicin	2	1
Alpha-Lipoic Acid	• Chemotherapy-Induced Toxicity: Bleomycin • Chemotherapy-Induced Toxicity: Cisplatin	14	3
Astragalus	• Chemotherapy Induced Myelotoxicity • Chemotherapy-Induced Toxicity	11	2
Cannabis	• Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin	11	2
Glutamine	• Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin	11	2
Reishi Mushroom	• Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin	11	2
Caffeine	• Chemotherapeutic • Chemotherapy-Induced Toxicity: Cisplatin	10	1
Folic Acid	• Chemotherapy Induced Myelotoxicity • Chemotherapy-Induced Toxicity	10	1
Vitamin B-12	• Chemotherapy Induced Myelotoxicity • Chemotherapy-Induced Toxicity	10	1
Wheat Grass	• Chemotherapy Induced Myelotoxicity • Chemotherapy-Induced Toxicity	10	1
EGCG (Epigallocatechin gallate)	• Chemotherapeutic • Chemotherapy-Induced Toxicity: Bleomycin	8	6
Quercetin	• Chemotherapeutic • Chemotherapy-Induced Toxicity: Cisplatin	8	8
Flavonoids	• Chemotherapeutic • Chemotherapy-Induced Toxicity: Cisplatin	7	6
Ginsenosides	• Chemotherapeutic • Chemotherapy-Induced Toxicity: Cisplatin	5	3
Green Tea	• Chemotherapeutic • Chemotherapy-Induced Toxicity: Cisplatin	5	3
Lycopene	• Chemotherapeutic • Chemotherapy-Induced Toxicity: Cisplatin	5	3
Vitamin C	• Chemotherapeutic • Chemotherapy-Induced Toxicity: Cisplatin	5	4
Arginine	• Chemotherapy-Induced Toxicity: Cyclophosphamide • Chemotherapy-Induced Toxicity: Cisplatin	4	2
Clove	• Chemotherapy-Induced Toxicity: Cyclophosphamide • Chemotherapy-Induced Toxicity: Cisplatin	4	2
Mangosteen	• Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin • Chemotherapy-Induced Toxicity: Adriamycin	4	2

Red Sage	• Chemotherapy-Induced Toxicity: Bleomycin	4	2
Royal Jelly	• Chemotherapy-Induced Toxicity: 5-fluorouracil • Chemotherapy-Induced Toxicity: Cisplatin	4	2
Emodin	• Chemosensitizer • Chemotherapy-Induced Toxicity: Cisplatin	3	3
Licorice	• Chemotherapy-Induced Toxicity: Cisplatin • Chemotherapy-Induced Toxicity: Doxorubicin	3	2
Stilbenes	• Chemosensitizer • Chemotherapy-Induced Toxicity: Cisplatin	3	2
Bile salts	• Chemotherapy-Induced Liver Toxicity • Chemotherapy-Induced Toxicity	2	1
Coenzyme Q10	• Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin	2	1
Luteolin	• Chemosensitizer • Chemotherapy-Induced Toxicity: Cisplatin	2	2
Panax Notoginseng	• Cardiotoxicity: Chemotherapy-Induced • Chemotherapy-Induced Toxicity: Doxorubicin	2	1
Piperidines	• Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin	2	1
Pomegranate Seed	• Chemotherapy-Induced Liver Toxicity • Chemotherapy-Induced Toxicity	2	1
Rehmannia	• Chemotherapy-Induced Toxicity: Adriamycin • Chemotherapy-Induced Toxicity: Cisplatin	2	2
Rubia Cordifolia	• Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin	2	1
Spirulina	• Cardiotoxicity: Chemotherapy-Induced • Chemotherapy-Induced Toxicity: Doxorubicin	2	1
Testosterone	• Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin	2	1
Tocotrienol: Delta	• Chemosensitizer • Chemotherapy Induced Myelotoxicity	2	2
Rice Bran	• Chemosensitizer • Chemotherapy-Induced Toxicity: Cisplatin	1	1
Tocotrienols	• Chemosensitizer • Chemotherapy-Induced Toxicity: Cisplatin	1	1

17 Relevant Results for Keywords

Keyword Name	Disease/Symptom	Cumulative Article Knowledge Count	
Plant Extracts	• Chemosensitizer	75	22
	• Chemotherapy Induced Myelotoxicity		
	• Chemotherapy-Induced Liver Toxicity		
	• Chemotherapy-Induced Toxicity		
	• Chemotherapy-Induced Toxicity:		
	• Cyclophosphamide		
	• Chemotherapy-Induced Toxicity:		
	• Adriamycin		
	• Chemotherapy-Induced Toxicity:		
	• Bleomycin		

	• Chemotherapy-Induced Toxicity: Cisplatin • Chemotherapy-Induced Toxicity: Doxorubicin		
	• Cardiotoxicity: Chemotherapy-Induced • Chemotherapy Induced Myelotoxicity • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cyclophosphamide • Chemotherapy-Induced Toxicity: Adriamycin		
Drug Side Effect Attenuation	• Chemotherapy-Induced Toxicity: Bleomycin • Chemotherapy-Induced Toxicity: Cisplatin • Chemotherapy-Induced Toxicity: Doxorubicin • Chemotherapy-Induced Toxicity: Epirubicin	74	22
	• Cardiotoxicity: Chemotherapy-Induced • Chemosensitizer • Chemotherapy Induced Myelotoxicity • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Adriamycin		
Drug-Plant-Vitamin Synergies	• Chemotherapy-Induced Toxicity: Bleomycin • Chemotherapy-Induced Toxicity: Cisplatin • Chemotherapy-Induced Toxicity: Doxorubicin	81	43
	• Cardiotoxicity: Chemotherapy-Induced • Chemosensitizer • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Adriamycin		
Drug: Doxorubicin	• Chemotherapy-Induced Toxicity: Cisplatin • Chemotherapy-Induced Toxicity: Doxorubicin	72	30
	• Chemosensitizer • Chemotherapy Induced Myelotoxicity • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin		
Drug Synergy		61	41
	• Chemosensitizer • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Bleomycin		
Antineoplastic Agents	• Chemotherapy-Induced Toxicity: Cisplatin	28	11
	• Chemosensitizer • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin		
Drug: 5-flourouracil		36	9
	• Chemosensitizer • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin		
Drug: Cisplatin		30	10
	• Chemosensitizer		

Chemopreventive	• Chemotherapy-Induced Toxicity: Doxorubicin	10	5
	• Chemosensitizer		
	• Chemotherapy Induced Myelotoxicity		
	• Chemotherapy-Induced Liver Toxicity		
	• Chemotherapy-Induced Toxicity: Cyclophosphamide		
Antineoplastic Agents	• Chemotherapy-Induced Toxicity: Cisplatin	122	52
	• Chemosensitizer		
	• Chemotherapy Induced Myelotoxicity		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Cisplatin		
Renoprotective	• Chemotherapy-Induced Toxicity: Adriamycin	29	15
	• Chemotherapy-Induced Liver Toxicity		
	• Chemotherapy-Induced Toxicity: Cisplatin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Cisplatin		
Tumor Necrosis Factor (TNF) Alpha Inhibitor	• Chemosensitizer	13	8
	• Chemotherapy-Induced Toxicity: Cyclophosphamide		
	• Chemotherapy-Induced Toxicity: Bleomycin		
	• Chemotherapy-Induced Toxicity: Cisplatin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
Apoptotic	• Chemosensitizer	77	71
	• Chemotherapy-Induced Toxicity: Cisplatin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
NF-kappaB Inhibitor	• Chemosensitizer	25	21
	• Chemotherapy-Induced Toxicity: Bleomycin		
	• Chemotherapy-Induced Toxicity: Cisplatin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
Anticarcinogenic Agents	• Chemosensitizer	17	14
	• Chemotherapy-Induced Toxicity: Cisplatin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
Cardioprotective	• Cardiotoxicity: Chemotherapy-Induced	15	8
	• Chemotherapy-Induced Toxicity: Adriamycin		
	• Chemotherapy-Induced Toxicity: Arsenic Trioxide		
	• Chemotherapy-Induced Toxicity: Doxorubicin		
	• Chemotherapy-Induced Liver Toxicity		
	• Chemotherapy-Induced Toxicity		

Hepatoprotective	• Chemotherapy-Induced Toxicity: Cyclophosphamide • Chemotherapy-Induced Toxicity: Doxorubicin	10	5
Radioprotective	• Chemosensitizer • Chemotherapy Induced Myelotoxicity • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin	6	5
Chemosensitizer	• Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Cisplatin • Chemotherapy-Induced Toxicity: Doxorubicin	188	157
Antiproliferative	• Chemosensitizer • Chemotherapy-Induced Toxicity: Cisplatin • Chemotherapy-Induced Toxicity: Doxorubicin	27	24
Anti-Inflammatory Agents	• Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Bleomycin • Chemotherapy-Induced Toxicity: Cisplatin	17	5
Tumor Suppressor Protein p53 Upregulation	• Chemosensitizer • Chemotherapy-Induced Toxicity: Cyclophosphamide • Chemotherapy-Induced Toxicity: Doxorubicin	11	9
Matrix metalloproteinase-2 (MMP-2) inhibitor	• Chemosensitizer • Chemotherapy-Induced Toxicity: Bleomycin • Chemotherapy-Induced Toxicity: Cisplatin	7	4
Anti-Bacterial Agents	• Chemosensitizer • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Bleomycin	4	3
Malondialdehyde Down-regulation	• Chemosensitizer • Chemotherapy-Induced Toxicity: Cyclophosphamide • Chemotherapy-Induced Toxicity: Cisplatin	4	2
Antihypertensive Agents	• Cardiotoxicity: Chemotherapy-Induced • Chemotherapy-Induced Toxicity • Chemotherapy-Induced Toxicity: Doxorubicin	2	1
Cell cycle arrest	• Chemosensitizer • Chemotherapy-Induced Toxicity: Cisplatin	20	19
Enzyme Inhibitors	• Chemosensitizer • Chemotherapy-Induced Toxicity: Cisplatin	9	7
Radiosensitizer	• Chemosensitizer • Chemotherapy-Induced Toxicity	8	7

Anti-Apoptotic	Chemotherapy-Induced Toxicity: Cisplatin Chemotherapy-Induced Toxicity: Doxorubicin	4	3
Anti-metastatic	Chemosensitizer Chemotherapy-Induced Toxicity: Cisplatin	3	2
Drug synergy	Chemosensitizer Chemotherapy-Induced Toxicity	3	3
Glutathione S-transferase Inhibitor	Chemotherapy-Induced Liver Toxicity Chemotherapy-Induced Toxicity	2	1
Hematopoietic	Chemotherapy Induced Myelotoxicity Chemotherapy-Induced Toxicity: Doxorubicin	2	2
Interleukin-6 Downregulation	Chemosensitizer Chemotherapy-Induced Toxicity: Cisplatin	1	1

3 Relevant Results for Problem Substances

Problem Substance Name	Disease/Symptom	Cumulative Knowledge	Article Count
Paclitaxel	Chemotherapy Induced Myelotoxicity Chemotherapy-Induced Liver Toxicity Chemotherapy-Induced Toxicity	6	3
Doxorubicin	Chemotherapy-Induced Toxicity Chemotherapy-Induced Toxicity: Doxorubicin	3	2
Cyclophosphamide	Chemotherapy-Induced Toxicity Chemotherapy-Induced Toxicity: Doxorubicin	2	1

1 Relevant Result for Therapeutic Actions

Therapeutic Action Name	Disease/Symptom	Cumulative Knowledge	Article Count
Exercise	Chemotherapy-Induced Toxicity Chemotherapy-Induced Toxicity: Doxorubicin	10	1

1 Relevant Result for Problematic Actions

Problematic Action Name	Disease/Symptom	Cumulative Knowledge	Article Count
Chemotherapy	Chemotherapy-Induced Toxicity Chemotherapy-Induced Toxicity: Cyclophosphamide Chemotherapy-Induced Toxicity: Cisplatin Chemotherapy-Induced Toxicity: Doxorubicin	63	7

1 Relevant Result for Adverse Pharmacological Actions

Adverse Pharmacological Action Name	Disease/Symptom	Cumulative Knowledge	Article Count
Neurotoxic	Chemotherapy-Induced Toxicity Chemotherapy-Induced Toxicity: Doxorubicin	12	2

Antioxidants (AC 34)

The decrease in neutrophil count caused by breast carcinoma chemotherapy was ameliorated by dietary supplementation with a multivitamin or vitamin E. - GMI Summary

Pubmed Data : Cancer. 2004 Sep 1;101(5):1058-64. PMID: [15329916](#)

Article Published Date : Sep 01, 2004

Authors : Richard F Branda, Shelly J Naud, Elice M Brooks, Zhuan Chen, Hyman Muss

Study Type : Human Study

Additional Links

Substances : [Folic Acid : CK\(572\) : AC\(79\)](#), [Vitamin B-12 : CK\(752\) : AC\(98\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Mucositis : CK\(49\) : AC\(10\)](#), [Neutropenia: Chemotherapy Induced : CK\(82\) : AC\(17\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#)

A combination of Bacopa, Amla (E. officinalis), Licorice (G. glabra), Indian mango (M. indica) and Clove (S. aromaticum) protect against experimentally-induced cardiac and renal damage. - GMI Summary

Pubmed Data : Phytother Res. 2005 Mar;19(3):216-21. PMID: [15934019](#)

Article Published Date : Mar 01, 2005

Authors : P A Bafna, R Balaraman

Study Type : Animal Study

Additional Links

Substances : [Amla Fruit : CK\(59\) : AC\(28\)](#), [Bacopa : CK\(47\) : AC\(18\)](#), [Clove : CK\(91\) : AC\(46\)](#), [Licorice : CK\(254\) : AC\(79\)](#), [Mango : CK\(60\) : AC\(11\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Myocardial Infarction : CK\(888\) : AC\(116\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Aged garlic extract and grape seed proanthocyanidin protect against doxorubicin-induced cardiotoxicity. - GMI Summary

Pubmed Data : Can J Physiol Pharmacol. 2009 Aug;87(8):633-40. PMID: [19767888](#)

Article Published Date : Aug 01, 2009

Authors : Erkan Demirkaya, Aslihan Avci, Vural Kesik, Yildirim Karslioglu, Emin Oztas, Erol Kismet, Erdal Gokcay, Ilker Durak, Vedat Koseoglu

Study Type : Animal Study

Additional Links

Substances : [Garlic : CK\(488\) : AC\(156\)](#), [Grape Seed Extract : CK\(172\) : AC\(58\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#), [Proanthocyanidins : CK\(167\) : AC\(45\)](#)

Astaxanthin protects against cyclophosphamide-induced oxidative stress and DNA damage. - GMI Summary

Pubmed Data : Chem Biol Interact. 2009 Aug 14;180(3):398-406. Epub 2009 Apr 2. PMID: [19539803](#)

Article Published Date : Aug 14, 2009

Authors : D N Tripathi, G B Jena

Study Type : Animal Study

Additional Links

Substances : [Astaxanthin : CK\(585\) : AC\(104\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide : CK\(25\) : AC\(9\)](#), [DNA damage : CK\(687\) : AC\(287\)](#), [Lipid Peroxidation : CK\(333\) : AC\(125\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Malondialdehyde Down-regulation : CK\(68\) : AC\(18\)](#), [Superoxide Dismutase Up-regulation : CK\(127\) : AC\(40\)](#)

Brassica rapa (Mustard Greens) have a protective effect on cisplatin-induced nephrotoxicity in cells and rats. - GMI Summary

Pubmed Data : Biol Pharm Bull. 2006 Dec;29(12):2436-41. PMID: [17142978](#)

Article Published Date : Dec 01, 2006

Authors : Yang-Hee Kim, Yong-Won Kim, Young-Jun Oh, Nam-In Back, Sun-A Chung, Hae-Gon Chung, Tae-Sook Jeong, Myung-Sook Choi, Kyung-Tae Lee

Study Type : Animal Study

Additional Links

Substances : [Mustard Greens](#) : CK(39) : AC(12)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Plant Extracts](#) : CK(3297) : AC(1135)

Caffeic acid phenetyl ester, a compound found within bee propolis, protects against doxorubicin-induced cardiotoxicity in rats. - GMI Summary

Pubmed Data : Am J Ind Med. 2010 Sep 30. Epub 2010 Sep 30. PMID: [14745846](#)

Article Published Date : Sep 30, 2010

Authors : Ersin Fadillioglu, Emin Oztas, Hasan Erdogan, Murat Yagmurca, Sadik Sogut, Muharrem Ucar, M Kemal Irmak

Study Type : Animal Study

Additional Links

Substances : [Bee Propolis](#) : CK(222) : AC(88), [Caffeic acid phenethyl ester](#) : CK(15) : AC(8)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Celery has a protective effect against doxorubicin toxicity. - GMI Summary

Pubmed Data : Molecules. 2009 ;14(4):1627-38. Epub 2009 Apr 24. PMID: [19396021](#)

Article Published Date : Jan 01, 2009

Authors : Jovanka Kolarovic, Mira Popovic, Momir Mikov, Radoslav Mitic, Ljiljana Gvozdenovic

Study Type : Animal Study

Additional Links

Substances : [Celery](#) : CK(28) : AC(12)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Lipid Peroxidation](#) : CK(333) : AC(125)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Plant Extracts](#) : CK(3297) : AC(1135)

Coenzyme Q10 treatment ameliorates acute cisplatin nephrotoxicity in mice. - GMI Summary

Pubmed Data : Toxicology. 2010 Jul-Aug;274(1-3):49-56. Epub 2010 May 25. PMID: [20510337](#)

Article Published Date : Jul 01, 2010

Authors : Amr A Fouad, Ali Ibrahim Al-Sultan, Shereen M Refaie, Mohamed T Yacoubi

Study Type : Animal Study

Additional Links

Substances : [Coenzyme Q10](#) : CK(667) : AC(103)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

Coriandrum sativum has a protective effect on carbon tetrachloride-induced hepatotoxicity in mice. - GMI Summary

Pubmed Data : Food Chem Toxicol. 2009 Apr;47(4):702-8. Epub 2008 Dec 29. PMID: [19146910](#)

Article Published Date : Apr 01, 2009

Authors : S Sreelatha, P R Padma, M Umadevi

Study Type : Animal Study

Additional Links

Substances : [Coriandrum sativum : CK\(53\) : AC\(27\)](#)

Diseases : [Chemotherapy-Induced Liver Toxicity : CK\(14\) : AC\(8\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Hepatoprotective : CK\(528\) : AC\(257\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Curcumin oil has a protective effect against cisplatin-induced nephrotoxicity.

- GMI Summary

Pubmed Data : J Agric Food Chem. 2007 Dec 12;55(25):10150-5. Epub 2007 Nov 15. PMID: [18001039](#)

Article Published Date : Dec 12, 2007

Authors : Anurag Kuhad, Sangeeta Pilkhwal, Sameer Sharma, Naveen Tirkey, Kanwaljit Chopra

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Inflammation : CK\(1001\) : AC\(341\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Anti-Inflammatory Agents : CK\(1159\) : AC\(412\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Curcumin prevents cisplatin-induced chromosomal abberations in rat bone marrow cells.

- GMI Summary

Pubmed Data : Mutat Res. 2000 Feb 16;465(1-2):131-7. PMID: [10708978](#)

Article Published Date : Feb 16, 2000

Authors : L M Antunes, M C Araújo, J D Darin, M L Bianchi

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Genoprotective : CK\(109\) : AC\(46\)](#)

Curcumin protects against cisplatin-induced oxidative injury in rat testis.

- GMI Summary

Pubmed Data : Hum Reprod. 2009 Jul;24(7):1717-25. Epub 2009 Mar 11. PMID: [19279034](#)

Article Published Date : Jul 01, 2009

Authors : Yusuf Ozlem Ilbey, Emin Ozbek, Mustafa Cekmen, Abdulmuttalip Simsek, Alper Otuncemur, Adnan Somay

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

Curcumin protects against doxorubicin (adriamycin)-induced toxicity in rats.

- GMI Summary

Pubmed Data : J Med Food. 2009 Apr;12(2):394-402. PMID: [19459743](#)

Article Published Date : Apr 01, 2009

Authors : Ragaa Hosny Mohamad, Amal Mohamad El-Bastawesy, Zekry Khalid Zekry, Hussain A Al-Mehdar, Mohamad Gamil Abdel Monaam Al-Said, Soaad Shaker Aly, Sabry Mohamed Sharawy, Mahmud M El-Merzabani

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemically-Induced Liver Damage](#) : CK(451) : AC(174), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug Side Effect Attenuation](#) : CK(252) : AC(50), [Plant Extracts](#) : CK(3297) : AC(1135)

[Ginkgo biloba prevents bleomycin-induced oxidative injury in rats.](#) - GMI Summary

Pubmed Data : Toxicol Ind Health. 2006 Feb;22(1):47-52. PMID: [16572711](#)

Article Published Date : Feb 01, 2006

Authors : Hasan Erdogan, Ersin Fadillioğlu, Mahir Kotuk, Mustafa Iraz, Seda Tasdemir, Yesim Oztas, Zeki Yildirim

Study Type : Animal Study

Additional Links

Substances : [Ginkgo biloba](#) : CK(505) : AC(101)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Plant Extracts](#) : CK(3297) : AC(1135)

[Ginsenoside-Rd, a compound found within Ginseng, ameliorates cisplatin-induced renal injury.](#) - GMI Summary

Pubmed Data : Nephron. 2001 Dec;89(4):433-8. PMID: [11721162](#)

Article Published Date : Dec 01, 2001

Authors : T Yokozawa, E Dong

Study Type : Animal Study

Additional Links

Substances : [Ginsenosides](#) : CK(47) : AC(18)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28)

[Grape seed extract prevents gentamicin-induced nephrotoxicity and genotoxicity in bone marrow cells of mice.](#) - GMI Summary

Pubmed Data : Basic Clin Pharmacol Toxicol. 2006 Sep;99(3):230-6. PMID: [16930296](#)

Article Published Date : Sep 01, 2006

Authors : Ibrahim M El-Ashmawy, Abeer F El-Nahas, Osama M Salama

Study Type : Animal Study

Additional Links

Substances : [Grape Seed Extract](#) : CK(172) : AC(58)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity: Gentamicin](#) : CK(20) : AC(10), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Genoprotective](#) : CK(109) : AC(46), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

[Grape seed extract protects against cisplatin-induced oxidative stress in rats.](#) - GMI Summary

Pubmed Data : Food Chem Toxicol. 2009 Jun;47(6):1176-1183. PMID: [19425235](#)

Article Published Date : Jun 01, 2009

Authors : M I Yousef, A A Saad, L K El-Shennawy

Study Type : Animal Study

Additional Links

Substances : [Grape Seed Extract](#) : CK(172) : AC(58)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Green tea tannin eliminates oxidative stress and is beneficial to renal function in cisplatin-induced nephropathy in rats. - GMI Summary

Pubmed Data : J Pharm Pharmacol. 1999 Nov;51(11):1325-31. PMID: [10632092](#)

Article Published Date : Nov 01, 1999

Authors : T Yokozawa, T Nakagawa, K I Lee, E J Cho, K Terasawa, S Takeuchi

Study Type : Animal Study

Additional Links

Substances : [Green Tea : CK\(931\) : AC\(279\)](#), [Tannic Acid : CK\(20\) : AC\(16\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#)

Hazelnut prevented doxorubicin-induced cataract in low doses. - GMI Summary

Pubmed Data : Med Sci Monit. 2005 Aug;11(8):BR300-4. Epub 2005 Jul 25. PMID: [16049376](#)

Article Published Date : Aug 01, 2005

Authors : Atilla Bayer, Cem Evreklioglu, Erkan Demirkaya, Salih Altun, Yildirim Karslioglu, Gungor Sobaci

Study Type : Animal Study

Additional Links

Substances : [Hazelnut : CK\(12\) : AC\(2\)](#)

Diseases : [Cataract : CK\(175\) : AC\(58\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

L-arginine has a protective effect against cisplatin-induced renal oxidative stress and toxicity. - GMI Summary

Pubmed Data : Basic Clin Pharmacol Toxicol. 2005 Aug;97(2):91-7. PMID: [15998355](#)

Article Published Date : Aug 01, 2005

Authors : Samira Saleh, Ebtehal El-Demerdash

Study Type : Animal Study

Additional Links

Substances : [Arginine : CK\(960\) : AC\(168\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [Nitric Oxide Enhancer : CK\(127\) : AC\(33\)](#)

Melatonin, a pineal secretory product with antioxidant properties, protects against cisplatin-induced nephrotoxicity in rats. - GMI Summary

Pubmed Data : J Pineal Res. 2001 Apr;30(3):129-38. PMID: [11316323](#)

Article Published Date : Apr 01, 2001

Authors : M Hara, M Yoshida, H Nishijima, M Yokosuka, M Iigo, R Ohtani-Kaneko, A Shimada, T Hasegawa, Y Akama, K Hirata

Study Type : Animal Study

Additional Links

Substances : [Melatonin : CK\(454\) : AC\(115\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Kidney Damage: Drug-Induced : CK\(86\) : AC\(18\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

Oleuropein confers protection against doxorubicin-induced cardiotoxicity. - GMI Summary

Pubmed Data : NMR Biomed. 2009 Jul;22(6):585-92. PMID: [19308947](#)

Article Published Date : Jul 01, 2009

Authors : Ioanna Andreadou, Maria Papaefthimiou, Athina Zira, Maria Constantinou, Fragiska Sigala, Alexios-Leandros Skaltsounis, Anna Tsantili-Kakoulidou, Efstathios K Iliodromitis, Dimitrios T Kremastinos, Emmanuel Mikros

Study Type : Animal Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antihypertensive Agents](#) : CK(194) : AC(38), [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Pomegranate seed extract attenuates chemotherapy-induced acute nephrotoxicity and hepatotoxicity. - GMI Summary

Pubmed Data : J Med Food. 2011 May 6. Epub 2011 May 6. PMID: [21548807](#)

Article Published Date : May 06, 2011

Authors : Kerim Cayir, Ali Karadeniz, Nejdet Simsek, Serap Yildirim, Emre Karakuş, Adem Kara, Hürrem Turan Akkoyun, Emin Sengül

Study Type : Animal Study

Additional Links

Substances : [Pomegranate Seed](#) : CK(2) : AC(1)

Diseases : [Chemotherapy-Induced Liver Toxicity](#) : CK(14) : AC(8), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Glutathione S-transferase Inhibitor](#) : CK(3) : AC(2), [Hepatoprotective](#) : CK(528) : AC(257), [Renoprotective](#) : CK(179) : AC(84)

Rhus verniciflua Stokes prevents cisplatin-induced cytotoxicity and reactive oxygen species production in renal cells and intact mice. - GMI Summary

Pubmed Data : Phytomedicine. 2009 Mar;16(2-3):188-97. Epub 2009 Jan 15. PMID: [19150236](#)

Article Published Date : Mar 01, 2009

Authors : Joo-Ho Lee, Hyo-Jung Lee, Hyo-Jeong Lee, Won-Cheol Choi, Seong-Woo Yoon, Seong-Gyu Ko, Kwang Seok Ahn, Seung-Hoon Choi, Kyoo-Seok Ahn, John C Lieske, Sung-Hoon Kim

Study Type : Animal Study

Additional Links

Substances : [Sumac](#) : CK(37) : AC(16)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Drug Side Effect Attenuation](#) : CK(252) : AC(50), [Plant Extracts](#) : CK(3297) : AC(1135)

Royal jelly and green tea have a protective effect against cisplatin-induced nephrotoxicity in mice. - GMI Summary

Pubmed Data : J Chromatogr B Analyt Technol Biomed Life Sci. 2004 Apr 25;803(2):225-31. PMID: [19857080](#)

Article Published Date : Apr 25, 2004

Authors : Kürşad Yapar, Kültiğin Cavuşoğlu, Ertan Oruç, Emine Yalçın

Study Type : Animal Study

Additional Links

Substances : [Green Tea](#) : CK(931) : AC(279), [Royal Jelly](#) : CK(59) : AC(32)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Silymarin, a compound found within milk thistle, has a protective effect against Doxorubicin-induced oxidative stress and liver damage. - GMI Summary

Pubmed Data : Toxicol Appl Pharmacol. 2010 Feb 5. Epub 2010 Feb 5. PMID: [20144634](#)

Article Published Date : Feb 05, 2010

Authors : Nirav Patel, Cecil Joseph, George B Corcoran, Sidhartha D Ray

Study Type : Animal Study

Additional Links

Substances : [Milk Thistle](#) : CK(226) : AC(55)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Anti-Apoptotic](#) : CK(59) : AC(37), [Antioxidants](#) : CK(3530) : AC(1293), [Hepatoprotective](#) : CK(528) : AC(257)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Sulforaphane protects against cisplatin-induced liver and mitochondrial damage. - GMI Summary

Pubmed Data : Toxicology. 2011 Aug 15 ;286(1-3):20-7. Epub 2011 May 6. PMID: [21575670](#)

Article Published Date : Aug 15, 2011

Authors : Leobardo Gaona-Gaona, Eduardo Molina-Jijón, Edilia Tapia, Cecilia Zazueta, Rogelio Hernández-Pando, Mariel Calderón-Oliver, Guillermo Zarco-Márquez, Enrique Pinzón, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemically-Induced Liver Damage](#) : CK(451) : AC(174), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293)

Problem Substances : [Cisplatin](#) : CK(15) : AC(2)

Adverse Pharmacological Actions : [Hepatotoxic](#) : CK(262) : AC(69)

Taurine has a protective effect against cisplatin-induced nephrotoxicity in rats. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2007 May;32(9):835-9. PMID: [11901256](#)

Article Published Date : May 01, 2007

Authors : Sherif Y Saad, Ammar C Al-Rikabi

Study Type : Animal Study

Additional Links

Substances : [Taurine](#) : CK(145) : AC(33)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84)

Carotenoids extracted from red paprika, Valencia orange and Golden delicious apple exhibit anti-H. pylori and anti-multidrug resistance activity. - GMI Summary

Pubmed Data : Phytother Res. 2005 Aug;19(8):700-7. PMID: [16177974](#)

Article Published Date : Aug 01, 2005

Authors : Péter Molnár, Masami Kawase, Kazue Satoh, Yoshitaka Sohara, Toru Tanaka, Satoru Tani, Hiroshi Sakagami, Hideki Nakashima, Noboru Motohashi, Nóra Gyémánt, Joseph Molnár

Study Type : In Vitro Study

Additional Links

Substances : [Apple: Golden Delicious](#) : CK(2) : AC(2), [Carotenoids](#) : CK(1041) : AC(114), [Orange](#) : CK(127) : AC(28), [Paprika](#) : CK(8) : AC(6)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Helicobacter Pylori Infection](#) : CK(294) : AC(61)

Pharmacological Actions : [Anti-Bacterial Agents](#) : CK(901) : AC(280), [Antioxidants](#) : CK(3530) : AC(1293), [Chemosensitizer](#) : CK(188) : AC(157)

DHA sensitizes neuroblastoma cells to chemotherapy and asenic-induced oxidative stress. - GMI Summary

Pubmed Data : Int J Cancer. 2006 May 15;118(10):2584-93. PMID: [16353135](#)

Article Published Date : May 15, 2006

Authors : Magnus Lindskog, Helena Gleissman, Frida Ponthan, Juan Castro, Per Kogner, John Inge Johnsen

Study Type : In Vitro Study

Additional Links

Substances : [DHA \(Docosahexaenoic Acid\)](#) : CK(603) : AC(100)

Diseases : [Neuroblastoma](#) : CK(51) : AC(31), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Gamma tocotrienol has a chemosensitizing property.](#) - GMI Summary

Pubmed Data : J Biol Chem. 2010 Oct 22;285(43):33520-8. Epub 2010 Aug 18. PMID: [20720018](#)

Article Published Date : Oct 22, 2010

Authors : Ramaswamy Kannappan, Vivek R Yadav, Bharat B Aggarwal

Study Type : In Vitro Study

Additional Links

Substances : [Tocotrienol: Gamma](#) : CK(12) : AC(12), [Vitamin E](#) : CK(1288) : AC(227), [Vitamin E: Gamma-tocotrienol](#) : CK(42) : AC(11)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625)

Pharmacological Actions : [Anti-Angiogenic](#) : CK(133) : AC(99), [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

[Melatonin protects against the genotoxic potential of arsenic and sodium fluoride in human blood culture.](#) - GMI Summary

Pubmed Data : Ecotoxicol Environ Saf. 2010 Sep;73(6):1333-7. Epub 2010 Jun 20. PMID: [20646762](#)

Article Published Date : Sep 01, 2010

Authors : Hemlata Hemant Pant, Mandava Venkateshvara Rao

Study Type : In Vitro Study

Additional Links

Substances : [Melatonin](#) : CK(454) : AC(115)

Diseases : [Arsenic Poisoning](#) : CK(85) : AC(26), [Chemotherapy-Induced Toxicity: Arsenic Trioxide](#) : CK(3) : AC(2), [Fluoride Toxicity](#) : CK(147) : AC(42)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Genoprotective](#) : CK(109) : AC(46)

[Purified anthocyanin from eggplant reduces genotoxicity and mutagenicity of cyclophosphamide.](#) - GMI Summary

Pubmed Data : Clin Cancer Res. 2009 Feb 15;15(4):1269-76. PMID: [17194516](#)

Article Published Date : Feb 15, 2009

Authors : Luciana Azevedo, Patrícia L Alves de Lima, José C Gomes, Paulo C Stringheta, Daniel A Ribeiro, Daisy M F Salvadori

Study Type : In Vitro Study

Additional Links

Substances : [Anthocyanins](#) : CK(47) : AC(16), [Eggplant](#) : CK(26) : AC(10)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

[Resveratrol protects against Cisplatin-induced cardiotoxicity by alleviating oxidative damage.](#) - GMI Summary

Pubmed Data : Cancer Biother Radiopharm. 2009 Dec;24(6):675-80. PMID: [20025547](#)

Article Published Date : Dec 01, 2009

Authors : Jingxuan Wang, Dongning He, Qingyuan Zhang, Ying Han, Shi Jin, Feng Qi

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)
Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)
Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293)
Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Stilbenes](#) : CK(414) : AC(245)

Chemotherapy-Induced Toxicity (AC 61)

There are high rates of behavioral symptoms in breast cancer survivors, particularly those treated with chemotherapy - GMI Summary

Pubmed Data : J Clin Oncol. 2011 Aug 8. Epub 2011 Aug 8. PMID: [21825266](#)

Article Published Date : Aug 08, 2011

Authors : Julianne E Bower, Patricia A Ganz, Michael R Irwin, Lorna Kwan, Elizabeth C Breen, Steve W Cole

Study Type : Meta Analysis

Additional Links

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Depression: Unipolar](#) : CK(601) : AC(80), [Fatigue](#) : CK(218) : AC(29), [Inflammation](#) : CK(1001) : AC(341), [Insomnia](#) : CK(459) : AC(54)

Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33)

Problem Substances : [Chemotherapy](#) : CK(325) : AC(35)

Adverse Pharmacological Actions : [Inflammatory](#) : CK(123) : AC(32), [Tumor necrosis factorα \(TNFα\) up-regulation](#) : CK(42) : AC(4)

There is evidence to support the use of topical calendula for prophylaxis of acute dermatitis during radiotherapy and Traumeel S mouthwash in the treatment of chemotherapy-induced stomatitis. - GMI Summary

Pubmed Data : Cochrane Database Syst Rev. 2009(2):CD004845. Epub 2009 Apr 15. PMID: [19370613](#)

Article Published Date : Jan 01, 2009

Authors : Sosie Kassab, Mike Cummings, Saul Berkovitz, Robbert van Haselen, Peter Fisher

Study Type : Meta Analysis

Additional Links

Substances : [Calendula](#) : CK(41) : AC(4), [Homeopathic Medicine: All](#) : CK(501) : AC(48), [Homeopathic Medicine: Traumeel](#) : CK(40) : AC(3)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Dermatitis](#) : CK(1129) : AC(101), [Radiation Induced Illness](#) : CK(994) : AC(245), [Radiation Induced Illness: Dermatitis](#) : CK(30) : AC(2), [Stomatitis: Aphthous](#) : CK(30) : AC(3)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

A combination of geranium extract, Ganoderma lucidum, Codonopsis pilosula and Angelicae sinensis, improve the condition of cancer patients receiving chemotherapy/radiotherapy. - GMI Summary

Pubmed Data : Phytother Res. 2009 Jun;23(6):785-90. PMID: [19145638](#)

Article Published Date : Jun 01, 2009

Authors : Shu-Ru Zhuang, Su-Lin Chen, Jih-Hsin Tsai, Chi-Chou Huang, Tzu-Chin Wu, Wen-Shan Liu, Hsien-Chun Tseng, Hong-Sen Lee, Min-Chang Huang, Guang-Tzu Shane, Cheng-Hua Yang, You-Cheng Shen, Yeong-Yu Yan, Chin-Kun Wang

Study Type : Human Study

Additional Links

Substances : [Angelica](#) : CK(73) : AC(28), [Codonopsis pilosula](#) : CK(23) : AC(4), [Geranium](#) : CK(16) : AC(8), [Reishi Mushroom](#) : CK(109) : AC(43)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Radiation Induced Illness](#) : CK(994) : AC(245)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

A proprietary honey-based herbal formula reduces chemotherapy-induced neutropenia and the need for colony-stimulating factors. - GMI Summary

Pubmed Data : Med Oncol. 2006;23(4):549-52. PMID: [17303914](#)

Article Published Date : Jan 01, 2006

Authors : Jamal Zidan, Lika Shetver, Anthony Gershuny, Amira Abzah, Sigalit Tamam, Moshe Stein, Eitan Friedman

Study Type : Human Study

Additional Links

Substances : [Honey: Life Mel Proprietary Formula](#) : CK(205) : AC(31)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Neutropenia](#) : CK(90) : AC(22), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\)](#) : CK(33) : AC(10)

[Acute exercise protects against doxorubicin cardiotoxicity.](#) - GMI Summary

Pubmed Data : Integr Cancer Ther. 2008 Sep;7(3):147-54. PMID: [18815146](#)

Article Published Date : Sep 01, 2008

Authors : Karen Y Wonders, David S Hydock, Carole M Schneider, Reid Hayward

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Hypertension](#) : CK(2610) : AC(260), [Oxidative Stress](#) : CK(1858) : AC(703)

Therapeutic Actions : [Exercise](#) : CK(451) : AC(61)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

[Administration of Bifidobacterium breve on patients undergoing chemotherapy for pediatric malignancies improves their intestinal environments.](#) - GMI Summary

Pubmed Data : Support Care Cancer. 2010 Jun;18(6):751-9. Epub 2009 Aug 14. PMID: [19685085](#)

Article Published Date : Jun 01, 2010

Authors : Mariko Wada, Satoru Nagata, Masahiro Saito, Toshiaki Shimizu, Yuichiro Yamashiro, Takahiro Matsuki, Takashi Asahara, Koji Nomoto

Study Type : Human Study

Additional Links

Substances : [Bifidobacterium](#) : CK(450) : AC(42), [Bifidobacterium Breve](#) : CK(57) : AC(8), [Probiotics](#) : CK(2369) : AC(215)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

[Astragalus may provide an ideal complementary treatment to chemotherapy.](#) - GMI Summary

Pubmed Data : Food Chem Toxicol. 2008 Mar;46(3):1089-96. Epub 2007 Nov 17. PMID: [12592686](#)

Article Published Date : Mar 01, 2008

Authors : Ping Duan, Zai-mo Wang

Study Type : Human Study

Additional Links

Substances : [Astragalus](#) : CK(284) : AC(57)

Diseases : [Chemotherapy](#) : CK(65) : AC(16), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

[Atorvastatin causes cardiomyopathy when administered in combination with chemotherapy.](#) - GMI Summary

Pubmed Data : Cell Biochem Funct. 2007 Jul-Aug;25(4):463-72. PMID: [16906597](#)

Article Published Date : Jul 01, 2007

Authors : Metin Caner, Bingur Sonmez, Ozlem Kurnaz, Caner Aldemir, Seda Salar, Tuncay Altug, Ayhan Bilir, Meric A Altinoz

Study Type : Human Study

Additional Links

Diseases : [Cardiomyopathy](#) : CK(77) : AC(15), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Additional Keywords : [Drug Interaction](#) : CK(64) : AC(8)

Problem Substances : [Atorvastatin : CK\(486\) : AC\(90\)](#)

Cannabis extract is safe and efficacious in reducing chemotherapy-induced nausea and vomiting. - GMI Summary

Pubmed Data : Br J Clin Pharmacol. 2010 Nov;70(5):656-63. PMID: [21039759](#)

Article Published Date : Nov 01, 2010

Authors : Marta Duran, Eulàlia Pérez, Sergio Abanades, Xavier Vidal, Cristina Saura, Margarita Majem, Eurne Arriola, Manel Rabanal, Antoni Pastor, Magí Farré, Neus Rams, Joan-Ramon Laporte, Dolors Capellà

Study Type : Human Study

Additional Links

Substances : [Cannabis : CK\(702\) : AC\(133\)](#)

Diseases : [Chemotherapy : CK\(65\) : AC\(16\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Nausea: Chemotherapy-Induced : CK\(60\) : AC\(5\)](#)

Pharmacological Actions : [Antiemetics : CK\(40\) : AC\(4\)](#)

Carnitine improves fatigue, quality of life, lean body mass and appetite in advanced cancer patients undergoing anticancer therapy. - GMI Summary

Pubmed Data : Nutrition. 2006 Feb;22(2):136-45. PMID: [16459226](#)

Article Published Date : Feb 01, 2006

Authors : Giulia Gramignano, Maria Rita Lusso, Clelia Madeddu, Elena Massa, Roberto Serpe, Laura Deiana, Giovanna Lamonica, Mariele Dessì, Carla Spiga, Giorgio Astara, Antonio Macciò, Giovanni Mantovani

Study Type : Human Study

Additional Links

Substances : [Carnitine : CK\(650\) : AC\(67\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Chemotherapy : CK\(65\) : AC\(16\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Fatigue : CK\(218\) : AC\(29\)](#), [Quality of Life: Poor : CK\(170\) : AC\(16\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Children treated for solid tumors or lymphoma with chemotherapy have increased caries of the primary teeth. - GMI Summary

Pubmed Data : Int J Paediatr Dent. 2010 Jan;20(1):15-23. PMID: [20059589](#)

Article Published Date : Jan 01, 2010

Authors : Alison Hutton, Moira Bradwell, Martin English, Iain Chapple

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Dental Caries : CK\(247\) : AC\(33\)](#), [Neuroblastoma : CK\(51\) : AC\(31\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Exercise preconditioning protects against doxorubicin-induced cardiac dysfunction. - GMI Summary

Pubmed Data : Vet Microbiol. 2006 Oct 5;117(1):59-65. PMID: [18408619](#)

Article Published Date : Oct 05, 2006

Authors : David S Hydock, Chia-Ying Lien, Carole M Schneider, Reid Hayward

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Fermented wheat germ extract reduces chemotherapy-induced febrile neutropenia in pediatric patients. - GMI Summary

Pubmed Data : J Pediatr Hematol Oncol. 2004 Oct;26(10):631-5. PMID: [15454833](#)

Article Published Date : Oct 01, 2004

Authors : Miklós Garami, Dezso Schuler, Mária Babosa, Gábor Borgulya, Péter Hauser, Judit Müller, András Paksy, Eniko Szabó, Máté Hidvégi, György Fekete

Study Type : Human Study

Additional Links

Substances : [Wheat Germ](#) : CK(65) : AC(10)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17)

Ginger root powder is effective in reducing severity of acute and delayed chemotherapy-induced nausea and vomiting as additional therapy to ondansetron and dexamethasone in patients receiving chemotherapy. - GMI Summary

Pubmed Data : Pediatr Blood Cancer. 2010 Sep 14. Epub 2010 Sep 14. PMID: [20842754](#)

Article Published Date : Sep 14, 2010

Authors : Anu Kochanujan Pillai, Kamlesh K Sharma, Yogendra K Gupta, Sameer Bakhshi

Study Type : Human Study

Additional Links

Substances : [Ginger](#) : CK(299) : AC(91)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Nausea: Chemotherapy-Induced](#) : CK(60) : AC(5)

Pharmacological Actions : [Antiemetics](#) : CK(40) : AC(4)

Memory deficits occur in breast cancer patients who receive either chemotherapy or tamoxifen. - GMI Summary

Pubmed Data : J Psychosoc Oncol. 2011 Sep-Oct;29(5):499-514. PMID: [21882931](#)

Article Published Date : Sep 01, 2011

Authors : Svetlana Prokasheva, Yifat Faran, Julie Cwikel, David B Geffen

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Memory Disorders: Drug-Induced](#) : CK(74) : AC(9), [Memory Loss](#) : CK(117) : AC(34)

Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33)

Problem Substances : [Tamoxifen](#) : CK(294) : AC(39)

Adverse Pharmacological Actions : [Neurotoxic](#) : CK(976) : AC(155)

Polysaccharides isolated from Echinacea purpurea herba cell cultures to counteract undesired effects of chemotherapy. - GMI Summary

Pubmed Data : Phytother Res. 2002 Mar;16(2):138-42. PMID: [11933115](#)

Article Published Date : Mar 01, 2002

Authors : Dieter Melchart, Christof Clemm, Bernhard Weber, Thorsten Draczynski, Felege Worku, Klaus Linde, Wolfgang Weidenhammer, Hildebert Wagner, Reinhard Saller

Study Type : Human Study

Additional Links

Substances : [Echinacea](#) : CK(469) : AC(90)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Gastric Cancer](#) : CK(360) : AC(108), [Leukopenia](#) : CK(43) : AC(7), [Leukopenia: Chemotherapy Induced](#) : CK(25) : AC(5)

Additional Keywords : [Drug: 5-fluorouracil](#) : CK(88) : AC(23), [Plant Extracts](#) : CK(3297) : AC(1135)

Saccharomyces boulardii has significant therapeutic activity in irinotecan-induced (chemotherapy) diarrhea and mucositis. - GMI Summary

Pubmed Data : Med Oncol. 2008 Dec 9. PMID: [19067257](#)

Article Published Date : Dec 09, 2008

Authors : Atakan Sezer, Ufuk Usta, Irfan Cicin

Study Type : Human Study

Additional Links

Substances : [Saccharomyces Boulardii](#) : CK(137) : AC(21)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Diarrhea](#) : CK(519) : AC(69), [Mucositis](#) : CK(49) : AC(10)

Additional Keywords : [Drug: Irinotecan](#) : CK(10) : AC(1)

[The decrease in neutrophil count caused by breast carcinoma chemotherapy was ameliorated by dietary supplementation with a multivitamin or vitamin E.](#) - GMI Summary

Pubmed Data : Cancer. 2004 Sep 1;101(5):1058-64. PMID: [15329916](#)

Article Published Date : Sep 01, 2004

Authors : Richard F Branda, Shelly J Naud, Elice M Brooks, Zhuan Chen, Hyman Muss

Study Type : Human Study

Additional Links

Substances : [Folic Acid](#) : CK(572) : AC(79), [Vitamin B-12](#) : CK(752) : AC(98), [Vitamin E](#) : CK(1288) : AC(227)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Mucositis](#) : CK(49) : AC(10), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293)

[TRAUMEEL S may reduce significantly the severity and duration of chemotherapy-induced stomatitis in children undergoing bone marrow transplantation.](#) - GMI Summary

Pubmed Data : Cancer. 2001 Aug 1;92(3):684-90. PMID: [11505416](#)

Article Published Date : Aug 01, 2001

Authors : M Oberbaum, I Yaniv, Y Ben-Gal, J Stein, N Ben-Zvi, L S Freedman, D Branski

Study Type : Human Study

Additional Links

Substances : [Homeopathic Medicine: Traumeel](#) : CK(40) : AC(3)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Stomatitis: Chemotherapy-Induced](#) : CK(10) : AC(1)

Therapeutic Actions : [Homeopathic Treatment](#) : CK(642) : AC(68)

Pharmacological Actions : [Anti-Inflammatory Agents](#) : CK(1159) : AC(412)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

[Vitamin E and N-acetylcysteine are an effective antioxidant adjuvant therapy in children with acute lymphoblastic leukemia to reduce the chemo-/radiotherapy toxicity of treatment.](#) - GMI Summary

Pubmed Data : Adv Hematol. 2009;2009:689639. Epub 2009 Oct 20. PMID: [19960046](#)

Article Published Date : Jan 01, 2009

Authors : Youssef Al-Tonbary, Mohammad Al-Haggag, Rasha El-Ashry, Sahar El-Dakroory, Hanan Azzam, Ashraf Fouda

Study Type : Human Study

Additional Links

Substances : [NAC \(N-acetyl-L-cysteine\)](#) : CK(248) : AC(64), [Vitamin E](#) : CK(1288) : AC(227)

Diseases : [Acute lymphoblastic leukemia \(ALL\)](#) : CK(95) : AC(28), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Radiation Induced Illness](#) : CK(994) : AC(245)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Wheat grass juice may reduce myelotoxicity and need for granulocyte colony-stimulating factors in breast cancer patients receiving chemotherapy.](#) - GMI Summary

Pubmed Data : Nutr Cancer. 2007;58(1):43-8. PMID: [17571966](#)

Article Published Date : Jan 01, 2007

Authors : Gil Bar-Sela, Medy Tsalic, Getta Fried, Hadassah Goldberg

Study Type : Human Study

Additional Links

Substances : [Wheat Grass : CK\(182\) : AC\(11\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Myelotoxicity : CK\(31\) : AC\(8\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

"Impaired cognitive function and hippocampal neurogenesis following cancer chemotherapy." - GMI Summary

Pubmed Data : Clin Cancer Res. 2012 Feb 14. Epub 2012 Feb 14. PMID: [22338017](#)

Article Published Date : Feb 14, 2012

Authors : Lori-Ann Christie, Munjal M Acharya, Vipin K Parihar, Anna Nguyen, Vahan Martirosian, Charles L Limoli

Study Type : Animal Study

Additional Links

Diseases : [Brain Injury: Hippocampal Damage : CK\(35\) : AC\(12\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [Cognitive Decline/Dysfunction : CK\(500\) : AC\(80\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#)

Problem Substances : [Cyclophosphamide : CK\(2\) : AC\(1\)](#), [Doxorubicin : CK\(2\) : AC\(1\)](#)

Adverse Pharmacological Actions : [Neurotoxic : CK\(976\) : AC\(155\)](#)

A compound in mangosteen prevents cisplatin-induced toxicity to the kidneys of rats. - GMI Summary

Pubmed Data : Chem Biol Interact. 2010 Oct 6;188(1):144-50. PMID: [20603111](#)

Article Published Date : Oct 06, 2010

Authors : Yesennia Sánchez-Pérez, Rocío Morales-Bárcenas, Claudia M García-Cuellar, Rebeca López-Marure, Mariel Calderon-Oliver, José Pedraza-Chaverri, Yolanda I Chirino

Study Type : Animal Study

Additional Links

Substances : [Mangosteen : CK\(43\) : AC\(21\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

AHCC attenuates cisplatin (chemotherapy) induced side effects in tumor-bearing mice. - GMI Summary

Pubmed Data : Toxicol Appl Pharmacol. 2007 Jul 15;222(2):152-8. Epub 2007 Apr 20. PMID: [17555784](#)

Article Published Date : Jul 15, 2007

Authors : Aya Hirose, Eri Sato, Hajime Fujii, Buxiang Sun, Hiroshi Nishioka, Okezie I Aruoma

Study Type : Animal Study

Additional Links

Substances : [AHCC : CK\(48\) : AC\(17\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Tumors : CK\(179\) : AC\(107\)](#)

AHCC improves treatment outcome and reduces side effects in anticancer drug treated mice. - GMI Summary

Pubmed Data : J Exp Ther Oncol. 2009;8(1):43-51. PMID: [19827270](#)

Article Published Date : Jan 01, 2009

Authors : Kota Shigama, Akihiro Nakaya, Koji Wakame, Hiroshi Nishioka, Hajime Fujii

Study Type : Animal Study

Additional Links

Substances : [AHCC : CK\(48\) : AC\(17\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Chemotherapy Induced Myelotoxicity :](#)

[CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Myelotoxicity : CK\(31\) : AC\(8\)](#)
Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#)
Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

AHCC prevents chemotherapy induced hair loss. - GMI Summary

Pubmed Data : Cancer Epidemiol. 2009 Oct;33(3-4):293-9. Epub 2009 Aug 20. PMID: [19699163](#)

Article Published Date : Oct 01, 2009

Authors : Buxiang Sun, Koji Wakame, Eri Sato, Hiroshi Nishioka, Okezie I Aruoma, Hajime Fujii

Study Type : Animal Study

Additional Links

Substances : [AHCC : CK\(48\) : AC\(17\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Hair Loss : CK\(99\) : AC\(22\)](#)

Bile acid conjugate prevents Oxaliplatin chemotherapy-induced fatty liver. - GMI Summary

Pubmed Data : Cancer. 2010 Jan 1;116(1):251-5. PMID: [19890960](#)

Article Published Date : Jan 01, 2010

Authors : Daniel Keizman, Natalie Maimon, Maya Ish-Shalom, Dana Buchbut, Moshe Inbar, Baruch Klein, Joelle Bernheim, Ilana Goldiner, Alicia Leikin-Frenkel, Fred Konikoff

Study Type : Animal Study

Additional Links

Substances : [Bile salts : CK\(5\) : AC\(3\)](#)

Diseases : [Chemotherapy-Induced Liver Toxicity : CK\(14\) : AC\(8\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Oxaliplatin : CK\(2\) : AC\(1\)](#), [Fatty Liver : CK\(486\) : AC\(116\)](#)

Caffeic acid phenetyl ester, a compound found within bee propolis, protects against doxorubicin-induced cardiotoxicity in rats. - GMI Summary

Pubmed Data : Am J Ind Med. 2010 Sep 30. Epub 2010 Sep 30. PMID: [14745846](#)

Article Published Date : Sep 30, 2010

Authors : Ersin Fadillioglu, Emin Oztas, Hasan Erdogan, Murat Yagmurca, Sadik Sogut, Muharrem Ucar, M Kemal Irmak

Study Type : Animal Study

Additional Links

Substances : [Bee Propolis : CK\(222\) : AC\(88\)](#), [Caffeic acid phenethyl ester : CK\(15\) : AC\(8\)](#)

Diseases : [Cardiotoxicity: Chemotherapy-Induced : CK\(12\) : AC\(6\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Coenzyme Q10 treatment ameliorates acute cisplatin nephrotoxicity in mice. - GMI Summary

Pubmed Data : Toxicology. 2010 Jul-Aug;274(1-3):49-56. Epub 2010 May 25. PMID: [20510337](#)

Article Published Date : Jul 01, 2010

Authors : Amr A Fouad, Ali Ibrahim Al-Sultan, Shereen M Refaie, Mohamed T Yacoubi

Study Type : Animal Study

Additional Links

Substances : [Coenzyme Q10 : CK\(667\) : AC\(103\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Curcumin and CAPE may reduce chemotherapy-induced mucosal barrier injury. - GMI Summary

Pubmed Data : Leukemia. 2004 Feb;18(2):276-84. PMID: [14671640](#)

Article Published Date : Feb 01, 2004

Authors : B van't Land, N M A Blijlevens, J Marteiijn, S Timal, J P Donnelly, T J M de Witte, L M'Rabet

Study Type : Animal Study

Additional Links

Substances : [Caffeic acid phenethyl ester](#) : CK(15) : AC(8), [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Mucositis](#) : CK(49) : AC(10)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Curcumin protects against cisplatin-induced oxidative injury in rat testis. - GMI Summary

Pubmed Data : Hum Reprod. 2009 Jul;24(7):1717-25. Epub 2009 Mar 11. PMID: [19279034](#)

Article Published Date : Jul 01, 2009

Authors : Yusuf Ozlem Ilbey, Emin Ozbek, Mustafa Cekmen, Abdulmuttalip Simsek, Alper Otuncemur, Adnan Somay

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11)

Curcumin reduced the side effects of mitomycin C in the treatment of breast cancer. - GMI Summary

Pubmed Data : Cancer Sci. 2009 Nov;100(11):2040-5. Epub 2009 Jul 23. PMID: [19703194](#)

Article Published Date : Nov 01, 2009

Authors : Qian-Mei Zhou, Hui Zhang, Yi-Yu Lu, Xiu-Feng Wang, Shi-Bing Su

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Mitomycin-C](#) : CK(6) : AC(4), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Mitomycin](#) : CK(4) : AC(3), [Drug Synergy](#) : CK(309) : AC(137)

Goji significantly enhances peripheral platelet and white blood cell counts in irradiation and chemotherapy-induced myelosuppressive mice. - GMI Summary

Pubmed Data : Cancer Biother Radiopharm. 2005 Apr;20(2):155-62. PMID: [15869449](#)

Article Published Date : Apr 01, 2005

Authors : Haiyang Gong, Ping Shen, Li Jin, Changhong Xing, Fu Tang

Study Type : Animal Study

Additional Links

Substances : [Goji](#) : CK(53) : AC(18)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Leukopenia](#) : CK(43) : AC(7), [Thrombocytopenia](#) : CK(238) : AC(25)

L-carnitine may reduce cardiotoxicities associated with epirubicin toxicity. - GMI Summary

Pubmed Data : Cancer Lett. 2007 Jul 18;252(2):195-207. Epub 2007 Feb 2. PMID: [17275999](#)

Article Published Date : Jul 18, 2007

Authors : Christie E Delaney, Sean P Hopkins, Christina L Addison

Study Type : Animal Study

Additional Links

Substances : [Carnitine](#) : CK(650) : AC(67)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Epirubicin](#) : CK(2) : AC(1)

Additional Keywords : [Drug: Epirubicin](#) : CK(2) : AC(1), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Maitake beta-glucan promotes recovery of leukocytes and myeloid cell function in peripheral blood from paclitaxel hematotoxicity. - GMI Summary

Pubmed Data : Cancer Immunol Immunother. 2010 Feb 6. Epub 2010 Feb 6. PMID: [20140432](#)

Article Published Date : Feb 06, 2010

Authors : Hong Lin, Elisa de Stanchina, Xi Kathy Zhou, Feng Hong, Andrew Seidman, Monica Fornier, Wei-Lie Xiao, Edward J Kennelly, Kathleen Wesa, Barrie R Cassileth, Susanna Cunningham-Rundles

Study Type : Animal Study

Additional Links

Substances : [Beta-glucan](#) : CK(223) : AC(41), [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Paclitaxel](#) : CK(32) : AC(4), [Myelotoxicity](#) : CK(31) : AC(8)

Pharmacological Actions : [Chemopreventive](#) : CK(1254) : AC(342)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Mangosteen protects against cisplatin-induced kidney toxicity. - GMI Summary

Pubmed Data : Free Radic Res. 2009;43(11):1122-32. PMID: [19863372](#)

Article Published Date : Jan 01, 2009

Authors : Jazmin M Pérez-Rojas, Cristino Cruz, Patricia García-López, Dolores J Sánchez-González, Claudia M Martínez-Martínez, Gisela Ceballos, Magali Espinosa, Jorge Meléndez-Zajgla, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Mangosteen](#) : CK(43) : AC(21)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage](#) : CK(118) : AC(41)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Oleuropein confers protection against doxorubicin-induced cardiotoxicity. - GMI Summary

Pubmed Data : NMR Biomed. 2009 Jul;22(6):585-92. PMID: [19308947](#)

Article Published Date : Jul 01, 2009

Authors : Ioanna Andreadou, Maria Papaefthimiou, Athina Zira, Maria Constantinou, Fragiska Sigala, Alexios-Leandros Skaltsounis, Anna Tsantili-Kakoulidou, Efstathios K Iliodromitis, Dimitrios T Kremastinos, Emmanuel Mikros

Study Type : Animal Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antihypertensive Agents](#) : CK(194) : AC(38), [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Oleuropein prevents doxorubicin-induced cardiotoxicity and improves therapeutic outcome. - GMI Summary

Pubmed Data : J Mol Cell Cardiol. 2007 Mar;42(3):549-58. Epub 2007 Jan 16. PMID: [17223128](#)

Article Published Date : Mar 01, 2007

Authors : Ioanna Andreadou, Fragiska Sigala, Efstathios K Iliodromitis, Maria Papaefthimiou, Constantinos Sigalas, Nektarios Aligiannis, Paraskevi Savvari, Vassilis Gorgoulis, Efstathios

Papalabros, Dimitrios Th Kremastinos

Study Type : Animal Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Oxidative Stress](#) : CK(1858) : AC(703)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Paclitaxel has a myelotoxic and immunosuppressive effect.](#) - GMI Summary

Pubmed Data : Eksp Klin Farmakol. 2007 Jul-Aug;70(4):39-43. PMID: [18078042](#)

Article Published Date : Jul 01, 2007

Authors : G V Karpov, T I Fomina, O L Voronova, E V Abramova, E A Timina, T Iu Lamzina, L A Ermolaeva, A V Perova

Study Type : Animal Study

Additional Links

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Problem Substances : [Paclitaxel](#) : CK(28) : AC(6)

[Paclitaxel has a wide range of adverse effects in mice.](#) - GMI Summary

Pubmed Data : Bull Exp Biol Med. 2008 Feb;145(2):213-7. PMID: [19023972](#)

Article Published Date : Feb 01, 2008

Authors : A A Churin, V E Gol'dberg, G V Karpova, O L Voronova, E P Feodorova, O V Kolotova, E G Skurikhin, O V Pershina

Study Type : Animal Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Problem Substances : [Paclitaxel](#) : CK(28) : AC(6)

[Piperine protects against cisplatin-induced toxicity in auditory cells.](#) - GMI Summary

Pubmed Data : J Nutr Biochem. 2007 Sep;18(9):615-22. Epub 2007 Apr 5. PMID: [17418561](#)

Article Published Date : Sep 01, 2007

Authors : Byung-Min Choi, Sung-Min Kim, Tae-Kwang Park, Guang Li, Sung-Jae Hong, Raekil Park, Hun-Taeg Chung, Bok-Ryang Kim

Study Type : Animal Study

Additional Links

Substances : [Piperidines](#) : CK(45) : AC(17)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087)

[Pomegranate seed extract attenuates chemotherapy-induced acute nephrotoxicity and hepatotoxicity.](#) - GMI Summary

Pubmed Data : J Med Food. 2011 May 6. Epub 2011 May 6. PMID: [21548807](#)

Article Published Date : May 06, 2011

Authors : Kerim Cayir, Ali Karadeniz, Nejdet Simsek, Serap Yildirim, Emre Karakuş, Adem Kara, Hürrem Turan Akkoyun, Emin Sengül

Study Type : Animal Study

Additional Links

Substances : [Pomegranate Seed](#) : CK(2) : AC(1)

Diseases : [Chemotherapy-Induced Liver Toxicity](#) : CK(14) : AC(8), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Glutathione S-transferase Inhibitor](#) : CK(3) : AC(2), [Hepatoprotective](#) : CK(528) : AC(257), [Renoprotective](#) : CK(179) : AC(84)

Resveratrol alleviates chemotherapy-induced (bleomycin) lung injury in rats.

- GMI Summary

Pubmed Data : : Pulm Pharmacol Ther. 2007;20(6):642-9. Epub 2006 Sep 3. PMID: [17035056](#)

Article Published Date : Jan 01, 2007

Authors : Göksel Sener, Nurhayat Topaloğlu, A Ozer Sehirli, Feriha Ercan, Nursal Gedik

Study Type : Animal Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10), [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Rubia cordifolia ameliorates cisplatin-induced nephrotoxicity in mice.

Summary

Pubmed Data : J Cancer Res Ther. 2008 Jul-Sep;4(3):111-5. PMID: [18923202](#)

Article Published Date : Jul 01, 2008

Authors : Jisha Joy, Cherupally Krishnan Krishnan Nair

Study Type : Animal Study

Additional Links

Substances : [Rubia Cordifolia](#) : CK(8) : AC(4)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Saffron protects against chromosomal damage induced by cisplatin, mitomycin-C and urethane.

GMI Summary

Pubmed Data : Asia Pac J Clin Nutr. 2003;12(4):474-6. PMID: [14672873](#)

Article Published Date : Jan 01, 2003

Authors : Kumpati Premkumar, Suresh K Abraham, Sathiyavedu T Santhiya, Arabandi Ramesh

Study Type : Animal Study

Additional Links

Substances : [Saffron](#) : CK(123) : AC(32)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Chemopreventive](#) : CK(1254) : AC(342)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Schisandra protects against adriamycin-induced cardiotoxicity in rats.

Summary

Pubmed Data : Chang Gung Med J. 2006 Jan-Feb;29(1):63-70. PMID: [16642728](#)

Article Published Date : Jan 01, 2006

Authors : Jyh-Sheng You, Tai-Long Pan, Yu-Chang Hou

Study Type : Animal Study

Additional Links

Substances : [Schisandra](#) : CK(129) : AC(44)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Sulforaphane protects against cisplatin-induced nephrotoxicity.

Summary

Pubmed Data : Int J Sport Nutr Exerc Metab. 2007 Aug;17(4):352-63. PMID: [19913604](#)

Article Published Date : Aug 01, 2007

Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Edilia Tapia, Omar N Medina-Campos, Dolores Javier Sánchez-González, Claudia María Martínez-Martínez, Karla Mariana Ortiz-Vega, Martha Franco, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Renoprotective](#) : CK(179) : AC(84)

Testosterone has a preventive role on cisplatin-induced gonadal toxicity. - GMI Summary

Pubmed Data : Fertil Steril. 2010 Mar 15;93(5):1388-93. Epub 2009 Apr 10. PMID: [19362306](#)

Article Published Date : Mar 15, 2010

Authors : Alireza Aminsharifi, Saeed Shakeri, Ali Ariafar, Behnam Moeinjahromi, Prikala V Kumar, Saeed Karbalaeeidoost

Study Type : Animal Study

Additional Links

Substances : [Testosterone](#) : CK(133) : AC(25)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Curcumin reduces NF-kappa B factor activation associated with anticancer drugs. - GMI Summary

Pubmed Data : Endocr Relat Cancer. 2009 Dec;16(4):1339-50. Epub 2009 Sep 2. PMID: [12007574](#)

Article Published Date : Dec 01, 2009

Authors : Shuang En Chuang, Pei Yen Yeh, Yen Shen Lu, Gi Ming Lai, Chao Ming Liao, Ming Gao, Ann Lii Cheng

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy](#) : CK(65) : AC(16), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug: Tamoxifen](#) : CK(367) : AC(53)

Melatonin decreases the toxicity and increases the efficacy of chemotherapy in patients with metastatic solid tumors and poor clinical status. - GMI Summary

Pubmed Data : Eur J Cancer. 1999 Nov;35(12):1688-92. PMID: [10674014](#)

Article Published Date : Nov 01, 1999

Authors : P Lissoni, S Barni, M Mandalà, A Ardizzoia, F Paolorossi, M Vaghi, R Longarini, F Malugani, G Tancini

Study Type : In Vitro Study

Additional Links

Substances : [Melatonin](#) : CK(454) : AC(115)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Pharmacological Actions : [Drug synergy](#) : CK(51) : AC(14)

MRP-1 with efflux activity has been discovered in human mitochondria and may be up-regulated through exposure to non-lethal doses of the chemoagent doxorubicin. - GMI Summary

Pubmed Data : Br J Cancer. 2012 Feb 21. Epub 2012 Feb 21. PMID: [22353810](#)

Article Published Date : Feb 21, 2012

Authors : E A Roundhill, S A Burchill

Study Type : In Vitro Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#)

Additional Keywords : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#)

Problem Substances : [Doxorubicin : CK\(2\) : AC\(1\)](#)

Purified anthocyanin from eggplant reduces genotoxicity and mutagenicity of cyclophosphamide. - GMI Summary

Pubmed Data : Clin Cancer Res. 2009 Feb 15;15(4):1269-76. PMID: [17194516](#)

Article Published Date : Feb 15, 2009

Authors : Luciana Azevedo, Patrícia L Alves de Lima, José C Gomes, Paulo C Stringheta, Daniel A Ribeiro, Daisy M F Salvadori

Study Type : In Vitro Study

Additional Links

Substances : [Anthocyanins : CK\(47\) : AC\(16\)](#), [Eggplant : CK\(26\) : AC\(10\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [DNA damage : CK\(687\) : AC\(287\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Sulforaphane protects against sulfur mustard cytotoxicity. - GMI Summary

Pubmed Data : Cutan Ocul Toxicol. 2006;25(3):155-63. PMID: [16980241](#)

Article Published Date : Jan 01, 2006

Authors : Clark L Gross, Eric W Nealley, Mary T Nipwoda, William J Smith

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#)

Topical curcumin can inhibit deleterious effects of upper respiratory tract bacteria on human oropharyngeal cells. - GMI Summary

Pubmed Data : Support Care Cancer. 2010 May 14. Epub 2010 May 14. PMID: [20467756](#)

Article Published Date : May 14, 2010

Authors : Sonja Lüer, Rolf Troller, Marion Jetter, Violeta Spaniol, Christoph Aebi

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Mucositis : CK\(49\) : AC\(10\)](#), [Upper Respiratory Infections : CK\(849\) : AC\(92\)](#)

Pharmacological Actions : [Anti-Bacterial Agents : CK\(901\) : AC\(280\)](#), [Anti-Inflammatory Agents : CK\(1159\) : AC\(412\)](#)

Maitake enhances granulopoiesis and mobilization of granulocytes by increasing granulocyte colony-stimulating factor. - GMI Summary

Pubmed Data : Int Immunopharmacol. 2009 Jun 30. PMID: [19573626](#)

Article Published Date : Jun 30, 2009

Authors : Koichi Ito, Yuki Masuda, Yoshihiko Yamasaki, Yoshinobu Yokota, Hiroaki Nanba

Study Type : Commentary

Additional Links

Substances : [Maitake Mushroom : CK\(61\) : AC\(34\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Leukopenia: Chemotherapy Induced : CK\(25\) : AC\(5\)](#), [Neutropenia : CK\(90\) : AC\(22\)](#), [Neutropenia: Chemotherapy Induced : CK\(82\) : AC\(17\)](#), [Neutropenia: Cyclic : CK\(48\) : AC\(16\)](#)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\) : CK\(33\) : AC\(10\)](#)

Anticancer drugs may cause kidney disorders. - GMI Summary

Pubmed Data : Drug Saf. 2001 Jan;24(1):19-38. PMID: [11219485](#)

Article Published Date : Jan 01, 2001

Authors : P E Kintzel

Study Type : Review

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Iatrogenic Disease : CK\(62\) : AC\(7\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#)

Curcumin has radiosensitizing and chemosensitizing effects on tumors while protecting healthy tissue from damage. - GMI Summary

Pubmed Data : Nutr Cancer. 2010 Oct;62(7):919-30. PMID: [20924967](#)

Article Published Date : Oct 01, 2010

Authors : Ajay Goel, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#),

[Radiation Induced Illness : CK\(994\) : AC\(245\)](#), [Tumors : CK\(179\) : AC\(107\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

Glutamine prevents chemotherapy and radiation toxicity and may increase the efficacy of cancer treatment. - GMI Summary

Pubmed Data : Cancer Treat Rev. 2003 Dec;29(6):501-13. PMID: [14585260](#)

Article Published Date : Dec 01, 2003

Authors : Diane M F Savarese, Gayle Savy, Linda Vahdat, Paul E Wischmeyer, Barbara Corey

Study Type : Review

Additional Links

Substances : [Glutamine : CK\(120\) : AC\(22\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Radiation Induced Illness : CK\(994\) : AC\(245\)](#)

Pharmacological Actions : [Radioprotective : CK\(453\) : AC\(180\)](#)

American Ginseng is capable of suppressing the chromosomal aberration induced by the chemotherapeutic agent Mitomycin C. - GMI Summary

Pubmed Data : Phytother Res. 2007 Dec;21(12):1221-7. PMID: [17661327](#)

Article Published Date : Dec 01, 2007

Authors : Amol Ashok Pawar, Durga Nand Tripathi, Poduri Ramarao, Gopabandhu Jena

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#)

Ellagic acid reduces chemotherapy induced toxicity (e.g. neutropenia), in hormone refractory prostate cancer. - GMI Summary

Pubmed Data : Eur Urol. 2005 Apr;47(4):449-54; discussion 454-5. Epub 2005 Jan 19. PMID: [15774240](#)

Article Published Date : Apr 01, 2005

Authors : Mario Falsaperla, Giuseppe Morgia, Alfredo Tartarone, Raffaele Ardito, Giampiero Romano

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#)

Royal jelly has a healing effect for 5-fluorouracil-induced experimental oral mucositis in hamsters. - GMI Summary

Pubmed Data : Methods Find Exp Clin Pharmacol. 2008 Mar;30(2):103-6. PMID: [18560624](#)

Article Published Date : Mar 01, 2008

Authors : K Suemaru, R Cui, B Li, S Watanabe, K Okihara, K Hashimoto, H Yamada, H Araki

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#)

Plant Extracts (AC 22)

[There is evidence to support the use of topical calendula for prophylaxis of acute dermatitis during radiotherapy and Traumeel S mouthwash in the treatment of chemotherapy-induced stomatitis.](#) - GMI Summary

Pubmed Data : Cochrane Database Syst Rev. 2009(2):CD004845. Epub 2009 Apr 15. PMID: [19370613](#)

Article Published Date : Jan 01, 2009

Authors : Sosie Kassab, Mike Cummings, Saul Berkovitz, Robbert van Haselen, Peter Fisher

Study Type : Meta Analysis

Additional Links

Substances : [Calendula : CK\(41\) : AC\(4\)](#), [Homeopathic Medicine: All : CK\(501\) : AC\(48\)](#), [Homeopathic Medicine: Traumeel : CK\(40\) : AC\(3\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Dermatitis : CK\(1129\) : AC\(101\)](#), [Radiation Induced Illness : CK\(994\) : AC\(245\)](#), [Radiation Induced Illness: Dermatitis : CK\(30\) : AC\(2\)](#), [Stomatitis: Aphthous : CK\(30\) : AC\(3\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

[Polysaccharides isolated from Echinacea purpurea herba cell cultures to counteract undesired effects of chemotherapy.](#) - GMI Summary

Pubmed Data : Phytother Res. 2002 Mar;16(2):138-42. PMID: [11933115](#)

Article Published Date : Mar 01, 2002

Authors : Dieter Melchart, Christof Clemm, Bernhard Weber, Thorsten Draczynski, Felege Worku, Klaus Linde, Wolfgang Weidenhammer, Hildebert Wagner, Reinhard Saller

Study Type : Human Study

Additional Links

Substances : [Echinacea : CK\(469\) : AC\(90\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Gastric Cancer : CK\(360\) : AC\(108\)](#), [Leukopenia : CK\(43\) : AC\(7\)](#), [Leukopenia: Chemotherapy Induced : CK\(25\) : AC\(5\)](#)

Additional Keywords : [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

[TRAUMEEL S may reduce significantly the severity and duration of chemotherapy-induced stomatitis in children undergoing bone marrow transplantation.](#) - GMI Summary

Pubmed Data : Cancer. 2001 Aug 1;92(3):684-90. PMID: [11505416](#)

Article Published Date : Aug 01, 2001

Authors : M Oberbaum, I Yaniv, Y Ben-Gal, J Stein, N Ben-Zvi, L S Freedman, D Branski

Study Type : Human Study

Additional Links

Substances : [Homeopathic Medicine: Traumeel : CK\(40\) : AC\(3\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Stomatitis: Chemotherapy-Induced : CK\(10\) : AC\(1\)](#)

Therapeutic Actions : [Homeopathic Treatment : CK\(642\) : AC\(68\)](#)

Pharmacological Actions : [Anti-Inflammatory Agents : CK\(1159\) : AC\(412\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

[A combination of Bacopa, Amla \(E. officinalis\), Licorice \(G. glabra\), Indian mango \(M. indica\) and Clove \(S. aromaticum\) protect against experimentally-induced cardiac and renal damage.](#) - GMI Summary

Pubmed Data : Phytother Res. 2005 Mar;19(3):216-21. PMID: [15934019](#)

Article Published Date : Mar 01, 2005

Authors : P A Bafna, R Balaraman

Study Type : Animal Study

Additional Links

Substances : [Amla Fruit : CK\(59\) : AC\(28\)](#), [Bacopa : CK\(47\) : AC\(18\)](#), [Clove : CK\(91\) : AC\(46\)](#), [Licorice : CK\(254\) : AC\(79\)](#), [Mango : CK\(60\) : AC\(11\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Myocardial Infarction : CK\(888\) : AC\(116\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Aged garlic extract and grape seed proanthocyanidin protect against doxorubicin-induced cardiotoxicity. - GMI Summary

Pubmed Data : Can J Physiol Pharmacol. 2009 Aug;87(8):633-40. PMID: [19767888](#)

Article Published Date : Aug 01, 2009

Authors : Erkan Demirkaya, Aslihan Avci, Vural Kesik, Yildirim Karslioglu, Emin Oztas, Erol Kismet, Erdal Gokcay, Ilker Durak, Vedat Koseoglu

Study Type : Animal Study

Additional Links

Substances : [Garlic : CK\(488\) : AC\(156\)](#), [Grape Seed Extract : CK\(172\) : AC\(58\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#), [Proanthocyanidins : CK\(167\) : AC\(45\)](#)

Brassica rapa (Mustard Greens) have a protective effect on cisplatin-induced nephrotoxicity in cells and rats. - GMI Summary

Pubmed Data : Biol Pharm Bull. 2006 Dec;29(12):2436-41. PMID: [17142978](#)

Article Published Date : Dec 01, 2006

Authors : Yang-Hee Kim, Yong-Won Kim, Young-Jun Oh, Nam-In Back, Sun-A Chung, Hae-Gon Chung, Tae-Sook Jeong, Myung-Sook Choi, Kyung-Tae Lee

Study Type : Animal Study

Additional Links

Substances : [Mustard Greens : CK\(39\) : AC\(12\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Celery has a protective effect against doxorubicin toxicity. - GMI Summary

Pubmed Data : Molecules. 2009 ;14(4):1627-38. Epub 2009 Apr 24. PMID: [19396021](#)

Article Published Date : Jan 01, 2009

Authors : Jovanka Kolarovic, Mira Popovic, Momir Mikov, Radoslav Mitic, Ljiljana Gvozdenovic

Study Type : Animal Study

Additional Links

Substances : [Celery : CK\(28\) : AC\(12\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [Lipid Peroxidation : CK\(333\) : AC\(125\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Coriandrum sativum has a protective effect on carbon tetrachloride-induced hepatotoxicity in mice. - GMI Summary

Pubmed Data : Food Chem Toxicol. 2009 Apr;47(4):702-8. Epub 2008 Dec 29. PMID: [19146910](#)

Article Published Date : Apr 01, 2009

Authors : S Sreelatha, P R Padma, M Umadevi

Study Type : Animal Study

Additional Links

Substances : [Coriandrum sativum : CK\(53\) : AC\(27\)](#)

Diseases : [Chemotherapy-Induced Liver Toxicity : CK\(14\) : AC\(8\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Hepatoprotective : CK\(528\) : AC\(257\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Curcumin protects against doxorubicin (adriamycin)-induced toxicity in rats. - GMI Summary

Pubmed Data : J Med Food. 2009 Apr;12(2):394-402. PMID: [19459743](#)

Article Published Date : Apr 01, 2009

Authors : Ragaa Hosny Mohamad, Amal Mohamad El-Bastawesy, Zekry Khalid Zekry, Hussain A Al-Mehdar, Mohamad Gamil Abdel Monaam Al-Said, Soaad Shaker Aly, Sabry Mohamed Sharawy, Mahmud M El-Merzabani

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemically-Induced Liver Damage : CK\(451\) : AC\(174\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Ginkgo biloba prevents bleomycin-induced oxidative injury in rats. - GMI Summary

Pubmed Data : Toxicol Ind Health. 2006 Feb;22(1):47-52. PMID: [16572711](#)

Article Published Date : Feb 01, 2006

Authors : Hasan Erdogan, Ersin Fadillioğlu, Mahir Kotuk, Mustafa Iraz, Seda Tasdemir, Yesim Oztas, Zeki Yildirim

Study Type : Animal Study

Additional Links

Substances : [Ginkgo biloba : CK\(505\) : AC\(101\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Grape seed extract prevents gentamicin-induced nephrotoxicity and genotoxicity in bone marrow cells of mice. - GMI Summary

Pubmed Data : Basic Clin Pharmacol Toxicol. 2006 Sep;99(3):230-6. PMID: [16930296](#)

Article Published Date : Sep 01, 2006

Authors : Ibrahim M El-Ashmawy, Abeer F El-Nahas, Osama M Salama

Study Type : Animal Study

Additional Links

Substances : [Grape Seed Extract : CK\(172\) : AC\(58\)](#)

Diseases : [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity: Gentamicin : CK\(20\) : AC\(10\)](#), [Kidney Damage: Drug-Induced : CK\(86\) : AC\(18\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Genoprotective : CK\(109\) : AC\(46\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

L-carnitine and ginkgo biloba extract exhibits a protective agent in an animal model of bleomycin-induced lung fibrosis - GMI Summary

Pubmed Data : Pharmacol Res. 2002 Jun;45(6):461-7. PMID: [12162946](#)

Article Published Date : Jun 01, 2002

Authors : Mohamed H Daba, Abdel-Aziz H Abdel-Aziz, Adel M Moustafa, Abdulhakeem A Al-Majed, Othman A Al-Shabanah, Hassan A El-Kashef

Study Type : Animal Study

Additional Links

Substances : [Carnitine : CK\(650\) : AC\(67\)](#), [Ginkgo biloba : CK\(505\) : AC\(101\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

Pharmacological Actions : [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Loquat seed inhibits oxidative stress associated with adriamycin-induced nephropathy. - GMI Summary

Pubmed Data : Biol Pharm Bull. 2004 Dec;27(12):1961-4. PMID: [15577213](#)

Article Published Date : Dec 01, 2004

Authors : Atsuhide Hamada, Saburo Yoshioka, Daisuke Takuma, Junko Yokota, Tailine Cui, Masahiko Kusunose, Mitsuhiko Miyamura, Shojiro Kyotani, Yutaka Nishioka

Study Type : Animal Study

Additional Links

Substances : [Loquat Seeds : CK\(11\) : AC\(6\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin : CK\(17\) : AC\(10\)](#), [Lipid Peroxidation : CK\(333\) : AC\(125\)](#), [Nephropathy : CK\(161\) : AC\(29\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Glutathione Upregulation : CK\(152\) : AC\(47\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Rhus verniciflua Stokes prevents cisplatin-induced cytotoxicity and reactive oxygen species production in renal cells and intact mice. - GMI Summary

Pubmed Data : Phytomedicine. 2009 Mar;16(2-3):188-97. Epub 2009 Jan 15. PMID: [19150236](#)

Article Published Date : Mar 01, 2009

Authors : Joo-Ho Lee, Hyo-Jung Lee, Hyo-Jeong Lee, Won-Cheol Choi, Seong-Woo Yoon, Seong-Gyu Ko, Kwang Seok Ahn, Seung-Hoon Choi, Kyoo-Seok Ahn, John C Lieske, Sung-Hoon Kim

Study Type : Animal Study

Additional Links

Substances : [Sumac : CK\(37\) : AC\(16\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Royal jelly and green tea have a protective effect against cisplatin-induced nephrotoxicity in mice. - GMI Summary

Pubmed Data : J Chromatogr B Analyt Technol Biomed Life Sci. 2004 Apr 25;803(2):225-31. PMID: [19857080](#)

Article Published Date : Apr 25, 2004

Authors : Kürşad Yapar, Kültiğın Cavuşoğlu, Ertan Oruç, Emine Yalçın

Study Type : Animal Study

Additional Links

Substances : [Green Tea : CK\(931\) : AC\(279\)](#), [Royal Jelly : CK\(59\) : AC\(32\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Kidney Damage: Drug-Induced : CK\(86\) : AC\(18\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Rubia cordifolia ameliorates cisplatin-induced nephrotoxicity in mice. - GMI Summary

Pubmed Data : J Cancer Res Ther. 2008 Jul-Sep;4(3):111-5. PMID: [18923202](#)

Article Published Date : Jul 01, 2008

Authors : Jisha Joy, Cherupally Krishnan Krishnan Nair

Study Type : Animal Study

Additional Links

Substances : [Rubia Cordifolia : CK\(8\) : AC\(4\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Saffron, garlic and curcumin protect against cyclophosphamide induced genotoxicity in mice. - GMI Summary

Pubmed Data : Asia Pac J Clin Nutr. 2004;13(3):292-4. PMID: [15331343](#)

Article Published Date : Jan 01, 2004

Authors : Kumpati Premkumar, Sundramoorthy Kavitha, Sathiyavedu T Santhiya, A-Rabandi Ramesh, Jiraporn Suwanteerangkul

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475), [Garlic](#) : CK(488) : AC(156)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9)

Pharmacological Actions : [Antimutagenic Agents](#) : CK(73) : AC(43), [Genoprotective](#) : CK(109) : AC(46)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Woodfordia fruticosa has an immunostimulatory effect and may protect the bone marrow. - GMI Summary

Pubmed Data : Pharm Biol. 2010 Sep;48(9):1066-72. PMID: [20731559](#)

Article Published Date : Sep 01, 2010

Authors : Abhishek S Shah, Archana R Juvekar

Study Type : Animal Study

Additional Links

Substances : [Woodfordia fruticosa](#) : CK(2) : AC(1)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Immune Disorders: Low Immune Function](#) : CK(483) : AC(116), [Myelodysplastic Syndrome](#) : CK(188) : AC(17)

Pharmacological Actions : [Immunomodulatory](#) : CK(516) : AC(145)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Zingiber officinale (Ginger) alone and in combination with vitamin E partially ameliorated cisplatin-induced nephrotoxicity. - GMI Summary

Pubmed Data : Food Chem Toxicol. 2007 Jun;45(6):921-7. Epub 2006 Nov 29. PMID: [17210214](#)

Article Published Date : Jun 01, 2007

Authors : T A Ajith, V Nivitha, S Usha

Study Type : Animal Study

Additional Links

Substances : [Ginger](#) : CK(299) : AC(91), [Vitamin E](#) : CK(1288) : AC(227)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Plant Extracts](#) : CK(3297) : AC(1135)

EGCG sensitizes human cholangiocarcinoma cells to chemotherapy-induced programmed cell death. - GMI Summary

Pubmed Data : Liver Int. 2009 May;29(5):670-7. Epub 2009 Feb 17. PMID: [19226332](#)

Article Published Date : May 01, 2009

Authors : Molly Lang, Roger Henson, Chiara Braconi, Tushar Patel

Study Type : In Vitro Study

Additional Links

Substances : [Catechin](#) : CK(408) : AC(130), [EGCG \(Epigallocatechin gallate\)](#) : CK(176) : AC(115)

Diseases : [Cholangiocarcinoma](#) : CK(23) : AC(11)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-fluorouracil](#) : CK(88) : AC(23), [Drug: Mitomycin](#) : CK(4) : AC(3), [Plant Extracts](#) : CK(3297) : AC(1135)

Oleuropein profoundly increases the susceptibility of breast cancer cells to trastuzumab treatment. - GMI Summary

Pubmed Data : BMC Cancer. 2007;7:80. Epub 2007 May 9. PMID: [17490486](#)

Article Published Date : Jan 01, 2007

Authors : Javier A Menendez, Alejandro Vazquez-Martin, Ramon Colomer, Joan Brunet, Alegria Carrasco-Pancorbo, Rocio Garcia-Villalba, Alberto Fernandez-Gutierrez, Antonio Segura-Carretero

Study Type : In Vitro Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Bitter Principle](#) : CK(11) : AC(2), [Drug Resistant Cancer](#) : CK(9) : AC(9), [Plant Extracts](#) : CK(3297) : AC(1135)

Purified anthocyanin from eggplant reduces genotoxicity and mutagenicity of cyclophosphamide. - GMI Summary

Pubmed Data : Clin Cancer Res. 2009 Feb 15;15(4):1269-76. PMID: [17194516](#)

Article Published Date : Feb 15, 2009

Authors : Luciana Azevedo, Patrícia L Alves de Lima, José C Gomes, Paulo C Stringheta, Daniel A Ribeiro, Daisy M F Salvadori

Study Type : In Vitro Study

Additional Links

Substances : [Anthocyanins](#) : CK(47) : AC(16), [Eggplant](#) : CK(26) : AC(10)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Drug Side Effect Attenuation (AC 22)

Carnitine improves fatigue, quality of life, lean body mass and appetite in advanced cancer patients undergoing anticancer therapy. - GMI Summary

Pubmed Data : Nutrition. 2006 Feb;22(2):136-45. PMID: [16459226](#)

Article Published Date : Feb 01, 2006

Authors : Giulia Gramignano, Maria Rita Lusso, Clelia Madeddu, Elena Massa, Roberto Serpe, Laura Deiana, Giovanna Lamonica, Mariele Dessì, Carla Spiga, Giorgio Astara, Antonio Macciò, Giovanni Mantovani

Study Type : Human Study

Additional Links

Substances : [Carnitine](#) : CK(650) : AC(67)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy](#) : CK(65) : AC(16), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Fatigue](#) : CK(218) : AC(29), [Quality of Life: Poor](#) : CK(170) : AC(16)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Children treated for solid tumors or lymphoma with chemotherapy have increased caries of the primary teeth. - GMI Summary

Pubmed Data : Int J Paediatr Dent. 2010 Jan;20(1):15-23. PMID: [20059589](#)

Article Published Date : Jan 01, 2010

Authors : Alison Hutton, Moira Bradwell, Martin English, Iain Chapple

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Dental Caries](#) : CK(247) : AC(33), [Neuroblastoma](#) : CK(51) : AC(31)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Oral glutamine supplementation protects lymphocytes and attenuates gut permeability in patients with esophageal cancer during radiochemotherapy. - GMI Summary

Pubmed Data : Ann Surg. 1998 Apr;227(4):485-91. PMID: [9563534](#)

Article Published Date : Apr 01, 1998

Authors : S Yoshida, M Matsui, Y Shirouzu, H Fujita, H Yamana, K Shirouzu

Study Type : Human Study

Additional Links

Substances : [Glutamine : CK\(120\) : AC\(22\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Esophageal Cancer : CK\(293\) : AC\(54\)](#), [Radiation Induced Illness : CK\(994\) : AC\(245\)](#)

Additional Keywords : [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Vitamin E and N-acetylcysteine are an effective antioxidant adjuvant therapy in children with acute lymphoblastic leukemia to reduce the chemo-/radiotherapy toxicity of treatment. - GMI Summary

Pubmed Data : Adv Hematol. 2009;2009:689639. Epub 2009 Oct 20. PMID: [19960046](#)

Article Published Date : Jan 01, 2009

Authors : Youssef Al-Tonbary, Mohammad Al-Haggar, Rasha El-Ashry, Sahar El-Dakroory, Hanan Azzam, Ashraf Fouda

Study Type : Human Study

Additional Links

Substances : [NAC \(N-acetyl-L-cysteine\) : CK\(248\) : AC\(64\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Acute lymphoblastic leukemia \(ALL\) : CK\(95\) : AC\(28\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Radiation Induced Illness : CK\(994\) : AC\(245\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

A compound in mangosteen prevents cisplatin-induced toxicity to the kidneys of rats. - GMI Summary

Pubmed Data : Chem Biol Interact. 2010 Oct 6;188(1):144-50. PMID: [20603111](#)

Article Published Date : Oct 06, 2010

Authors : Yesennia Sánchez-Pérez, Rocío Morales-Bárcenas, Claudia M García-Cuellar, Rebeca López-Marure, Mariel Calderon-Oliver, José Pedraza-Chaverri, Yolanda I Chirino

Study Type : Animal Study

Additional Links

Substances : [Mangosteen : CK\(43\) : AC\(21\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Aged garlic extract protects against doxorubicin-induced cardiotoxicity in rats. - GMI Summary

Pubmed Data : Nutrition. 2006 Feb;22(2):136-45. PMID: [20060872](#)

Article Published Date : Feb 01, 2006

Authors : Huda Alkreathy, Zoheir A Damanhoury, Nessar Ahmed, Mark Slevin, Soad S Ali, Abdel-Moneim M Osman

Study Type : Animal Study

Additional Links

Substances : [Garlic : CK\(488\) : AC\(156\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Cardioprotective : CK\(627\) : AC\(185\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Bilberry enhances the effects and reduces the side effects of the chemotoxic agent 5-flouroucil. - GMI Summary

Pubmed Data : Biofactors. 2007;29(1):55-65. PMID: [17611294](#)

Article Published Date : Jan 01, 2007

Authors : Eun Hye Choi, Hyun Ee Ok, Yoosik Yoon, Bernadene A Magnuson, Mi Kyung Kim, Hyang

Sook Chun

Study Type : Animal Study

Additional Links

Substances : [Bilberry](#) : CK(787) : AC(22)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Myelotoxicity](#) : CK(31) : AC(8)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Drug Side Effect](#)

[Attenuation](#) : CK(252) : AC(50)

[Clove postively modulates humoral and cell-mediated immune responses and prevents cyclophosphamide-induced immunosuppression in mice.](#) - GMI

Summary

Pubmed Data : J Pharm Pharmacol. 2009 Jul;61(7):961-7. PMID: [19589240](#)

Article Published Date : Jul 01, 2009

Authors : Fábio Ricardo Carrasco, Gustavo Schmidt, Adriano Lopez Romero, Juliano Luiz Sartoretto, Silvana Martins Caparroz-Assef, Ciomar Aparecida Bersani-Amado, Roberto Kenji Nakamura Cuman

Study Type : Animal Study

Additional Links

Substances : [Clove](#) : CK(91) : AC(46)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Curcumin inhibits fibrosis-related effects in IPF fibroblasts and in mice following bleomycin-induced lung injury.](#) - GMI Summary

Pubmed Data : Am J Physiol Lung Cell Mol Physiol. 2010 Jan 8. Epub 2010 Jan 8. PMID: [20061443](#)

Article Published Date : Jan 08, 2010

Authors : Monica R Smith, Srinivasa R Gangireddy, Venkata R Narala, Cory M Hogaboam, Theodore J Standiford, Paul J Christensen, Anand K Kondapi, Raju C Reddy

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [Transforming growth factor beta \(TGF-β\) inhibitor](#) : CK(32) : AC(9)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Curcumin protects against doxorubicin \(adriamycin\)-induced toxicity in rats.](#) - GMI Summary

Pubmed Data : J Med Food. 2009 Apr;12(2):394-402. PMID: [19459743](#)

Article Published Date : Apr 01, 2009

Authors : Ragaa Hosny Mohamad, Amal Mohamad El-Bastawesy, Zekry Khalid Zekry, Hussain A Al-Mehdar, Mohamad Gamil Abdel Monaam Al-Said, Soaad Shaker Aly, Sabry Mohamed Sharawy, Mahmud M El-Merzabani

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemically-Induced Liver Damage](#) : CK(451) : AC(174), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug Side Effect Attenuation](#) : CK(252) : AC(50), [Plant Extracts](#) : CK(3297) : AC(1135)

[L-carnitine may reduce cardiotoxicities associated with epirubicin toxicity.](#) - GMI Summary

Pubmed Data : Cancer Lett. 2007 Jul 18;252(2):195-207. Epub 2007 Feb 2. PMID: [17275999](#)

Article Published Date : Jul 18, 2007

Authors : Christie E Delaney, Sean P Hopkins, Christina L Addison

Study Type : Animal Study

Additional Links

Substances : [Carnitine](#) : CK(650) : AC(67)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Epirubicin](#) : CK(2) : AC(1)

Additional Keywords : [Drug: Epirubicin](#) : CK(2) : AC(1), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Lecithinized superoxide dismutase has protective activity against bleomycin-induced pulmonary fibrosis. - GMI Summary

Pubmed Data : Am J Physiol Lung Cell Mol Physiol. 2009 Dec 24. Epub 2009 Dec 24. PMID: [20034962](#)

Article Published Date : Dec 24, 2009

Authors : Ken-Ichiro Tanaka, Tomoaki Ishihara, Arata Azuma, Shoji Kudoh, Masahito Ebina, Toshihiro Nukiwa, Yukihiro Sugiyama, Yuichi Tasaka, Takushi Namba, Tsutomu Ishihara, Keizo Sato, Yutaka Mizushima, Tooru Mizushima

Study Type : Animal Study

Additional Links

Substances : [Lecithin](#) : CK(28) : AC(10), [Superoxide dismutase](#) : CK(16) : AC(5)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Maitake beta-glucan enhances therapeutic effect and reduces myelosuppression and nephrotoxicity of cisplatin in mice. - GMI Summary

Pubmed Data : Int Immunopharmacol. 2009 May;9(5):620-6. Epub 2009 Feb 26. PMID: [19249389](#)

Article Published Date : May 01, 2009

Authors :

Yuki Masuda, Munechika Inoue, Ayu Miyata, Shigeto Mizuno, Hiroaki Nanba

Study Type : Animal Study

Additional Links

Substances : [Beta-glucan](#) : CK(223) : AC(41), [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Myelotoxicity](#) : CK(31) : AC(8)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Maitake beta-glucan promotes recovery of leukocytes and myeloid cell function in peripheral blood from paclitaxel hematotoxicity. - GMI Summary

Pubmed Data : Cancer Immunol Immunother. 2010 Feb 6. Epub 2010 Feb 6. PMID: [20140432](#)

Article Published Date : Feb 06, 2010

Authors : Hong Lin, Elisa de Stanchina, Xi Kathy Zhou, Feng Hong, Andrew Seidman, Monica Fournier, Wei-Lie Xiao, Edward J Kennelly, Kathleen Wesa, Barrie R Cassileth, Susanna Cunningham-Rundles

Study Type : Animal Study

Additional Links

Substances : [Beta-glucan](#) : CK(223) : AC(41), [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Paclitaxel](#) : CK(32) : AC(4), [Myelotoxicity](#) : CK(31) : AC(8)

Pharmacological Actions : [Chemopreventive](#) : CK(1254) : AC(342)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Panax Notoginseng has a protective effect against doxorubicin-induced cardiotoxicity in mice. - GMI Summary

Pubmed Data : Planta Med. 2008 Feb;74(3):203-9. Epub 2008 Feb 8. PMID: [18260050](#)

Article Published Date : Feb 01, 2008

Authors : Li Liu, Run Shi, Qiang Shi, Yiyu Cheng, Yang Huo

Study Type : Animal Study

Additional Links

Substances : [Panax Notoginseng](#) : CK(42) : AC(9)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Rhus verniciflua Stokes prevents cisplatin-induced cytotoxicity and reactive oxygen species production in renal cells and intact mice.](#) - GMI Summary

Pubmed Data : Phytomedicine. 2009 Mar;16(2-3):188-97. Epub 2009 Jan 15. PMID: [19150236](#)

Article Published Date : Mar 01, 2009

Authors : Joo-Ho Lee, Hyo-Jung Lee, Hyo-Jeong Lee, Won-Cheol Choi, Seong-Woo Yoon, Seong-Gyu Ko, Kwang Seok Ahn, Seung-Hoon Choi, Kyoo-Seok Ahn, John C Lieske, Sung-Hoon Kim

Study Type : Animal Study

Additional Links

Substances : [Sumac](#) : CK(37) : AC(16)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Drug Side Effect Attenuation](#) : CK(252) : AC(50), [Plant Extracts](#) : CK(3297) : AC(1135)

[Saffron protects against chromosomal damage induced by cisplatin, mitomycin-C and urethane.](#) - GMI Summary

Pubmed Data : Asia Pac J Clin Nutr. 2003;12(4):474-6. PMID: [14672873](#)

Article Published Date : Jan 01, 2003

Authors : Kumpati Premkumar, Suresh K Abraham, Sathiyavedu T Santhiya, Arabandi Ramesh

Study Type : Animal Study

Additional Links

Substances : [Saffron](#) : CK(123) : AC(32)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Chemopreventive](#) : CK(1254) : AC(342)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Schisandra protects against adriamycin-induced cardiotoxicity in rats.](#) - GMI Summary

Pubmed Data : Chang Gung Med J. 2006 Jan-Feb;29(1):63-70. PMID: [16642728](#)

Article Published Date : Jan 01, 2006

Authors : Jyh-Sheng You, Tai-Long Pan, Yu-Chang Hou

Study Type : Animal Study

Additional Links

Substances : [Schisandra](#) : CK(129) : AC(44)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Spirulina has a protective effect against doxorubicin-induced cardiotoxicity in mice.](#) - GMI Summary

Pubmed Data : Phytother Res. 2005 Dec;19(12):1030-7. PMID: [16372368](#)

Article Published Date : Dec 01, 2005

Authors : Mahmood Khan, Jagdish Chandra Shobha, Iyyapu Krishna Mohan, Madireddi Umamaheswara Rao Naidu, Challa Sundaram, Shashi Singh, Periannan Kuppusamy, Vijay Kumar Kutala

Study Type : Animal Study

Additional Links

Substances : [Spirulina](#) : CK(77) : AC(23)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity:](#)

[Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Cardioprotective : CK\(627\) : AC\(185\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Testosterone has a preventive role on cisplatin-induced gonadal toxicity. - GMI Summary

Pubmed Data : Fertil Steril. 2010 Mar 15;93(5):1388-93. Epub 2009 Apr 10. PMID: [19362306](#)

Article Published Date : Mar 15, 2010

Authors : Alireza Aminsharifi, Saeed Shakeri, Ali Ariafar, Behnam Moeinjahromi, Prikala V Kumar, Saeed Karbalaeeidoost

Study Type : Animal Study

Additional Links

Substances : [Testosterone : CK\(133\) : AC\(25\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Schisandra ameloriates doxorubicin-induced cytotoxicity to cardomyocytes. - GMI Summary

Pubmed Data : Genes Nutr. 2008 Feb;2(4):337-45. PMID: [18850228](#)

Article Published Date : Feb 01, 2008

Authors : Eun Hye Choi, Nari Lee, Hyun Jung Kim, Mi Kyung Kim, Sung-Gil Chi, Dae Young Kwon, Hyang Sook Chun

Study Type : In Vitro Study

Additional Links

Substances : [Schisandra : CK\(129\) : AC\(44\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Garlic may attenuate the cardiotoxicity of the chemotherapy agent adriamycin. - GMI Summary

Pubmed Data : Kathmandu Univ Med J (KUMJ). 2006 Jul-Sep;4(3):337-9. PMID: [18603930](#)

Article Published Date : Jul 01, 2006

Authors : R N Das, N Poudel

Study Type : Commentary

Additional Links

Substances : [Garlic : CK\(488\) : AC\(156\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin : CK\(17\) : AC\(10\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Curcumin (AC 82)

Curcumin ameliorates oxaliplatin-induced chemoresistance in HCT116 colorectal cancer cells in vitro and in vivo. - GMI Summary

Pubmed Data : Int J Cancer. 2010 Sep 13. Epub 2010 Sep 13. PMID: [20839263](#)

Article Published Date : Sep 13, 2010

Authors : Lynne M Howells, Stewart Sale, Sathya Neelature Sriramareddy, Glen R B Irving, Donald J L Jones, Christopher J Ottley, D Graham Pearson, Christopher D Mann, Margaret M Manson, David P Berry, Andreas Gescher, William P Steward, Karen Brown

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy : CK\(65\) : AC\(16\)](#), [Colorectal Cancer : CK\(768\) : AC\(299\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin ameliorates oxaliplatin-induced chemoresistance in HCT116 colorectal cancer cells in vitro and in vivo. - GMI Summary

Pubmed Data : Int J Cancer. 2010 Sep 13. Epub 2010 Sep 13. PMID: [20839263](#)

Article Published Date : Sep 13, 2010

Authors : Lynne M Howells, Stewart Sale, Sathya Neelature Sriramareddy, Glen R B Irving, Donald J L Jones, Christopher J Ottley, D Graham Pearson, Christopher D Mann, Margaret M Manson, David P Berry, Andreas Gescher, William P Steward, Karen Brown

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy : CK\(65\) : AC\(16\)](#), [Colorectal Cancer : CK\(768\) : AC\(299\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Oxaliplatin : CK\(6\) : AC\(5\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin and CAPE may reduce chemotherapy-induced mucosal barrier injury. - GMI Summary

Pubmed Data : Leukemia. 2004 Feb;18(2):276-84. PMID: [14671640](#)

Article Published Date : Feb 01, 2004

Authors : B van't Land, N M A Blijlevens, J Marteiijn, S Timal, J P Donnelly, T J M de Witte, L M'Rabet

Study Type : Animal Study

Additional Links

Substances : [Caffeic acid phenethyl ester : CK\(15\) : AC\(8\)](#), [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Mucositis : CK\(49\) : AC\(10\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Curcumin attenuates acute adriamycin myocardial toxicity in rats. - GMI Summary

Pubmed Data : Br J Pharmacol. 1998 Jun;124(3):425-7. PMID: [9647462](#)

Article Published Date : Jun 01, 1998

Authors : N Venkatesan

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin : CK\(17\) : AC\(10\)](#)

Pharmacological Actions : [Cardioprotective : CK\(627\) : AC\(185\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Curcumin can alleviate alveolitis and pulmonary fibrosis induced by bleomycin in rats. - GMI Summary

Pubmed Data : Zhonghua Jie He He Hu Xi Za Zhi. 2007 Mar;30(3):197-201. PMID: [17572999](#)

Article Published Date : Mar 01, 2007

Authors : De-ping Zhang, Hui Qiu, Yi Zhuang, Fan-qing Meng

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Alveolitis: Fibrosing : CK\(151\) : AC\(1\)](#), [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

Curcumin enhances adriamycin-induced human liver-derived hepatoma G2 cell death. - GMI Summary

Pubmed Data : Eur J Pharm Sci. 2011 Jun 14 ;43(3):125-31. Epub 2011 Apr 14. PMID: [21514382](#)

Article Published Date : Jun 14, 2011

Authors : Haoran Qian, Yi Yang, Xianfa Wang

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Hepatoma : CK\(23\) : AC\(22\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Adriamycin : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin enhances the effect of cisplatin in suppression of head and neck squamous cell carcinoma. - GMI Summary

Pubmed Data : Mol Cancer Ther. 2010 Oct;9(10):2665-75. PMID: [20937593](#)

Article Published Date : Oct 01, 2010

Authors : Victor M Duarte, Eugene Han, Mysore S Veena, Amanda Salvado, Jeffrey D Suh, Li-Jung Liang, Kym F Faull, Eri S Srivatsan, Marilene B Wang

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Head and Neck Cancer : CK\(36\) : AC\(14\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin has a similar effect to hydrocortisone in preventing bleomycin-induced pulmonary fibrosis. - GMI Summary

Pubmed Data : J Ethnopharmacol. 2007 Jun 13;112(2):292-9. Epub 2007 Mar 13. PMID: [17434272](#)

Article Published Date : Jun 13, 2007

Authors : Min Xu, Bin Deng, Yeuk-Lung Chow, Zhong-Zhen Zhao, Bin Hu

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

Additional Keywords : [Superiority of Natural Substances versus Drugs : CK\(897\) : AC\(173\)](#)

Curcumin has a synergistic effect with cisplatin against fibrosarcoma. - GMI Summary

Pubmed Data : Pharmacol Res. 1999 Mar;39(3):175-9. PMID: [10094841](#)

Article Published Date : Mar 01, 1999

Authors : I Navis, P Sriganth, B Premalatha

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Fibrosarcoma : CK\(10\) : AC\(7\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin has anticancer, chemosensitization and radiosensitization effects in prostate cancer. - GMI Summary

Pubmed Data : Cancer Res. 2007 Mar 1;67(5):1988-96. PMID: [17332326](#)

Article Published Date : Mar 01, 2007

Authors : Mao Li, Zhuo Zhang, Donald L Hill, Hui Wang, Ruiwen Zhang

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Additional Keywords : [Drug: Gemcitabine : CK\(36\) : AC\(13\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin inhibits bleomycin-induced pulmonary fibrosis in rats. - GMI Summary

Pubmed Data : Br J Pharmacol. 2000 Sep;131(2):169-72. PMID: [10991907](#)

Article Published Date : Sep 01, 2000

Authors : D Punithavathi, N Venkatesan, M Babu

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [Anti-Bacterial Agents](#) : CK(901) : AC(280)

Curcumin inhibits fibrosis-related effects in IPF fibroblasts and in mice following bleomycin-induced lung injury. - GMI Summary

Pubmed Data : Am J Physiol Lung Cell Mol Physiol. 2010 Jan 8. Epub 2010 Jan 8. PMID: [20061443](#)

Article Published Date : Jan 08, 2010

Authors : Monica R Smith, Srinivasa R Gangireddy, Venkata R Narala, Cory M Hogaboam, Theodore J Standiford, Paul J Christensen, Anand K Kondapi, Raju C Reddy

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [Transforming growth factor beta \(TGF- \$\beta\$ \) inhibitor](#) : CK(32) : AC(9)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Curcumin inhibits lipid peroxidation and cholesterol levels in mice. - GMI Summary

Pubmed Data : Indian J Physiol Pharmacol. 1992 Oct;36(4):239-43. PMID: [1291474](#)

Article Published Date : Oct 01, 1992

Authors : K K Soudamini, M C Unnikrishnan, K B Soni, R Kuttan

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [Lipid Peroxidation](#) : CK(333) : AC(125)

Pharmacological Actions : [Hepatoprotective](#) : CK(528) : AC(257)

Curcumin inhibits lung cancer cell metastasis. - GMI Summary

Pubmed Data : Clin Exp Metastasis. 2000;18(7):539-45. PMID: [11688958](#)

Article Published Date : Jan 01, 2000

Authors : K Ichiki, N Mitani, Y Doki, H Hara, T Misaki, I Saiki

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancer Metastasis](#) : CK(283) : AC(132), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Anti-metastatic](#) : CK(172) : AC(95), [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711)

Curcumin is more effective than prednisone at suppressing bleomycin-induced pulmonary fibrosis in rats. - GMI Summary

Pubmed Data : Zhonghua Lao Dong Wei Sheng Zhi Ye Bing Za Zhi. 2008 May;26(5):257-61. PMID: [18727865](#)

Article Published Date : May 01, 2008

Authors : Bi Chen, De-Ping Zhang, Wei Gao

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

Pharmacological Actions : [Transforming growth factor beta \(TGF-β\) inhibitor : CK\(32\) : AC\(9\)](#)

Additional Keywords : [Superiority of Natural Substances versus Drugs : CK\(897\) : AC\(173\)](#)

Curcumin may play its therapeutuc role by leveling down the content of extracellular matrix in rats with pulmonary fibrosis induced by bleomycin. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2006 Apr;31(7):570-3. PMID: [16780161](#)

Article Published Date : Apr 01, 2006

Authors : Gang Zhou, Ji-Feng Wang, Jian-Zhao Niu, Yin-Sheng Lu, Wei-Tao Chen, Ze-Hua Li, Tong-Xiang Lin

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

Curcumin oil has a protective effect against cisplatin-induced nephrotoxicity. - GMI Summary

Pubmed Data : J Agric Food Chem. 2007 Dec 12;55(25):10150-5. Epub 2007 Nov 15. PMID: [18001039](#)

Article Published Date : Dec 12, 2007

Authors : Anurag Kuhad, Sangeeta Pilkhwal, Sameer Sharma, Naveen Tirkey, Kanwaljit Chopra

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Inflammation : CK\(1001\) : AC\(341\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Anti-Inflammatory Agents : CK\(1159\) : AC\(412\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Curcumin prevents adriamycin nephrotoxicity in rats. - GMI Summary

Pubmed Data : Br J Pharmacol. 2000 Jan;129(2):231-4. PMID: [10694226](#)

Article Published Date : Jan 01, 2000

Authors : [No authors listed]

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin : CK\(17\) : AC\(10\)](#), [Kidney Damage: Drug-Induced : CK\(86\) : AC\(18\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Curcumin prevents cisplatin-induced chromosomal abberations in rat bone marrow cells. - GMI Summary

Pubmed Data : Mutat Res. 2000 Feb 16;465(1-2):131-7. PMID: [10708978](#)

Article Published Date : Feb 16, 2000

Authors : L M Antunes, M C Araújo, J D Darin, M L Bianchi

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Genoprotective : CK\(109\) : AC\(46\)](#)

Curcumin protects against bleomycin-induced damages in pulmonary functions in rats - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2008 Jun;33(12):1434-8. PMID: [18837350](#)

Article Published Date : Jun 01, 2008

Authors : Cheng-jiang Zhao, Jian-zhao Niu, Ji-feng Wang, Gang Zhou, Bing-hua Tang

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

Curcumin protects against cisplatin-induced oxidative injury in rat testis. - GMI Summary

Pubmed Data : Hum Reprod. 2009 Jul;24(7):1717-25. Epub 2009 Mar 11. PMID: [19279034](#)

Article Published Date : Jul 01, 2009

Authors : Yusuf Ozlem Ilbey, Emin Ozbek, Mustafa Cekmen, Abdulmuttalip Simsek, Alper Otuntemur, Adnan Somay

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

Curcumin protects against cyclophosphamide-induced haemorrhagic cystitis. - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2004 Apr 16;316(4):1065-72. PMID: [19413659](#)

Article Published Date : Apr 16, 2004

Authors : Hossam M M Arafa

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Bladder Dysfunction : CK\(39\) : AC\(7\)](#), [Chemotherapy-Induced Toxicity: Cyclophosphamide : CK\(25\) : AC\(9\)](#), [Cystitis : CK\(2\) : AC\(1\)](#), [Interstitial Cystitis : CK\(136\) : AC\(17\)](#)

Pharmacological Actions : [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Curcumin protects against doxorubicin (adriamycin)-induced toxicity in rats. - GMI Summary

Pubmed Data : J Med Food. 2009 Apr;12(2):394-402. PMID: [19459743](#)

Article Published Date : Apr 01, 2009

Authors : Ragaa Hosny Mohamad, Amal Mohamad El-Bastawesy, Zekry Khalid Zekry, Hussain A Al-Mehdar, Mohamad Gamil Abdel Monaam Al-Said, Soaad Shaker Aly, Sabry Mohamed Sharawy, Mahmud M El-Merzabani

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemically-Induced Liver Damage : CK\(451\) : AC\(174\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Curcumin protects bleomycin-induced lung injury in rats. - GMI Summary

Pubmed Data : Pharm Res. 2008 Sep;25(9):2181-9. Epub 2008 Apr 25. PMID: [9250724](#)

Article Published Date : Sep 01, 2008

Authors : N Venkatesan, V Punithavathi, G Chandrakasan

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Lung Injury: Acute](#) : CK(30) : AC(11), [Oxidative Stress](#) : CK(1858) : AC(703)

Curcumin reduced the side effects of mitomycin C in the treatment of breast cancer. - GMI Summary

Pubmed Data : Cancer Sci. 2009 Nov;100(11):2040-5. Epub 2009 Jul 23. PMID: [19703194](#)

Article Published Date : Nov 01, 2009

Authors : Qian-Mei Zhou, Hui Zhang, Yi-Yu Lu, Xiu-Feng Wang, Shi-Bing Su

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Mitomycin-C](#) : CK(6) : AC(4), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Mitomycin](#) : CK(4) : AC(3), [Drug Synergy](#) : CK(309) : AC(137)

Pre-treatment with curcumin enhances oral bioavailability of docetaxel in rats. - GMI Summary

Pubmed Data : Int J Pharm. 2010 Oct 31;399(1-2):116-20. Epub 2010 Aug 18. PMID: [20727390](#)

Article Published Date : Oct 31, 2010

Authors : Yi-Dong Yan, Dae Hwan Kim, Jun Ho Sung, Chul Soon Yong, Han Gon Choi

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy](#) : CK(65) : AC(16)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157), [Enzyme Inhibitors](#) : CK(385) : AC(210)

Additional Keywords : [Chemotherapeutic Synergy: Docetaxel](#) : CK(3) : AC(2), [Drug: Docetaxel](#) : CK(2) : AC(1)

Saffron, garlic and curcumin protect against cyclophosphamide induced genotoxicity in mice. - GMI Summary

Pubmed Data : Asia Pac J Clin Nutr. 2004;13(3):292-4. PMID: [15331343](#)

Article Published Date : Jan 01, 2004

Authors : Kumpati Premkumar, Sundramoorthy Kavitha, Sathiyavedu T Santhiya, A-Rabandi Ramesh, Jiraporn Suwanteerangkul

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475), [Garlic](#) : CK(488) : AC(156)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9)

Pharmacological Actions : [Antimutagenic Agents](#) : CK(73) : AC(43), [Genoprotective](#) : CK(109) : AC(46)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

"Curcumin enhances the anticancer effects of trichostatin a in breast cancer cells." - GMI Summary

Pubmed Data : Mol Carcinog. 2012 Jan 30. Epub 2012 Jan 30. PMID: [22290509](#)

Article Published Date : Jan 30, 2012

Authors : Guang Yan, Kimmer Graham, Susan Lanza-Jacoby

Study Type : In Vitro Study

Additional Links**Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Breast Cancer](#) : CK(2047) : AC(556)**Pharmacological Actions** : [Chemotherapeutic Agent](#) : CK(188) : AC(157)**Additional Keywords** : [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin acts as a chemosensitizing agent in lung cancer cells.](#) - GMI Summary**Pubmed Data** : Biochem Biophys Res Commun. 2005 Jun 17;331(4):1245-52. PMID: [15883009](#)**Article Published Date** : Jun 17, 2005**Authors** : Sudip Sen, Himani Sharma, Neeta Singh**Study Type** : In Vitro Study**Additional Links****Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Carcinoma: Non-Small-Cell Lung](#) : CK(19) : AC(13), [Lung Cancer](#) : CK(440) : AC(185)**Pharmacological Actions** : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agent](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)**Additional Keywords** : [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin appears to have value in multi-drug chemoresistance.](#) - GMI Summary**Pubmed Data** : J Clin Rheumatol. 2010 Feb 2. Epub 2010 Feb 2. PMID: [14680379](#)**Article Published Date** : Feb 02, 2010**Authors** : Heleen M Wortelboer, Mustafa Usta, Astrid E van der Velde, Marelle G Boersma, Bert Spenkelink, Jelmer J van Zanden, Ivonne M C M Rietjens, Peter J van Bladeren, Nicole H P Cnubben**Study Type** : In Vitro Study**Additional Links****Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)**Pharmacological Actions** : [Chemotherapeutic Agent](#) : CK(188) : AC(157)

[Curcumin augments gemcitabine cytotoxic effect on pancreatic cancer cell lines.](#) - GMI Summary**Pubmed Data** : Cancer Invest. 2007 Sep;25(6):411-8. PMID: [17882652](#)**Article Published Date** : Sep 01, 2007**Authors** : Shahar Lev-Ari, Akiva Vexler, Alex Starr, Maia Ashkenazy-Voghera, Joel Greif, Dan Aderka, Rami Ben-Yosef**Study Type** : In Vitro Study**Additional Links****Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Pancreatic Cancer](#) : CK(524) : AC(160)**Pharmacological Actions** : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agent](#) : CK(188) : AC(157), [Cyclooxygenase 2 Inhibitors](#) : CK(274) : AC(167)**Additional Keywords** : [Drug: Gemcitabine](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin chemosensitizes prostate cancer cells to TRAIL-induce programmed cell death.](#) - GMI Summary**Pubmed Data** : J Exp Ther Oncol. 2005;5(2):81-91. PMID: [16471035](#)**Article Published Date** : Jan 01, 2005**Authors** : Dorrah D Deeb, Hao Jiang, Xiaohua Gao, George Divine, Scott A Dulchavsky, Subhash C Gautam**Study Type** : In Vitro Study**Additional Links****Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Prostate Cancer](#) : CK(961) : AC(288)**Pharmacological Actions** : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemotherapeutic Agent](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin displays chemosensitizing activity in combination with paclitaxel. - GMI Summary

Pubmed Data : Int J Biochem Cell Biol. 2010 Sep 29. Epub 2010 Sep 29. PMID: [20883815](#)

Article Published Date : Sep 29, 2010

Authors : Smitha V Bava, Chanickal N Sreekanth, Arun Kumar T Thulasidasan, Nikhil P Anto, Vino T Cherian, Vineshkumar T Puliyappadamba, Sajna G Menon, Santhosh D Ravichandran, Ruby John Anto

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cervical Cancer : CK\(322\) : AC\(65\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin enhances chemotherapeutic agents in prostate cancer cells. - GMI Summary

Pubmed Data : Prostate. 2002 May 15;51(3):211-8. PMID: [11967955](#)

Article Published Date : May 15, 2002

Authors : Tzyh-Chyuan Hour, Jun Chen, Chao-Yuan Huang, Jing-Yi Guan, Shiu-Hui Lu, Yeong-Shiau Pu

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin enhances programmed cell death in chemoresistant ovarian cancer cells. - GMI Summary

Pubmed Data : Gynecol Oncol. 2007 Apr;105(1):104-12. Epub 2006 Dec 15. PMID: [17174384](#)

Article Published Date : Apr 01, 2007

Authors : Heather Wahl, Lijun Tan, Kent Griffith, Miheon Choi, J Rebecca Liu

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin exhibits chemosensitizing properties against multidrug resistance in rat liver cells. - GMI Summary

Pubmed Data : Life Sci. 1998;62(25):2349-58. PMID: [9651124](#)

Article Published Date : Jan 01, 1998

Authors : N Romiti, R Tongiani, F Cervelli, E Chieli

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin has anti-cancer activity against drug-resistant chronic myeloid leukemia cells. - GMI Summary

Pubmed Data : Mol Cancer Res. 2006 Jul;4(7):457-69. PMID: [16849521](#)

Article Published Date : Jul 01, 2006

Authors : Kamila Wolanin, Adriana Magalska, Grazyna Mosieniak, Rut Klinger, Sharon McKenna, Susanne Vejda, Ewa Sikora, Katarzyna Piwocka

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chronic Myeloid Leukemia : CK\(21\) : AC\(11\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin has antimutagenic activity. - GMI Summary

Pubmed Data : Int J Antimicrob Agents. 2008 Jun;31(6):572-6. Epub 2008 Apr 28. PMID: [10682600](#)

Article Published Date : Jun 01, 2008

Authors : X Li, Q Song, B Chen

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide : CK\(25\) : AC\(9\)](#), [DNA damage : CK\(687\) : AC\(287\)](#)

Pharmacological Actions : [Antimutagenic Agents : CK\(73\) : AC\(43\)](#), [Genoprotective : CK\(109\) : AC\(46\)](#)

Curcumin has antimutagenic potential. - GMI Summary

Pubmed Data : Mutat Res. 2002 Mar 25;515(1-2):197-202. PMID: [11909768](#)

Article Published Date : Mar 25, 2002

Authors : Yogeshwer Shukla, Annu Arora, Pankaj Taneja

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide : CK\(25\) : AC\(9\)](#), [DNA damage : CK\(687\) : AC\(287\)](#)

Pharmacological Actions : [Antimutagenic Agents : CK\(73\) : AC\(43\)](#), [Genoprotective : CK\(109\) : AC\(46\)](#)

Curcumin has chemosensitizing activity in multidrug resistant tumor cell lines. - GMI Summary

Pubmed Data : Zhong Yao Cai. 2001 Sep;24(9):655-7. PMID: [11799777](#)

Article Published Date : Sep 01, 2001

Authors : H Zhang, L Yang, S Liu, L Ren

Study Type : In Vitro Study

Additional Links

Substances : [Berberine : CK\(142\) : AC\(67\)](#), [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin improves chemotherapy by simultaneously sensitising cancer cells and reducing side effects. - GMI Summary

Pubmed Data : Eur J Cancer. 2011 May 24. Epub 2011 May 24. PMID: [21616659](#)

Article Published Date : May 24, 2011

Authors : Qian-Mei Zhou, Xiu-Feng Wang, Xin-Jun Liu, Hui Zhang, Yi-Yu Lu, Shuang Huang, Shi-Bing Su

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Mitomycin-C : CK\(6\) : AC\(4\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Cytoprotective : CK\(10\) : AC\(8\)](#)

Additional Keywords : [Drug: Mitomycin : CK\(4\) : AC\(3\)](#)

Curcumin induces cell cycle arrest and programmed cell death in cisplatin-resistant human ovarian cancer cells. - GMI Summary

Pubmed Data : Cancer Biol Ther. 2007 Feb;6(2):178-84. Epub 2007 Feb 5. PMID: [17218783](#)

Article Published Date : Feb 01, 2007

Authors : Nathan M Weir, Karuppaiyah Selvendiran, Vijay Kumar Kutala, Liyue Tong, Shilpa Vishwanath, Murugesan Rajaram, Susheela Tridandapani, Shrikant Anant, Periannan Kuppusamy

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin induces chemo/radio-sensitization in ovarian cancer cells and curcumin nanoparticles inhibit ovarian cancer cell growth. - GMI Summary

Pubmed Data : J Ovarian Res. 2010;3:11. Epub 2010 Apr 29. PMID: [20429876](#)

Article Published Date : Jan 01, 2010

Authors : Murali M Yallapu, Diane M Maher, Vasudha Sundram, Maria C Bell, Meena Jaggi, Subhash C Chauhan

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

Curcumin induces programmed cell death in human melanoma cells. - GMI Summary

Pubmed Data : Exp Cell Res. 2001 Dec 10;271(2):305-14. PMID: [11716543](#)

Article Published Date : Dec 10, 2001

Authors : J A Bush, K J Cheung, G Li

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Melanoma : CK\(169\) : AC\(87\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Curcumin inhibits growth and sensitizes ovarian cancer cells to cisplatin-mediated killing. - GMI Summary

Pubmed Data : Carcinogenesis. 1982;3(11):1331-8. PMID: [12447990](#)

Article Published Date : Jan 01, 1982

Authors : Marion M Chan, Dunne Fong, Kenneth J Soprano, William F Holmes, Harry Heverling

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Interleukin-6 Downregulation : CK\(497\) : AC\(133\)](#)

Curcumin inhibits multi drug resistance associated protein (MRP1) in

retinoblastoma cells. - GMI Summary

Pubmed Data : Bioinformation. 2012 ;8(1):13-9. Epub 2012 Jan 6. PMID: [22359429](#)

Article Published Date : Jan 01, 2012

Authors : Seethalakshmi Sreenivasan, Sathyabaarathi Ravichandran, Umashankar Vetrivel, Subramanian Krishnakumar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Retinoblastoma](#) : CK(24) : AC(6)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin inhibits multi-drug resistance gene expression in human leukemic cells. - GMI Summary

Pubmed Data : Arch Pharm Res. 2006 Oct;29(10):866-73. PMID: [17121181](#)

Article Published Date : Oct 01, 2006

Authors : Songyot Anuchapreeda, Pattri Thanarattanakorn, Somjai Sittipreechacharn, Singkome Tima, Prasit Chanarat, Pornngarm Limtrakul

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin inhibits multi-drug resistant leukemia cells. - GMI Summary

Pubmed Data : Mol Cell Biochem. 2012 Jan ;360(1-2):253-60. Epub 2011 Sep 22. PMID: [21938404](#)

Article Published Date : Jan 01, 2012

Authors : Jin-Jian Lu, Yu-Jun Cai, Jian Ding

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Leukemia: Multi-Drug Resistant](#) : CK(1) : AC(1)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin inhibits multi-drug resistant pancreatic cancer. - GMI Summary

Pubmed Data : Cancer Chemother Pharmacol. 2010 Nov 30. Epub 2010 Nov 30. PMID: [21116627](#)

Article Published Date : Nov 30, 2010

Authors : Yan Li, Jezrael L Revalde, Glen Reid, James W Paxton

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin inhibits pancreatic cancer cell growth and acts as a chemosensitizing agent. - GMI Summary

Pubmed Data : Mol Pharmacol. 2009 Jul;76(1):81-90. Epub 2009 Apr 24. PMID: [19395473](#)

Article Published Date : Jul 01, 2009

Authors : Jun Li, Yun Wang, Chaozhe Yang, Pengfei Wang, Denise K Oelschlager, Yong Zheng, De-An Tian, William E Grizzle, Donald J Buchsbaum, Mei Wan

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)
Additional Keywords : [Chemotherapeutic Synergy: Gemcitabine : CK\(10\) : AC\(8\)](#), [Drug: Gemcitabine : CK\(36\) : AC\(13\)](#)

Curcumin may act as a chemosensitizer in multi-drug resistant cancer. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2010 Sep;35(18):2460-3. PMID: [21141501](#)

Article Published Date : Sep 01, 2010

Authors : Yanfen Huang, Gaixia Dong, Xingqiu Hong, Hui Chai, Xiaofeng Yuan

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin may act as a chemosensitizing agent in multidrug resistant cancer cells. - GMI Summary

Pubmed Data : Biochem Pharmacol. 2002 Aug 15;64(4):573-82. PMID: [12167476](#)

Article Published Date : Aug 15, 2002

Authors : Songyot Anuchapreeda, Pranee Leechanachai, Melissa M Smith, Suresh V Ambudkar, Porn-ngarm Limtrakul

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin may act as a photosensitizer and chemotherapeutic agent in nasopharyngeal carcinoma. - GMI Summary

Pubmed Data : J Environ Pathol Toxicol Oncol. 2006;25(1-2):205-15. PMID: [16566718](#)

Article Published Date : Jan 01, 2006

Authors : H Koon, Albert W N Leung, Kevin K M Yue, Naiki K Mak

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Nasopharyngeal Cancer : CK\(58\) : AC\(21\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin may be used as a chemosensitizer to make the retinoblastoma cells more sensitive to the effects of chemotherapy. - GMI Summary

Pubmed Data : Curr Eye Res. 2009 Oct;34(10):845-51. PMID: [19895312](#)

Article Published Date : Oct 01, 2009

Authors : Seethalakshmi Thiagarajan, Karthiyayini Thirumalai, Sudarshan Nirmala, Jyotirmay Biswas, Subramanian Krishnakumar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Retinoblastoma : CK\(24\) : AC\(6\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin may contribute to overcoming chemoresistance of FOLFOX.- surviving colon cancer cells. - GMI Summary

Pubmed Data : Vet Med (Praha). 1989 Aug;34(8):467-74. PMID: [20332435](#)

Article Published Date : Aug 01, 1989

Authors : Bhaumik B Patel, Deepshika Gupta, Althea A Elliott, Vivek Sengupta, Yingjie Yu, Adhip P N Majumdar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Colon Cancer](#) : CK(375) : AC(230)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23), [Drug: Oxaliplatin](#) : CK(6) : AC(5)

Curcumin may have chemosensitizing properties in the treatment of human ovarian cancer. - GMI Summary

Pubmed Data : Cell Prolif. 2009 Apr;42(2):195-206. Epub 2009 Feb 18. PMID: [19236381](#)

Article Published Date : Apr 01, 2009

Authors : M Montopoli, E Ragazzi, G Froldi, L Caparrotta

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11), [Drug: Oxaliplatin](#) : CK(6) : AC(5)

Curcumin may improve outcome in chemotherapy-refractory Natural killer/T-cell lymphoma (NKTL). - GMI Summary

Pubmed Data : Br J Haematol. 2005 Oct;131(1):59-66. PMID: [16173963](#)

Article Published Date : Oct 01, 2005

Authors : Kihyun Kim, Kyoungju Ryu, Younghyeh Ko, Chaehwa Park

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Lymphoma](#) : CK(211) : AC(68), [Natural killer/T-cell lymphoma \(NKTL\)](#) : CK(1) : AC(1)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Enzyme Inhibitors](#) : CK(385) : AC(210), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Curcumin may sensitize cancer cells to chemotherapy. - GMI Summary

Pubmed Data : Mol Cancer Ther. 2006 Apr;5(4):952-61. PMID: [16648566](#)

Article Published Date : Apr 01, 2006

Authors : Deborah Chirnomas, Toshiyasu Taniguchi, Michelle de la Vega, Ami P Vaidya, Maria Vasserman, Anne-Renee Hartman, Richard Kennedy, Rosemary Foster, Jennifer Mahoney, Michael V Seiden, Alan D D'Andrea

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11)

Curcumin potentiates antitumor activity of l-asparaginase in acute lymphoblastic leukemia. - GMI Summary

Pubmed Data : Leuk Lymphoma. 2012 Jan 25. Epub 2012 Jan 25. PMID: [22185211](#)

Article Published Date : Jan 25, 2012

Authors : Hua Wang, Qi-Rong Geng, Liang Wang, Yue Lu

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Acute lymphoblastic leukemia \(ALL\) : CK\(95\) : AC\(28\)](#)

Pharmacological Actions : [Chemotherapeutic Synergy : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin promotes programmed cell death in multidrug-resistant human lung cancer cells. - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2010 Aug 13;399(1):1-6. Epub 2010 Jul 11. PMID: [20627087](#)

Article Published Date : Aug 13, 2010

Authors : Jian Zhang, Tao Zhang, Xinyu Ti, Jieran Shi, Changgui Wu, Xinling Ren, Hong Yin

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic Synergy : CK\(188\) : AC\(157\)](#)

Curcumin promotes programmed cell death of cisplatin-resistant human lung carcinoma cells. - GMI Summary

Pubmed Data : Zhongguo Fei Ai Za Zhi. 2010 Apr;13(4):301-6. PMID: [20677554](#)

Article Published Date : Apr 01, 2010

Authors : Ni Tang, Jian Zhang, Yongping Du

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin : CK\(4\) : AC\(3\)](#), [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

Curcumin promotes programmed cell death, increases chemosensitivity, and inhibits nuclear factor kappaB in esophageal adenocarcinoma. - GMI Summary

Pubmed Data : Transl Oncol. 2010 Apr;3(2):99-108. PMID: [20360934](#)

Article Published Date : Apr 01, 2010

Authors : Wibisono Hartojo, Amy L Silvers, Dafydd G Thomas, Christopher W Seder, Lin Lin, Hyma Rao, Zhuwen Wang, Joel K Greenson, Thomas J Giordano, Mark B Orringer, Alnawaz Rehemtulla, Mahaveer S Bhojani, David G Beer, Andrew C Chang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Esophageal Cancer : CK\(293\) : AC\(54\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic Synergy : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Curcumin reduces chemo-resistance of melanoma cells to tamoxifen. - GMI Summary

Pubmed Data : Cancer Biol Ther. 2011 Jan 29;11(2). Epub 2011 Jan 29. PMID: [21088500](#)

Article Published Date : Jan 29, 2011

Authors : Sudipa June Chatterjee, Siyaram Pandey

Study Type : In Vitro Study

Additional Links**Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Melanoma](#) : CK(169) : AC(87)**Pharmacological Actions** : [Chemotherapeutic Agents](#) : CK(188) : AC(157)

[Curcumin reduces multi-drug resistance in uterine cancer cells.](#) - GMI Summary**Pubmed Data** : Oncol Rep. 2008 Oct;20(4):731-5. PMID: [18813811](#)**Article Published Date** : Oct 01, 2008**Authors** : Antonio Angelini, Manuela Iezzi, Concetta Di Febbo, Carmine Di Ilio, Franco Cuccurullo, Ettore Porreca**Study Type** : In Vitro Study**Additional Links****Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Uterine Cancer](#) : CK(24) : AC(10)**Pharmacological Actions** : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agents](#) : CK(188) : AC(157)**Additional Keywords** : [Drug: Doxorubicin](#) : CK(140) : AC(54)

[Curcumin reduces NF-kappa B factor activation associated with anticancer drugs.](#) - GMI Summary**Pubmed Data** : Endocr Relat Cancer. 2009 Dec;16(4):1339-50. Epub 2009 Sep 2. PMID: [12007574](#)**Article Published Date** : Dec 01, 2009**Authors** : Shuang En Chuang, Pei Yen Yeh, Yen Shen Lu, Gi Ming Lai, Chao Ming Liao, Ming Gao, Ann Lii Cheng**Study Type** : In Vitro Study**Additional Links****Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Chemotherapy](#) : CK(65) : AC(16), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)**Pharmacological Actions** : [Antineoplastic Agents](#) : CK(750) : AC(434), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)**Additional Keywords** : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug: Tamoxifen](#) : CK(367) : AC(53)

[Curcumin reverse multi-drug resistance in multiple myeloma cells.](#) - GMI Summary**Pubmed Data** : Ann Hematol. 2010 Apr;89(4):399-404. Epub 2009 Sep 15. PMID: [19756599](#)**Article Published Date** : Apr 01, 2010**Authors** : Hui Xiao, Qi Xiao, Kejian Zhang, Xuelan Zuo, Umid Kumar Shrestha**Study Type** : In Vitro Study**Additional Links****Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Multiple Myeloma](#) : CK(125) : AC(50)**Pharmacological Actions** : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Chemotherapeutic Agents](#) : CK(188) : AC(157)

[Curcumin reverse multidrug resistance of osteosarcoma cells.](#) - GMI Summary**Pubmed Data** : Wei Sheng Yan Jiu. 2011 Jan;40(1):103-6. PMID: [21434326](#)**Article Published Date** : Jan 01, 2011**Authors** : Yang Xiao, Wanchun Wang**Study Type** : In Vitro Study**Additional Links****Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Osteosarcoma](#) : CK(65) : AC(40)**Pharmacological Actions** : [Chemotherapeutic Agents](#) : CK(188) : AC(157)**Additional Keywords** : [Drug: Adriamycin](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

Curcumin reverses chemoresistance of human gastric cancer cells. - GMI Summary

Pubmed Data : Oncol Rep. 2011 Aug 2. Epub 2011 Aug 2. PMID: [21811763](#)

Article Published Date : Aug 02, 2011

Authors : Liang-Liang Yu, Jia-Guo Wu, Ning Dai, Hong-Gang Yu, Jian-Min Si

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [Inhibitor of Nuclear Factor Kappa-B Kinase \(IKK\) : CK\(2\) : AC\(2\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Curcumin sensitizes cervical cancer cells to curcumin-induced programmed cell death. - GMI Summary

Pubmed Data : J Biol Chem. 2005 Feb 25;280(8):6301-8. Epub 2004 Dec 7. PMID: [15590651](#)

Article Published Date : Feb 25, 2005

Authors : Smitha V Bava, Vineshkumar T Puliappadamba, Ayswaria Deepti, Asha Nair, Devarajan Karunagaran, Ruby John Anto

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cervical Cancer : CK\(322\) : AC\(65\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Taxol : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin sensitizes lung cancer cells to cisplatin-induced programmed cell death. - GMI Summary

Pubmed Data : Phytother Res. 1999 Jun;13(4):318-22. PMID: [19283527](#)

Article Published Date : Jun 01, 1999

Authors : Pithi Chanvorachote, Varisa Pongrakhananon, Sumalee Wannachaiyasit, Sudjit Luanpitpong, Yon Rojanasakul, Ubonthip Nimmannit

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Curcumin stimulates reactive oxygen species production and potentiates apoptosis induction by the antitumor drugs arsenic trioxide and lonidamine in human myeloid leukemia cell lines. - GMI Summary

Pubmed Data : J Pharmacol Exp Ther. 2010 Oct;335(1):114-23. Epub 2010 Jul 6. PMID: [20605902](#)

Article Published Date : Oct 01, 2010

Authors : Yolanda Sánchez, Gloria P Simón, Eva Calviño, Elena de Blas, Patricio Aller

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Acute Myeloid Leukemia : CK\(51\) : AC\(21\)](#), [Chronic Myeloid Leukemia : CK\(21\) : AC\(11\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Arsenic Trioxide : CK\(1\) : AC\(1\)](#), [Drug: Lonidamine : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin synergistically augments bcr/abl phosphorothioate antisense oligonucleotides to inhibit growth of chronic myelogenous leukemia cells. - GMI Summary

Pubmed Data : Acta Pharmacol Sin. 2007 Jan;28(1):105-10. PMID: [17184589](#)

Article Published Date : Jan 01, 2007

Authors : Kun-Zhong Zhang, Jian-Hua Xu, Xiu-Wang Huang, Li-Xian Wu, Yu Su, Yuan-Zhong Chen

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Leukemia: Chronic myelogenous leukemia \(CML\)](#) : CK(28) : AC(17)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin synergistically potentiates the anti-cancer effects of celecoxib in pancreatic cancer cells. - GMI Summary

Pubmed Data : Biomed Pharmacother. 2005 Oct;59 Suppl 2:S276-80. PMID: [16507392](#)

Article Published Date : Oct 01, 2005

Authors : S Lev-Ari, H Zinger, D Kazanov, D Yona, R Ben-Yosef, A Starr, A Figer, N Arber

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Cyclooxygenase 2 Inhibitors](#) : CK(274) : AC(167)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin works synergistically with bortezomib in multiple myeloma. - GMI Summary

Pubmed Data : Zhongguo Shi Yan Xue Ye Xue Za Zhi. 2011 Jun ;19(3):684-8. PMID: [21729550](#)

Article Published Date : Jun 01, 2011

Authors : Xiao-Yan Zhang, Qing-Xian Bai, Gao-Sheng Huang, Hui Zhao, Juan-Juan Chen, Li-Jie Yang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Multiple Myeloma](#) : CK(125) : AC(50)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Bcl-2 protein down-regulation](#) : CK(40) : AC(27), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Bortezomib](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

Curcumin works synergistically with cyclophosphide to reverse multi-drug resistance of a human lymphoma cell line. - GMI Summary

Pubmed Data : Zhongguo Shi Yan Xue Ye Xue Za Zhi. 2008 Aug;16(4):804-8. PMID: [18718065](#)

Article Published Date : Aug 01, 2008

Authors : Hui Xiao, Ke-Jian Zhang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Lymphoma](#) : CK(211) : AC(68)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin works synergistically with the chemotoxic agent FOLFOX to eliminate colon cancer stem cells. - GMI Summary

Pubmed Data : Transl Oncol. 2009 Dec;2(4):321-8. PMID: [19956394](#)

Article Published Date : Dec 01, 2009

Authors : Yingjie Yu, Shailender S Kanwar, Bhaumik B Patel, Jyoti Nautiyal, Fazlul H Sarkar, Adhip Pn Majumdar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy : CK\(65\) : AC\(16\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Cancer Stem Cells : CK\(4\) : AC\(3\)](#), [Drug: FOLFOX : CK\(1\) : AC\(1\)](#)

Topical curcumin can inhibit deleterious effects of upper respiratory tract bacteria on human oropharyngeal cells. - GMI Summary

Pubmed Data : Support Care Cancer. 2010 May 14. Epub 2010 May 14. PMID: [20467756](#)

Article Published Date : May 14, 2010

Authors : Sonja L  er, Rolf Troller, Marion Jetter, Violeta Spaniol, Christoph Aebi

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Mucositis : CK\(49\) : AC\(10\)](#), [Upper Respiratory Infections : CK\(849\) : AC\(92\)](#)

Pharmacological Actions : [Anti-Bacterial Agents : CK\(901\) : AC\(280\)](#), [Anti-Inflammatory Agents : CK\(1159\) : AC\(412\)](#)

A number of plant polyphenols have chemosensitizing and radiosensitizing activity. - GMI Summary

Pubmed Data : Antioxid Redox Signal. 2005 Nov-Dec;7(11-12):1630-47. PMID: [16356126](#)

Article Published Date : Nov 01, 2005

Authors : Amit K Garg, Thomas A Buchholz, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Betulinic acid : CK\(6\) : AC\(6\)](#), [Caffeic acid phenethyl ester : CK\(15\) : AC\(8\)](#), [Curcumin : CK\(2870\) : AC\(1475\)](#), [Emodin : CK\(30\) : AC\(19\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Genistein : CK\(457\) : AC\(176\)](#), [Green Tea : CK\(931\) : AC\(279\)](#), [Polyphenols : CK\(417\) : AC\(171\)](#), [Resveratrol : CK\(963\) : AC\(600\)](#), [Silymarin : CK\(36\) : AC\(6\)](#), [Ursolic Acid : CK\(18\) : AC\(13\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

A variety of natural substances may function as novel anticancer agents, proteasome inhibitors and chemosensitizers. - GMI Summary

Pubmed Data : Drug Resist Updat. 2006 Dec;9(6):263-73. Epub 2007 Jan 2. PMID: [17197231](#)

Article Published Date : Dec 01, 2006

Authors : Kristin R Landis-Piowar, Vesna Milacic, Di Chen, Huanjie Yang, Yunfeng Zhao, Tak Hang Chan, Bing Yan, Q Ping Dou

Study Type : Review

Additional Links

Substances : [Catechin : CK\(408\) : AC\(130\)](#), [Curcumin : CK\(2870\) : AC\(1475\)](#), [Genistein : CK\(457\) : AC\(176\)](#), [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Proteasome Inhibitors : CK\(39\) : AC\(25\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

Additional Keywords : [Stilbenes : CK\(414\) : AC\(245\)](#)

Curcumin has radiosensitizing and chemosensitizing effects on tumors while protecting healthy tissue from damage. - GMI Summary

Pubmed Data : Nutr Cancer. 2010 Oct;62(7):919-30. PMID: [20924967](#)

Article Published Date : Oct 01, 2010

Authors : Ajay Goel, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)
Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186),
[Radiation Induced Illness](#) : CK(994) : AC(245), [Tumors](#) : CK(179) : AC(107)
Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

Curcumin may act as a chemosensitizing agent. - GMI Summary

Pubmed Data : Adv Exp Med Biol. 2007;595:269-300. PMID: [17569216](#)

Article Published Date : Jan 01, 2007

Authors : Pornngarm Limtrakul

Study Type : Review

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin may work synergistically with taxane chemotherapy for hormone-refractory prostate cancer treatment. - GMI Summary

Pubmed Data : Nutr Cancer. 2010;62(2):148-53. PMID: [20099188](#)

Article Published Date : Jan 01, 2010

Authors : Aurelie Cabrespine-Faugeras, Mathilde Bayet-Robert, Jacques-Olivier Bay, Philippe Chollet, Chantal Barthomeuf

Study Type : Review

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy](#) : CK(65) : AC(16), [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Taxane](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

Drug-Plant-Vitamin Synergies (AC 43)

A combination of geranium extract, Ganoderma lucidum, Codonopsis pilosula and Angelica sinensis, improve the condition of cancer patients receiving chemotherapy/radiotherapy. - GMI Summary

Pubmed Data : Phytother Res. 2009 Jun;23(6):785-90. PMID: [19145638](#)

Article Published Date : Jun 01, 2009

Authors : Shu-Ru Zhuang, Su-Lin Chen, Jih-Hsin Tsai, Chi-Chou Huang, Tzu-Chin Wu, Wen-Shan Liu, Hsien-Chun Tseng, Hong-Sen Lee, Min-Chang Huang, Guang-Tzuu Shane, Cheng-Hua Yang, You-Cheng Shen, Yeong-Yu Yan, Chin-Kun Wang

Study Type : Human Study

Additional Links

Substances : [Angelica](#) : CK(73) : AC(28), [Codonopsis pilosula](#) : CK(23) : AC(4), [Geranium](#) : CK(16) : AC(8), [Reishi Mushroom](#) : CK(109) : AC(43)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Radiation Induced Illness](#) : CK(994) : AC(245)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Vitamin E and N-acetylcysteine are an effective antioxidant adjuvant therapy in children with acute lymphoblastic leukemia to reduce the chemo-/radiotherapy toxicity of treatment. - GMI Summary

Pubmed Data : Adv Hematol. 2009;2009:689639. Epub 2009 Oct 20. PMID: [19960046](#)

Article Published Date : Jan 01, 2009

Authors : Youssef Al-Tonbary, Mohammad Al-Haggag, Rasha El-Ashry, Sahar El-Dakroory, Hanan Azzam, Ashraf Fouda

Study Type : Human Study

Additional Links

Substances : [NAC \(N-acetyl-L-cysteine\) : CK\(248\) : AC\(64\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Acute lymphoblastic leukemia \(ALL\) : CK\(95\) : AC\(28\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Radiation Induced Illness : CK\(994\) : AC\(245\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

[Wheat grass juice may reduce myelotoxicity and need for granulocyte colony-stimulating factors in breast cancer patients receiving chemotherapy. - GMI Summary](#)

Pubmed Data : Nutr Cancer. 2007;58(1):43-8. PMID: [17571966](#)

Article Published Date : Jan 01, 2007

Authors : Gil Bar-Sela, Medy Tsalic, Getta Fried, Hadassah Goldberg

Study Type : Human Study

Additional Links

Substances : [Wheat Grass : CK\(182\) : AC\(11\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Myelotoxicity : CK\(31\) : AC\(8\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

[Sulforaphane increases the effectiveness of various cytotoxic drugs against pancreatic cancer stem cells without inducing additional toxicity in mice. - GMI Summary](#)

Pubmed Data : J Med Food. 2004 Summer;7(2):157-61. PMID: [20940707](#)

Article Published Date : Jun 01, 2004

Authors : Georgios Kallifatidis, Sabrina Labsch, Vanessa Rausch, Juergen Mattern, Jury Gladkikh, Gerhard Moldenhauer, Markus W Büchler, Alexei V Salnikov, Ingrid Herr

Study Type : Transgenic Animal Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

[A variety of carotenoids induce reduce resistance to chemotherapy in multidrug resistant lymphoma and human breast cancer cell lines. - GMI Summary](#)

Pubmed Data : In Vivo. 2004 Mar-Apr;18(2):237-44. PMID: [15113052](#)

Article Published Date : Mar 01, 2004

Authors : Joseph Molnár, Nóra Gyémánt, Ilona Mucsi, Annamária Molnár, Margaret Szabó, Tamás Körtvélyesi, András Varga, Péter Molnár, Gyula Tóth

Study Type : Animal Study

Additional Links

Substances : [Carotenoids : CK\(1041\) : AC\(114\)](#), [Lycopene : CK\(175\) : AC\(32\)](#), [Paprika : CK\(8\) : AC\(6\)](#), [Zeaxanthin : CK\(67\) : AC\(10\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Lymphoma : CK\(211\) : AC\(68\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

[AHCC improves treatment outcome and reduces side effects in anticancer drug treated mice. - GMI Summary](#)

Pubmed Data : J Exp Ther Oncol. 2009;8(1):43-51. PMID: [19827270](#)

Article Published Date : Jan 01, 2009

Authors : Kota Shigama, Akihiro Nakaya, Koji Wakame, Hiroshi Nishioka, Hajime Fujii

Study Type : Animal Study

Additional Links

Substances : [AHCC : CK\(48\) : AC\(17\)](#)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Myelotoxicity](#) : CK(31) : AC(8)
Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)
Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Bilberry enhances the effects and reduces the side effects of the chemotoxic agent 5-flouroucil. - GMI Summary

Pubmed Data : Biofactors. 2007;29(1):55-65. PMID: [17611294](#)

Article Published Date : Jan 01, 2007

Authors : Eun Hye Choi, Hyun Ee Ok, Yoosik Yoon, Bernadene A Magnuson, Mi Kyung Kim, Hyang Sook Chun

Study Type : Animal Study

Additional Links

Substances : [Bilberry](#) : CK(787) : AC(22)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Myelotoxicity](#) : CK(31) : AC(8)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Diosgenin, a compound isolated from fenugreek, has chemosensitizing activity against human liver cancer cells. - GMI Summary

Pubmed Data : Cancer Lett. 2010 Jan 4. Epub 2010 Jan 4. PMID: [20053498](#)

Article Published Date : Jan 04, 2010

Authors : Feng Li, Prasana Priscilla Fernandez, Peramaiyan Rajendran, Kam M Hui, Gautam Sethi

Study Type : Animal Study

Additional Links

Substances : [Diosgenin](#) : CK(2) : AC(1), [Fenugreek](#) : CK(71) : AC(28)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Oleuropein prevents doxorubicin-induced cardiotoxicity and improves therapeutic outcome. - GMI Summary

Pubmed Data : J Mol Cell Cardiol. 2007 Mar;42(3):549-58. Epub 2007 Jan 16. PMID: [17223128](#)

Article Published Date : Mar 01, 2007

Authors : Ioanna Andreadou, Fragiska Sigala, Efstathios K Iliodromitis, Maria Papaefthimiou, Constantinos Sigalas, Nektarios Aligiannis, Paraskevi Savvari, Vassilis Gorgoulis, Efstathios Papalabros, Dimitrios Th Kremastinos

Study Type : Animal Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Oxidative Stress](#) : CK(1858) : AC(703)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Pantothenic acid inhibits radiation-induced tumors and has a synergistic effect with the chemotherapeutic agent mitomycin C. - GMI Summary

Pubmed Data : Oncol Res. 2007;16(8):389-94. PMID: [17913047](#)

Article Published Date : Jan 01, 2007

Authors : Heike Schittl, Nikola Getoff

Study Type : Animal Study

Additional Links

Substances : [Pantothenic Acid \(Vitamin B-5\)](#) : CK(52) : AC(9)

Diseases : [Radiation Induced Illness](#) : CK(994) : AC(245)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radioprotective](#) : CK(453) : AC(180)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Resveratrol adds to the growth inhibitory/anticancer activity of cisplatin and doxorubicin in vitro and protects against doxorubicin-induced cardiac toxicity both in vitro and in mice. - GMI Summary

Pubmed Data : Am J Obstet Gynecol. 2006 May;194(5):e23-6. Epub 2006 Apr 21. PMID: [16647892](#)

Article Published Date : May 01, 2006

Authors : Youssef A Rezk, Sujata S Balulad, Rebecca S Keller, James A Bennett

Study Type : Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#), [Uterine Cancer : CK\(24\) : AC\(10\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Resveratrol alleviates chemotherapy-induced (bleomycin) lung injury in rats. - GMI Summary

Pubmed Data : Pulm Pharmacol Ther. 2007;20(6):642-9. Epub 2006 Sep 3. PMID: [17035056](#)

Article Published Date : Jan 01, 2007

Authors : Göksel Sener, Nurhayat Topaloğlu, A Ozer Sehirli, Feriha Ercan, Nursal Gedik

Study Type : Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Adriamycin : CK\(17\) : AC\(10\)](#), [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Resveratrol enhances the sensitivity of cholangiocarcinoma to chemotherapeutic agents. - GMI Summary

Pubmed Data : Lab Invest. 2010 May 10. Epub 2010 May 10. PMID: [20458282](#)

Article Published Date : May 10, 2010

Authors : Gabriel A Frampton, Eric A Lazcano, Huang Li, Akimuddin Mohamad, Sharon DeMorrow

Study Type : Animal Study

Additional Links

Diseases : [Cholangiocarcinoma : CK\(23\) : AC\(11\)](#)

Pharmacological Actions : [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Spirulina has a protective effect against doxorubicin-induced cardiotoxicity in mice. - GMI Summary

Pubmed Data : Phytother Res. 2005 Dec;19(12):1030-7. PMID: [16372368](#)

Article Published Date : Dec 01, 2005

Authors : Mahmood Khan, Jagdish Chandra Shobha, Iyyapu Krishna Mohan, Madireddi Umamaheswara Rao Naidu, Challa Sundaram, Shashi Singh, Periannan Kuppusamy, Vijay Kumar Kutala

Study Type : Animal Study

Additional Links

Substances : [Spirulina : CK\(77\) : AC\(23\)](#)

Diseases : [Cardiotoxicity: Chemotherapy-Induced : CK\(12\) : AC\(6\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Cardioprotective : CK\(627\) : AC\(185\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

A tocotrienol-rich fraction from rice bran enhances cisplatin-induced cytotoxicity in human mesothelioma cells. - GMI Summary

Pubmed Data : Phytother Res. 2010 Feb 1. Epub 2010 Feb 1. PMID: [20127663](#)

Article Published Date : Feb 01, 2010

Authors : Keisuke Nakashima, Nantiga Virgona, Mio Miyazawa, Takashi Watanabe, Tomohiro Yano

Study Type : In Vitro Study

Additional Links

Substances : [Rice Bran](#) : CK(29) : AC(14), [Tocotrienols](#) : CK(21) : AC(16)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Mesothelioma](#) : CK(30) : AC(9)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Andrographis contains a compound which enhances chemosensitivity of cancer cells to doxorubicin. - GMI Summary

Pubmed Data : Biochem Pharmacol. 2010 May 1;79(9):1242-50. Epub 2009 Dec 21. PMID: [20026083](#)

Article Published Date : May 01, 2010

Authors : Jing Zhou, Choon-Nam Ong, Gang-Min Hur, Han-Ming Shen

Study Type : In Vitro Study

Additional Links

Substances : [Andrographis](#) : CK(80) : AC(34)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Camptothecin acts synergistically with imatinib and overcomes imatinib resistance in chronic myelogenous leukemia (CML) cells. - GMI Summary

Pubmed Data : Cancer Lett. 2007 Jul 8;252(1):75-85. Epub 2007 Jan 16. PMID: [17223257](#)

Article Published Date : Jul 08, 2007

Authors : Dong-Sik Ju, Mi-Ju Kim, Jae-Ho Bae, Hye-Soon Song, Byung-Seon Chung, Min-Ki Lee, Chi-Dug Kang, Hyun-Sun Lee, Dong-Wan Kim, Sun-Hee Kim

Study Type : In Vitro Study

Additional Links

Substances : [Camptothecin](#) : CK(5) : AC(5)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Capsaicin potentiates the vitamin D3-induced and all-trans retinoic acid-induced differentiation of human promyelocytic leukemia cells. - GMI Summary

Pubmed Data : Eur J Pharmacol. 2001 May 25;420(2-3):83-90. PMID: [11408028](#)

Article Published Date : May 25, 2001

Authors : S N Kang, S W Chung, T S Kim

Study Type : In Vitro Study

Additional Links

Substances : [Capsaicin](#) : CK(47) : AC(25), [Vitamin D](#) : CK(1493) : AC(220)

Diseases : [Promyelocytic leukemia](#) : CK(137) : AC(75)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Enzyme Inhibitors](#) : CK(385) : AC(210)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Natural Substance Synergy](#) : CK(127) : AC(77)

DHA sensitizes neuroblastoma cells to chemotherapy and asenic-induced oxidative stress. - GMI Summary

Pubmed Data : Int J Cancer. 2006 May 15;118(10):2584-93. PMID: [16353135](#)

Article Published Date : May 15, 2006

Authors : Magnus Lindskog, Helena Gleissman, Frida Ponthan, Juan Castro, Per Kogner, John Inge Johnsen

Study Type : In Vitro Study

Additional Links

Substances : [DHA \(Docosahexaenoic Acid\)](#) : CK(603) : AC(100)

Diseases : [Neuroblastoma](#) : CK(51) : AC(31), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[DIM \(3,3'-diindolylmethane\) sensitizes breast tumors to chemotherapy.](#) - GMI Summary

Pubmed Data : Mol Cancer Ther. 2007 Oct;6(10):2757-65. Epub 2007 Oct 3. PMID: [17913854](#)

Article Published Date : Oct 01, 2007

Authors :

K M Wahidur Rahman, Shadan Ali, Amro Aboukameel, Sanila H Sarkar, Zhiwei Wang, Philip A Philip, Wael A Sakr, Avraham Raz

Study Type : In Vitro Study

Additional Links

Substances : [DIM \(3,3'-diindolylmethane\)](#) : CK(17) : AC(9)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[EGCG has anti-leukemia activity and enhances imatinib-induced cell death.](#) - GMI Summary

Pubmed Data : Cancer Sci. 2009 Feb;100(2):349-56. PMID: [19200260](#)

Article Published Date : Feb 01, 2009

Authors : Reo Iwasaki, Kinji Ito, Takaomi Ishida, Makoto Hamanoue, Souichi Adachi, Toshiki Watanabe, Yuko Sato

Study Type : In Vitro Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\)](#) : CK(176) : AC(115)

Diseases : [Leukemia: Chronic myelogenous leukemia \(CML\)](#) : CK(28) : AC(17)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Emodin enhances sensitivity of gallbladder cancer cells to chemotherapy.](#) - GMI Summary

Pubmed Data : Biochem Pharmacol. 2010 Apr 15;79(8):1134-40. Epub 2009 Dec 11. PMID: [20005210](#)

Article Published Date : Apr 15, 2010

Authors : Wei Wang, Yue-ping Sun, Xin-zhi Huang, Min He, Yu-ying Chen, Gui-ying Shi, Hui Li, Jing Yi, Jian Wang

Study Type : In Vitro Study

Additional Links

Substances : [Emodin](#) : CK(30) : AC(19)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Gallbladder Cancer](#) : CK(56) : AC(10)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Genistein acts as a chemosensitizer, augmenting the efficacy of cisplatin in pancreatic cancer.](#) - GMI Summary

Pubmed Data : Int J Cancer. 2007 Feb 15;120(4):906-17. PMID: [17131310](#)

Article Published Date : Feb 15, 2007

Authors : Sanjeev Banerjee, Yuxiang Zhang, Zhiwei Wang, Mingxin Che, Paul J Chiao, James L Abbruzzese, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor : CK\(141\) : AC\(68\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin : CK\(4\) : AC\(3\)](#), [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Genistein acts as a chemosensitizer, contributing to overcoming drug-resistance in prostate, breast, lung and pancreatic cancers. - GMI Summary

Pubmed Data : Cancer Res. 2005 Aug 1;65(15):6934-42. PMID: [16061678](#)

Article Published Date : Aug 01, 2005

Authors : Yiwei Li, Fakhara Ahmed, Shadan Ali, Philip A Philip, Omer Kucuk, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Genistein acts as a radiosensitizing and chemosensitizing agent against the breast cancer cell line MCF-7. - GMI Summary

Pubmed Data : Anticancer Res. 2009 Aug;29(8):3179-83. PMID: [19661332](#)

Article Published Date : Aug 01, 2009

Authors : Johannes Hartmann, Nikola Getoff

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Licorice alleviates Doxorubicin induced-toxicity. - GMI Summary

Pubmed Data : J Food Prot. 2002 Oct;65(10):1610-3. PMID: [18849542](#)

Article Published Date : Oct 01, 2002

Authors : Hyun Ju Choi, Mi Ra Seon, Soon Sung Lim, Jong-Sang Kim, Hyang Sook Chun, Jung Han Yoon Park

Study Type : In Vitro Study

Additional Links

Substances : [Licorice : CK\(254\) : AC\(79\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Luteolin has anti-proliferative and chemosensitizing effects on human gastric cancer cells. - GMI Summary

Pubmed Data : Mol Cell Biochem. 2008 Jun;313(1-2):125-32. Epub 2008 Apr 9. PMID: [18398671](#)

Article Published Date : Jun 01, 2008

Authors : Bin Wu, Qiang Zhang, Weiming Shen, Jun Zhu

Study Type : In Vitro Study

Additional Links

Substances : [Luteolin : CK\(61\) : AC\(51\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Quercetin acts as a chemosensitizing agent in daunorubicin multidrug resistant leukemia cell lines. - GMI Summary

Pubmed Data : Ai Zheng. 2004 Dec;23(12):1611-5. PMID: [15601547](#)

Article Published Date : Dec 01, 2004

Authors : Xun Cai, Fang-Yuan Chen, Jie-Ying Han, Chun-Hong Gu, Hua Zhong, Ren-Rong Ouyang

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Leukemia : CK\(694\) : AC\(270\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Daunorubicin : CK\(1\) : AC\(1\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Quercetin may overcome chemotherapy-resistance in chronic lymphocytic leukemia patients. - GMI Summary

Pubmed Data : Br J Cancer. 2010 Aug 24;103(5):642-8. Epub 2010 Jul 20. PMID: [20648016](#)

Article Published Date : Aug 24, 2010

Authors : M Russo, C Spagnuolo, S Volpe, A Mupo, I Tedesco, G-L Russo

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Leukemia: Chronic Lymphocytic Leukemia \(CLL\) : CK\(52\) : AC\(24\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Quercetin pretreatment sensitizes human cervical cells to cisplatin-induced programmed cell death. - GMI Summary

Pubmed Data : Biochem Pharmacol. 2005 May 1;69(9):1343-50. PMID: [15826605](#)

Article Published Date : May 01, 2005

Authors : J Jakubowicz-Gil, R Paduch, T Piersiak, K Głowniak, A Gawron, M Kandefer-Szerszeń

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cervical Cancer : CK\(322\) : AC\(65\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Quercetin reverses multi-drug resistance of adriamycin resistant promyelocytic leukemia cells. - GMI Summary

Pubmed Data : Zhonghua Zhong Liu Za Zhi. 2005 Jun;27(6):326-9. PMID: [16117892](#)

Article Published Date : Jun 01, 2005

Authors : Xun Cai, Fang-yuan Chen, Jie-ying Han, Chun-hong Gu, Hua Zhong, Ye Teng, Ren-rong Ouyang

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin](#) : CK(312) : AC(140)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Promyelocytic leukemia](#) : CK(137) : AC(75)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Adriamycin](#) : CK(2) : AC(2), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Resveratrol combines favorably with paclitaxel to induce cell death in lung cancer cells. - GMI Summary

Pubmed Data : Anticancer Res. 2003 Sep-Oct;23(5A):4039-46. PMID: [14666716](#)

Article Published Date : Sep 01, 2003

Authors : Tetsuya Kubota, Yoshiki Uemura, Makoto Kobayashi, Hirokuni Taguchi

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Stilbenes](#) : CK(414) : AC(245)

Resveratrol increase the sensitivity of non-Hodgkin's lymphoma and multiple myeloma cell lines to paclitaxel-induced programmed cell death. - GMI Summary

Pubmed Data : Mol Cancer Ther. 2004 Jan;3(1):71-84. PMID: [14749477](#)

Article Published Date : Jan 01, 2004

Authors : Ali R Jazirehi, Benjamin Bonavida

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Multiple Myeloma](#) : CK(125) : AC(50), [Non-Hodgkin Lymphoma](#) : CK(445) : AC(63)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Stilbenes](#) : CK(414) : AC(245)

Resveratrol increases sensitivity of nasopharyngeal cancer cells to chemotherapeutic drugs under hypoxia. - GMI Summary

Pubmed Data : Zhong Xi Yi Jie He Xue Bao. 2009 Oct;7(10):952-7. PMID: [19828106](#)

Article Published Date : Oct 01, 2009

Authors : Fang Quan, Shao-Qiang Zhang, Yan-Xia Bai, Xiao-Bao Yao, Hong-Hui Li, Liang Yu, Cheng-En Pan

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Nasopharyngeal Cancer](#) : CK(58) : AC(21)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Sulforaphane reduces doxorubicin resistance. - GMI Summary

Pubmed Data : Mutat Res. 2006 Oct 10;601(1-2):92-101. Epub 2006 Jul 14. PMID: [16843502](#)

Article Published Date : Oct 10, 2006

Authors : Carmela Fimognari, Michael Nüsse, Monia Lenzi, Davide Sciuscio, Giorgio Cantelli-Forti, Patrizia Hrelia

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Sulforaphane potentiates oxaliplatin-induced cell growth inhibition in colorectal cancer cells. - GMI Summary

Pubmed Data : Cancer Chemother Pharmacol. 2010 Aug 6. Epub 2010 Aug 6. PMID: [20689952](#)

Article Published Date : Aug 06, 2010

Authors : Bettina M Kaminski, Andreas Weigert, Bernhard Brüne, Marco Schumacher, Uwe Wenzel, Dieter Steinhilber, Jürgen Stein, Sandra Ulrich

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Colon Cancer](#) : CK(375) : AC(230), [Colorectal Cancer](#) : CK(768) : AC(299), [Colorectal Tumors](#) : CK(15) : AC(4)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Oxaliplatin](#) : CK(6) : AC(5), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Sulforaphane works synergistically with 5-fluorouracil to inhibit high and low metastasis cell lines of salivary gland adenoid cystic carcinoma. - GMI Summary

Pubmed Data : Cancer Chemother Pharmacol. 2001 Jul;47 Suppl:S38-44. PMID: [18844240](#)

Article Published Date : Jul 01, 2001

Authors : Xiao-Feng Wang, Dong-Mei Wu, Bao-Xin Li, Yan-Jie Lu, Bao-Feng Yang

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Cancer Metastasis](#) : CK(283) : AC(132), [Salivary Gland Adenoid Cystic Carcinoma.](#) : CK(3) : AC(3), [Salivary Gland Diseases](#) : CK(34) : AC(6)

Pharmacological Actions : [Anti-metastatic](#) : CK(172) : AC(95), [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-fluorouracil](#) : CK(88) : AC(23), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

The association of sulforaphane-doxorubicin may therefore allow doxorubicin to be administered at lower doses, thereby reducing its potential toxicity. - GMI Summary

Pubmed Data : Ann N Y Acad Sci. 2007 Jan;1095:62-9. PMID: [17404018](#)

Article Published Date : Jan 01, 2007

Authors : Carmela Fimognari, Monia Lenzi, Davide Sciuscio, Giorgio Cantelli-Forti, Patrizia Hrelia

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Triptolide, a compound found within Tripterygium wilfordii, has therapeutic value in the treatment of multi-drug resistant cancer cells. - GMI Summary

Pubmed Data : Anticancer Drugs. 2010 Feb 15. Epub 2010 Feb 15. PMID: [20154595](#)

Article Published Date : Feb 15, 2010

Authors : Yuan-Wu Chen, Gu-Jiun Lin, Yi-Ping Chuang, Wei-Tso Chia, Dueng-Yuan Hueng, Chih-Kung Lin, Shin Nieh, Huey-Kang Sytwu

Study Type : In Vitro Study

Additional Links

Substances : [Tripterygium wilfordii](#) : CK(104) : AC(26), [Triptolide](#) : CK(11) : AC(9)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Chemotherapeutic](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-fluorouracil](#) : CK(88) : AC(23), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Triptolide, a compound found within Tripterygium wilfordii, sensitizes cholangiocarcinoma cells to programmed cell death.](#) - GMI Summary

Pubmed Data : Anticancer Res. 2006 Jan-Feb;26(1A):259-65. PMID: [16475706](#)

Article Published Date : Jan 01, 2006

Authors : Tasanee Panichakul, Pakamas Intachote, Adisak Wongkajorsilp, Banchob Sripa, Stitaya Sirisinha

Study Type : In Vitro Study

Additional Links

Substances : [Tripterygium wilfordii](#) : CK(104) : AC(26), [Triptolide](#) : CK(11) : AC(9)

Diseases : [Cholangiocarcinoma](#) : CK(23) : AC(11)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic](#) : CK(188) : AC(157), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Vitamin C \(ascorbic acid\) reverses chemoresistance of human non-small lung-cancer cells.](#) - GMI Summary

Pubmed Data : Biochem J. 1994 Aug 1;301 (Pt 3):759-64. PMID: [7914401](#)

Article Published Date : Aug 01, 1994

Authors : C D Chiang, E J Song, V C Yang, C C Chao

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin C](#) : CK(1208) : AC(238)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Chemotherapeutic](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Vitamin C \(dehydroascorbic acid\) and mixtures of vitamin E and beta-carotene possess antitumor properties upon radiation and increase the chemotherapeutic activity of mitomycin C.](#) - GMI Summary

Pubmed Data : In Vivo. 2004 Nov-Dec;18(6):795-8. PMID: [15646822](#)

Article Published Date : Nov 01, 2004

Authors : Cornelia Kammerer, Nikola Getoff

Study Type : In Vitro Study

Additional Links

Substances : [beta-Carotene](#) : CK(201) : AC(31), [Vitamin C](#) : CK(1208) : AC(238), [Vitamin E](#) : CK(1288) : AC(227)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Tumors](#) : CK(179) : AC(107)

Pharmacological Actions : [Chemotherapeutic](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Vitamin C augments chemotherapeutic response of cervical carcinoma cells.](#) - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2001 Mar 30;282(2):409-15. PMID: [11401473](#)

Article Published Date : Mar 30, 2001

Authors : V G Reddy, N Khanna, N Singh

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin C](#) : CK(1208) : AC(238)

Diseases : [Cervical Cancer](#) : CK(322) : AC(65), [Human Papillomavirus \(HPV\)](#) : CK(490) : AC(23)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311),

Oxidative Stress (AC 16)

[Acute exercise protects against doxorubicin cardiotoxicity.](#) - GMI Summary

Pubmed Data : Integr Cancer Ther. 2008 Sep;7(3):147-54. PMID: [18815146](#)

Article Published Date : Sep 01, 2008

Authors : Karen Y Wonders, David S Hydock, Carole M Schneider, Reid Hayward

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Hypertension](#) : CK(2610) : AC(260), [Oxidative Stress](#) : CK(1858) : AC(703)

Therapeutic Actions : [Exercise](#) : CK(451) : AC(61)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

[A compound in ginger known as 6-Gingerol prevents cisplatin-induced acute renal failure in rats.](#) - GMI Summary

Pubmed Data : J Agric Food Chem. 2005 Apr 6;53(7):2446-50. PMID: [16971750](#)

Article Published Date : Apr 06, 2005

Authors : Anurag Kuhad, Naveen Tirkey, Sangeeta Pilkhwal, Kanwaljit Chopra

Study Type : Animal Study

Additional Links

Substances : [Catechols](#) : CK(15) : AC(11), [Ginger](#) : CK(299) : AC(91)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Renoprotective](#) : CK(179) : AC(84)

[Astaxanthin intervention ameliorates cyclophosphamide-induced oxidative stress, DNA damage and early hepatocarcinogenesis in rat.](#) - GMI Summary

Pubmed Data : Mutat Res. 2010 Feb ;696(1):69-80. Epub 2009 Dec 28. PMID: [20038455](#)

Article Published Date : Feb 01, 2010

Authors : D N Tripathi, G B Jena

Study Type : Animal Study

Additional Links

Substances : [Astaxanthin](#) : CK(585) : AC(104)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [DNA damage](#) : CK(687) : AC(287), [Liver Damage](#) : CK(598) : AC(209), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Chemopreventive](#) : CK(1254) : AC(342), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

[Astaxanthin protects against cyclophosphamide-induced oxidative stress and DNA damage.](#) - GMI Summary

Pubmed Data : Chem Biol Interact. 2009 Aug 14;180(3):398-406. Epub 2009 Apr 2. PMID: [19539803](#)

Article Published Date : Aug 14, 2009

Authors : D N Tripathi, G B Jena

Study Type : Animal Study

Additional Links

Substances : [Astaxanthin](#) : CK(585) : AC(104)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [DNA damage](#) : CK(687) : AC(287), [Lipid Peroxidation](#) : CK(333) : AC(125), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Malondialdehyde Down-regulation](#) : CK(68) : AC(18), [Superoxide Dismutase Up-regulation](#) : CK(127) : AC(40)

[Coenzyme Q10 treatment ameliorates acute cisplatin nephrotoxicity in mice.](#)

- GMI Summary

Pubmed Data : Toxicology. 2010 Jul-Aug;274(1-3):49-56. Epub 2010 May 25. PMID: [20510337](#)

Article Published Date : Jul 01, 2010

Authors : Amr A Fouad, Ali Ibrahim Al-Sultan, Shereen M Refaie, Mohamed T Yacoubi

Study Type : Animal Study

Additional Links

Substances : [Coenzyme Q10](#) : CK(667) : AC(103)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

[Curcumin oil has a protective effect against cisplatin-induced nephrotoxicity.](#)

- GMI Summary

Pubmed Data : J Agric Food Chem. 2007 Dec 12;55(25):10150-5. Epub 2007 Nov 15. PMID: [18001039](#)

Article Published Date : Dec 12, 2007

Authors : Anurag Kuhad, Sangeeta Pilkhwal, Sameer Sharma, Naveen Tirkey, Kanwaljit Chopra

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Inflammation](#) : CK(1001) : AC(341), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Anti-Inflammatory Agents](#) : CK(1159) : AC(412), [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

[Curcumin prevents adriamycin nephrotoxicity in rats.](#) - GMI Summary

Pubmed Data : Br J Pharmacol. 2000 Jan;129(2):231-4. PMID: [10694226](#)

Article Published Date : Jan 01, 2000

Authors : [No authors listed]

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

[Curcumin protects against cisplatin-induced oxidative injury in rat testis.](#) - GMI Summary

Pubmed Data : Hum Reprod. 2009 Jul;24(7):1717-25. Epub 2009 Mar 11. PMID: [19279034](#)

Article Published Date : Jul 01, 2009

Authors : Yusuf Ozlem Ilbey, Emin Ozbek, Mustafa Cekmen, Abdulmuttalip Simsek, Alper Otuncemur, Adnan Somay

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11)

[Curcumin protects bleomycin-induced lung injury in rats.](#) - GMI Summary

Pubmed Data : Pharm Res. 2008 Sep;25(9):2181-9. Epub 2008 Apr 25. PMID: [9250724](#)

Article Published Date : Sep 01, 2008

Authors : N Venkatesan, V Punithavathi, G Chandrakasan

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Lung Injury: Acute](#) : CK(30) : AC(11), [Oxidative Stress](#) : CK(1858) : AC(703)

L-arginine has a protective effect against cisplatin-induced renal oxidative stress and toxicity. - GMI Summary

Pubmed Data : Basic Clin Pharmacol Toxicol. 2005 Aug;97(2):91-7. PMID: [15998355](#)

Article Published Date : Aug 01, 2005

Authors : Samira Saleh, Ebtehal El-Demerdash

Study Type : Animal Study

Additional Links

Substances : [Arginine](#) : CK(960) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Enzyme Inhibitors](#) : CK(385) : AC(210), [Nitric Oxide Enhancer](#) : CK(127) : AC(33)

Loquat seed inhibits oxidative stress associated with adriamycin-induced nephropathy. - GMI Summary

Pubmed Data : Biol Pharm Bull. 2004 Dec;27(12):1961-4. PMID: [15577213](#)

Article Published Date : Dec 01, 2004

Authors : Atsuhide Hamada, Saburo Yoshioka, Daisuke Takuma, Junko Yokota, Tailine Cui, Masahiko Kusunose, Mitsuhiro Miyamura, Shojiro Kyotani, Yutaka Nishioka

Study Type : Animal Study

Additional Links

Substances : [Loquat Seeds](#) : CK(11) : AC(6)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10), [Lipid Peroxidation](#) : CK(333) : AC(125), [Nephropathy](#) : CK(161) : AC(29), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Glutathione Upregulation](#) : CK(152) : AC(47), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Plant Extracts](#) : CK(3297) : AC(1135)

Melatonin, a pineal secretory product with antioxidant properties, protects against cisplatin-induced nephrotoxicity in rats. - GMI Summary

Pubmed Data : J Pineal Res. 2001 Apr;30(3):129-38. PMID: [11316323](#)

Article Published Date : Apr 01, 2001

Authors : M Hara, M Yoshida, H Nishijima, M Yokosuka, M Iigo, R Ohtani-Kaneko, A Shimada, T Hasegawa, Y Akama, K Hirata

Study Type : Animal Study

Additional Links

Substances : [Melatonin](#) : CK(454) : AC(115)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84)

Oleuropein prevents doxorubicin-induced cardiotoxicity and improves therapeutic outcome. - GMI Summary

Pubmed Data : J Mol Cell Cardiol. 2007 Mar;42(3):549-58. Epub 2007 Jan 16. PMID: [17223128](#)

Article Published Date : Mar 01, 2007

Authors : Ioanna Andreadou, Fragiska Sigala, Efstathios K Iliodromitis, Maria Papaefthimiou, Constantinos Sigalas, Nektarios Aligiannis, Paraskevi Savvari, Vassilis Gorgoulis, Efstathios Papalabros, Dimitrios Th Kremastinos

Study Type : Animal Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Cardiotoxicity: Chemotherapy-Induced : CK\(12\) : AC\(6\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Sulforaphane protects against cisplatin-induced liver and mitochondrial damage. - GMI Summary

Pubmed Data : Toxicology. 2011 Aug 15 ;286(1-3):20-7. Epub 2011 May 6. PMID: [21575670](#)

Article Published Date : Aug 15, 2011

Authors : Leobardo Gaona-Gaona, Eduardo Molina-Jijón, Edilia Tapia, Cecilia Zazueta, Rogelio Hernández-Pando, Mariel Calderón-Oliver, Guillermo Zarco-Márquez, Enrique Pinzón, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Chemically-Induced Liver Damage : CK\(451\) : AC\(174\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Problem Substances : [Cisplatin : CK\(15\) : AC\(2\)](#)

Adverse Pharmacological Actions : [Hepatotoxic : CK\(262\) : AC\(69\)](#)

Sulforaphane protects against cisplatin-induced nephrotoxicity. - GMI Summary

Pubmed Data : Int J Sport Nutr Exerc Metab. 2007 Aug;17(4):352-63. PMID: [19913604](#)

Article Published Date : Aug 01, 2007

Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Edilia Tapia, Omar N Medina-Campos, Dolores Javier Sánchez-González, Claudia María Martínez-Martínez, Karla Mariana Ortiz-Vega, Martha Franco, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

DHA sensitizes neuroblastoma cells to chemotherapy and asenic-induced oxidative stress. - GMI Summary

Pubmed Data : Int J Cancer. 2006 May 15;118(10):2584-93. PMID: [16353135](#)

Article Published Date : May 15, 2006

Authors : Magnus Lindskog, Helena Gleissman, Frida Ponthan, Juan Castro, Per Kogner, John Inge Johnsen

Study Type : In Vitro Study

Additional Links

Substances : [DHA \(Docosahexaenoic Acid\) : CK\(603\) : AC\(100\)](#)

Diseases : [Neuroblastoma : CK\(51\) : AC\(31\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Resveratrol (AC 26)

Resveratrol enhances antitumor activity of TRAIL in prostate cancer xenografts. - GMI Summary

Pubmed Data : PLoS One. 2010;5(12):e15627. Epub 2010 Dec 28. PMID: [21209944](#)

Article Published Date : Jan 01, 2010

Authors : Suthakar Ganapathy, Qinghe Chen, Karan P Singh, Sharmila Shankar, Rakesh K Srivastava
Study Type : Transgenic Animal Study
Additional Links
Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)
Diseases : [Prostate Cancer : CK\(961\) : AC\(288\)](#)
Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Vascular Endothelial Growth Factor Regulator : CK\(28\) : AC\(13\)](#)

Hu Zhang (Polygonum cuspidatum), a rich source of resveratrol, inhibits the expression of inflammation in lung fibroblasts and reduces alveolitis and pulmonary fibrosis. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2009 Jun;34(12):1574-7. PMID: [19777850](#)
Article Published Date : Jun 01, 2009
Authors : Xiaoying Jin, Xianfang Luo, Kong Song, Yongliang Xia, Jianzhen Dan, Yongmei Sun
Study Type : Animal Study
Additional Links
Substances : [Hu Zhang \(Polygonum cuspidatum\) : CK\(964\) : AC\(9\)](#), [Resveratrol : CK\(963\) : AC\(600\)](#)
Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)
Pharmacological Actions : [Anti-Inflammatory Agents : CK\(1159\) : AC\(412\)](#), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor : CK\(141\) : AC\(68\)](#)

Resveratrol adds to the growth inhibitory/anticancer activity of cisplatin and doxorubicin in vitro and protects against doxorubicin-induced cardiac toxicity both in vitro and in mice. - GMI Summary

Pubmed Data : Am J Obstet Gynecol. 2006 May;194(5):e23-6. Epub 2006 Apr 21. PMID: [16647892](#)
Article Published Date : May 01, 2006
Authors : Youssef A Rezk, Sujata S Balulad, Rebecca S Keller, James A Bennett
Study Type : Animal Study
Additional Links
Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)
Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#), [Uterine Cancer : CK\(24\) : AC\(10\)](#)
Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#)
Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Resveratrol alleviates chemotherapy-induced (bleomycin) lung injury in rats. - GMI Summary

Pubmed Data : Pulm Pharmacol Ther. 2007;20(6):642-9. Epub 2006 Sep 3. PMID: [17035056](#)
Article Published Date : Jan 01, 2007
Authors : Göksel Sener, Nurhayat Topaloğlu, A Ozer Sehirli, Feriha Ercan, Nursal Gedik
Study Type : Animal Study
Additional Links
Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)
Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Adriamycin : CK\(17\) : AC\(10\)](#), [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)
Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Resveratrol attenuates doxorubicin-induced cardiomyocyte (heart cell) death in mice. - GMI Summary

Pubmed Data : Cardiovasc Res. 2011 Feb 16. Epub 2011 Feb 16. PMID: [21278141](#)
Article Published Date : Feb 16, 2011
Authors : Chi Zhang, Yansheng Feng, Shunlin Qu, Xing Wei, Honglin Zhu, Qi Luo, Meidong Liu, Guangwen Chen, Xianzhong Xiao
Study Type : Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Cardioprotective : CK\(627\) : AC\(185\)](#)

[Resveratrol enhances the anti-tumor effect of immunotherapy in a neuroblastoma model.](#) - GMI Summary

Pubmed Data : Cancer Immunol Immunother. 2011 Feb 22. Epub 2011 Feb 22. PMID: [21340652](#)

Article Published Date : Feb 22, 2011

Authors : Brenda L Soto, Jacquelyn A Hank, Tyler J Van De Voort, Lalita Subramanian, Arthur S Polans, Alexander L Rakhmievich, Richard K Yang, Songwong Seo, KyungMann Kim, Ralph A Reisfeld, Stephen D Gillies, Paul M Sondel

Study Type : Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Neuroblastoma : CK\(51\) : AC\(31\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

[Resveratrol exhibits chemosensitizing and chemopreventive properties.](#) - GMI Summary

Pubmed Data : Chemotherapy. 2010;56(1):60-5. Epub 2010 Mar 19. PMID: [20299793](#)

Article Published Date : Jan 01, 2010

Authors : A M El-Mowafy, M E El-Mesery, H A Salem, M M Al-Gayyar, M M Darweish

Study Type : Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#), [Stilbenes : CK\(123\) : AC\(88\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemopreventive : CK\(1254\) : AC\(342\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Malondialdehyde Down-regulation : CK\(68\) : AC\(18\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

[Resveratrol protects against arsenic trioxide-induced cardiotoxicity in vitro and in vivo.](#) - GMI Summary

Pubmed Data : Br J Pharmacol. 2008 May;154(1):105-13. Epub 2008 Mar 10. PMID: [18332854](#)

Article Published Date : May 01, 2008

Authors : X-Y Zhao, G-Y Li, Y Liu, L-M Chai, J-X Chen, Y Zhang, Z-M Du, Y-J Lu, B-F Yang

Study Type : Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Arsenic Poisoning : CK\(85\) : AC\(26\)](#), [Chemotherapy-Induced Toxicity: Arsenic Trioxide : CK\(3\) : AC\(2\)](#)

Pharmacological Actions : [Cardioprotective : CK\(627\) : AC\(185\)](#)

Additional Keywords : [Stilbenes : CK\(414\) : AC\(245\)](#)

[Resveratrol primes endometrial cancer cells for programmed cell death.](#) - GMI Summary

Pubmed Data : Biochim Biophys Acta. 2010 Sep;1800(9):912-8. Epub 2010 May 7. PMID: [20457218](#)

Article Published Date : Sep 01, 2010

Authors : Xiuli Sun, Yi Zhang, Jianliu Wang, Lihui Wei, Hui Li, Gregory Hanley, Miaoqing Zhao, Yi Li, Deling Yin

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Endometrial Cancer : CK\(239\) : AC\(43\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Glycogen synthase kinase-3beta \(GSK-3beta\) Inhibitor : CK\(4\) : AC\(4\)](#)

Additional Keywords : [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol attenuates doxorubicin-induced cellular damage by modulating nitric oxide and apoptosis. - GMI Summary

Pubmed Data : Exp Toxicol Pathol. 2010 Dec 6. Epub 2010 Dec 6. PMID: [21144718](#)

Article Published Date : Dec 06, 2010

Authors : Gulperi Oktem, Aysegul Uysal, Onur Oral, Ebru Demirel Sezer, Murat Olukman, Ayşe Erol, Serap A Akgur, Ayhan Bilir

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Resveratrol combines favorably with paclitaxel to induce cell death in lung cancer cells. - GMI Summary

Pubmed Data : Anticancer Res. 2003 Sep-Oct;23(5A):4039-46. PMID: [14666716](#)

Article Published Date : Sep 01, 2003

Authors : Tetsuya Kubota, Yoshiki Uemura, Makoto Kobayashi, Hirokuni Taguchi

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Paclitaxel : CK\(36\) : AC\(13\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol down-regulates survivin and induces programmed cell death in human multidrug-resistant cells. - GMI Summary

Pubmed Data : Oncol Rep. 2010 Jan;23(1):279-86. PMID: [19956893](#)

Article Published Date : Jan 01, 2010

Authors : Weiguo Zhao, Pengtao Bao, Haowen Qi, Houcheng You

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#), [Stilbenes : CK\(123\) : AC\(88\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Survivin Down-Regulation : CK\(1\) : AC\(1\)](#)

Resveratrol enhances the anti-tumor activity of rapamycin in breast cancer cell lines. - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 28;301(2):168-76. Epub 2010 Dec 17. PMID: [21168265](#)

Article Published Date : Feb 28, 2011

Authors : Xin He, Yu Wang, Jinhong Zhu, Mohammed Orloff, Charis Eng

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Rapamycin : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol improves the efficacy of cyclophosphamide in breast cancer

treatment and reduces toxicity. - GMI Summary

Pubmed Data : Cancer Sci. 2011 Jan 28. Epub 2011 Jan 28. PMID: [21276137](#)

Article Published Date : Jan 28, 2011

Authors : Neetu Singh, Manisha Nigam, Vishal Ranjan, Deeba Zaidi, Vivek Kumar Garg, Sharad Sharma, Rashmi Chaturvedi, Rishi Shankar, Sadan Kumar, Ramesh Sharma, Kalyan Mitra, Anil K Balapure, Srikanta K Rath

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Resveratrol increase the sensitivity of non-Hodgkin's lymphoma and multiple myeloma cell lines to paclitaxel-induced programmed cell death. - GMI Summary

Pubmed Data : Mol Cancer Ther. 2004 Jan;3(1):71-84. PMID: [14749477](#)

Article Published Date : Jan 01, 2004

Authors : Ali R Jazirehi, Benjamin Bonavida

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Multiple Myeloma](#) : CK(125) : AC(50), [Non-Hodgkin Lymphoma](#) : CK(445) : AC(63)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Stilbenes](#) : CK(414) : AC(245)

Resveratrol increases sensitivity of nasopharyngeal cancer cells to chemotherapeutic drugs under hypoxia. - GMI Summary

Pubmed Data : Zhong Xi Yi Jie He Xue Bao. 2009 Oct;7(10):952-7. PMID: [19828106](#)

Article Published Date : Oct 01, 2009

Authors : Fang Quan, Shao-Qiang Zhang, Yan-Xia Bai, Xiao-Bao Yao, Hong-Hui Li, Liang Yu, Cheng-En Pan

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Nasopharyngeal Cancer](#) : CK(58) : AC(21)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Resveratrol induces cell-cycle disruption and programmed cell death in chemoresistant melanoma. - GMI Summary

Pubmed Data : J Cell Biochem. 2010 Jul 1;110(4):893-902. PMID: [20564188](#)

Article Published Date : Jul 01, 2010

Authors : Grégory Gatouillat, Emilie Balasse, Débora Joseph-Pietras, Hamid Morjani, Claudie Madoulet

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Melanoma](#) : CK(169) : AC(87)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Stilbenes](#) : CK(414) : AC(245)

Resveratrol may help overcome multi-drug resistance in human cancer cell lines. - GMI Summary

Pubmed Data : Anticancer Res. 2010 Nov;30(11):4587-93. PMID: [21115910](#)

Article Published Date : Nov 01, 2010

Authors : Olga Wesolowska, Jerzy Wisniewski, Aleksandra Bielawska-Pohl, Maria Paprocka, Noelia Duarte, Maria-José U Ferreira, Danuta Dus, Krystyna Michalak

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Colorectal Cancer](#) : CK(768) : AC(299)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Stilbenes](#) : CK(414) : AC(245)

Resveratrol protects against Cisplatin-induced cardiotoxicity by alleviating oxidative damage. - GMI Summary

Pubmed Data : Cancer Biother Radiopharm. 2009 Dec;24(6):675-80. PMID: [20025547](#)

Article Published Date : Dec 01, 2009

Authors : Jingxuan Wang, Dongning He, Qingyuan Zhang, Ying Han, Shi Jin, Feng Qi

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Stilbenes](#) : CK(414) : AC(245)

Resveratrol reverses chemotherapy resistance in huma oral cancer cells. - GMI Summary

Pubmed Data : Zhonghua Er Bi Yan Hou Tou Jing Wai Ke Za Zhi. 2009 Jan;44(1):63-8. PMID: [19484992](#)

Article Published Date : Jan 01, 2009

Authors : Fang Quan, Cheng-en Pan, Shao-qiang Zhang, Li-ying Yan, Liang Yu

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Oral Cancer](#) : CK(66) : AC(44)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Resveratrol reverses doxorubicin resistance in acute myeloid leukemia cells. - GMI Summary

Pubmed Data : Environ Health. 2008;7:21. Epub 2008 May 30. PMID: [20350534](#)

Article Published Date : Jan 01, 2008

Authors : Sin Ho Kweon, Ju Han Song, Tae Sung Kim

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Stilbenes](#) : CK(414) : AC(245)

Resveratrol sensitizes resistant leukemia cells to the the effects of anticancer drugs. - GMI Summary

Pubmed Data : Neoplasma. 2006;53(5):384-92. PMID: [17013532](#)

Article Published Date : Jan 01, 2006

Authors : J Duraj, J Bodo, M Sulikova, P Rauko, J Sedlak

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Leukemia](#) : CK(694) : AC(270)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Stilbenes](#) : CK(414) : AC(245)

A number of plant polyphenols have chemosensitizing and radiosensitizing activity. - GMI Summary

Pubmed Data : Antioxid Redox Signal. 2005 Nov-Dec;7(11-12):1630-47. PMID: [16356126](#)

Article Published Date : Nov 01, 2005

Authors : Amit K Garg, Thomas A Buchholz, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Betulinic acid](#) : CK(6) : AC(6), [Caffeic acid phenethyl ester](#) : CK(15) : AC(8), [Curcumin](#) : CK(2870) : AC(1475), [Emodin](#) : CK(30) : AC(19), [Flavonoids](#) : CK(887) : AC(289), [Genistein](#) : CK(457) : AC(176), [Green Tea](#) : CK(931) : AC(279), [Polyphenols](#) : CK(417) : AC(171), [Resveratrol](#) : CK(963) : AC(600), [Silymarin](#) : CK(36) : AC(6), [Ursolic Acid](#) : CK(18) : AC(13)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

A variety of natural substances may function as novel anticancer agents, proteasome inhibitors and chemosensitizers. - GMI Summary

Pubmed Data : Drug Resist Updat. 2006 Dec;9(6):263-73. Epub 2007 Jan 2. PMID: [17197231](#)

Article Published Date : Dec 01, 2006

Authors : Kristin R Landis-Piowar, Vesna Milacic, Di Chen, Huanjie Yang, Yunfeng Zhao, Tak Hang Chan, Bing Yan, Q Ping Dou

Study Type : Review

Additional Links

Substances : [Catechin](#) : CK(408) : AC(130), [Curcumin](#) : CK(2870) : AC(1475), [Genistein](#) : CK(457) : AC(176), [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157), [Proteasome Inhibitors](#) : CK(39) : AC(25), [Radiosensitizer](#) : CK(50) : AC(28)

Additional Keywords : [Stilbenes](#) : CK(414) : AC(245)

Resveratrol exhibits tumor chemosensitizing properties. - GMI Summary

Pubmed Data : Ann N Y Acad Sci. 2011 Jan;1215(1):150-60. PMID: [21261654](#)

Article Published Date : Jan 01, 2011

Authors : Subash C Gupta, Ramaswamy Kannappan, Simone Reuter, Ji Hye Kim, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Acute Myeloid Leukemia](#) : CK(51) : AC(21), [Lung Cancer](#) : CK(440) : AC(185), [Multiple Myeloma](#) : CK(125) : AC(50), [Pancreatic Cancer](#) : CK(524) : AC(160), [Promyelocytic leukemia](#) : CK(137) : AC(75), [Prostate Cancer](#) : CK(961) : AC(288), [Skin Cancer](#) : CK(438) : AC(174), [Tumors](#) : CK(179) : AC(107)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Resveratrol has chemosensitizing and/or anti-cancer activity. - GMI Summary

Pubmed Data : Crit Rev Food Sci Nutr. 2009 Oct;49(9):782-99. PMID: [20443159](#)

Article Published Date : Oct 01, 2009

Authors : Thomas E Kraft, Daniel Parisotto, Christina Schempp, Thomas Efferth

Study Type : Review

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Anti-Angiogenic](#) : CK(133) : AC(99), [Anticarcinogenic Agents](#) : CK(494) :

DNA damage (AC 10)

[Astaxanthin intervention ameliorates cyclophosphamide-induced oxidative stress, DNA damage and early hepatocarcinogenesis in rat.](#) - GMI Summary

Pubmed Data : Mutat Res. 2010 Feb ;696(1):69-80. Epub 2009 Dec 28. PMID: [20038455](#)

Article Published Date : Feb 01, 2010

Authors : D N Tripathi, G B Jena

Study Type : Animal Study

Additional Links

Substances : [Astaxanthin : CK\(585\) : AC\(104\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide : CK\(25\) : AC\(9\)](#), [DNA damage : CK\(687\) : AC\(287\)](#), [Liver Damage : CK\(598\) : AC\(209\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Chemopreventive : CK\(1254\) : AC\(342\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

[Astaxanthin protects against cyclophosphamide-induced oxidative stress and DNA damage.](#) - GMI Summary

Pubmed Data : Chem Biol Interact. 2009 Aug 14;180(3):398-406. Epub 2009 Apr 2. PMID: [19539803](#)

Article Published Date : Aug 14, 2009

Authors : D N Tripathi, G B Jena

Study Type : Animal Study

Additional Links

Substances : [Astaxanthin : CK\(585\) : AC\(104\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide : CK\(25\) : AC\(9\)](#), [DNA damage : CK\(687\) : AC\(287\)](#), [Lipid Peroxidation : CK\(333\) : AC\(125\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Malondialdehyde Down-regulation : CK\(68\) : AC\(18\)](#), [Superoxide Dismutase Up-regulation : CK\(127\) : AC\(40\)](#)

[Curcumin reduced the side effects of mitomycin C in the treatment of breast cancer.](#) - GMI Summary

Pubmed Data : Cancer Sci. 2009 Nov;100(11):2040-5. Epub 2009 Jul 23. PMID: [19703194](#)

Article Published Date : Nov 01, 2009

Authors : Qian-Mei Zhou, Hui Zhang, Yi-Yu Lu, Xiu-Feng Wang, Shi-Bing Su

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Mitomycin-C : CK\(6\) : AC\(4\)](#), [DNA damage : CK\(687\) : AC\(287\)](#)

Pharmacological Actions : [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Drug: Mitomycin : CK\(4\) : AC\(3\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

[Grape seed extract has a protective role against doxorubicin-induced cardiotoxicity and genotoxicity in albino mice.](#) - GMI Summary

Pubmed Data : J Med Food. 2010 Aug;13(4):917-25. PMID: [20553142](#)

Article Published Date : Aug 01, 2010

Authors : Emine Yalçın, Ertan Oruç, Kültiğin Cavuşoğlu, Kürşad Yapar

Study Type : Animal Study

Additional Links

Substances : [Grape Seed Extract : CK\(172\) : AC\(58\)](#)

Diseases : [Cardiotoxicity: Chemotherapy-Induced : CK\(12\) : AC\(6\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [DNA damage : CK\(687\) : AC\(287\)](#)

Pharmacological Actions : [Cardioprotective : CK\(627\) : AC\(185\)](#), [Genoprotective : CK\(109\) : AC\(46\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Saffron protects against chromosomal damage induced by cisplatin, mitomycin-C and urethane. - GMI Summary

Pubmed Data : Asia Pac J Clin Nutr. 2003;12(4):474-6. PMID: [14672873](#)

Article Published Date : Jan 01, 2003

Authors : Kumpati Premkumar, Suresh K Abraham, Sathiyavedu T Santhiya, Arabandi Ramesh

Study Type : Animal Study

Additional Links

Substances : [Saffron](#) : CK(123) : AC(32)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Chemopreventive](#) : CK(1254) : AC(342)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Curcumin has antimutagenic activity. - GMI Summary

Pubmed Data : Int J Antimicrob Agents. 2008 Jun;31(6):572-6. Epub 2008 Apr 28. PMID: [10682600](#)

Article Published Date : Jun 01, 2008

Authors : X Li, Q Song, B Chen

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Antimutagenic Agents](#) : CK(73) : AC(43), [Genoprotective](#) : CK(109) : AC(46)

Curcumin has antimutagenic potential. - GMI Summary

Pubmed Data : Mutat Res. 2002 Mar 25;515(1-2):197-202. PMID: [11909768](#)

Article Published Date : Mar 25, 2002

Authors : Yogeshwer Shukla, Annu Arora, Pankaj Taneja

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Antimutagenic Agents](#) : CK(73) : AC(43), [Genoprotective](#) : CK(109) : AC(46)

Curcumin may sensitize cancer cells to chemotherapy. - GMI Summary

Pubmed Data : Mol Cancer Ther. 2006 Apr;5(4):952-61. PMID: [16648566](#)

Article Published Date : Apr 01, 2006

Authors : Deborah Chirnomas, Toshiyasu Taniguchi, Michelle de la Vega, Ami P Vaidya, Maria Vasserman, Anne-Renee Hartman, Richard Kennedy, Rosemary Foster, Jennifer Mahoney, Michael V Seiden, Alan D D'Andrea

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11)

Purified anthocyanin from eggplant reduces genotoxicity and mutagenicity of cyclophosphamide. - GMI Summary

Pubmed Data : Clin Cancer Res. 2009 Feb 15;15(4):1269-76. PMID: [17194516](#)

Article Published Date : Feb 15, 2009

Authors : Luciana Azevedo, Patrícia L Alves de Lima, José C Gomes, Paulo C Stringheta, Daniel A

Ribeiro, Daisy M F Salvadori

Study Type : In Vitro Study

Additional Links

Substances : [Anthocyanins](#) : CK(47) : AC(16), [Eggplant](#) : CK(26) : AC(10)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

[Quercetin abrogates chemoresistance in melanoma cells.](#) - GMI Summary

Pubmed Data : BMC Cancer. 2010;10:282. Epub 2010 Jun 11. PMID: [20540768](#)

Article Published Date : Jan 01, 2010

Authors : Thilakavathy Thangasamy, Sivanandane Sittadjody, Geoffrey C Mitchell, Erin E Mendoza, Vijayababu M Radhakrishnan, Kirsten H Limesand, Randy Burd

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin](#) : CK(312) : AC(140)

Diseases : [DNA damage](#) : CK(687) : AC(287), [Melanoma](#) : CK(169) : AC(87)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157),

[Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Drug: Doxorubicin (AC 30)

[Acute exercise protects against doxorubicin cardiotoxicity.](#) - GMI Summary

Pubmed Data : Integr Cancer Ther. 2008 Sep;7(3):147-54. PMID: [18815146](#)

Article Published Date : Sep 01, 2008

Authors : Karen Y Wonders, David S Hydock, Carole M Schneider, Reid Hayward

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Hypertension](#) : CK(2610) : AC(260), [Oxidative Stress](#) : CK(1858) : AC(703)

Therapeutic Actions : [Exercise](#) : CK(451) : AC(61)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

[Caffeine potentiates chemotherapy for metastatic osteosarcoma.](#) - GMI Summary

Pubmed Data : J Orthop Sci. 2009 Sep;14(5):556-65. Epub 2009 Oct 3. PMID: [19802667](#)

Article Published Date : Sep 01, 2009

Authors : Hiroaki Kimura, Hiroyuki Tsuchiya, Toshiharu Shirai, Hideji Nishida, Katsuhiko Hayashi, Akihiko Takeuchi, Issei Ohnari, Katsuro Tomita

Study Type : Human Study

Additional Links

Substances : [Caffeine](#) : CK(99) : AC(17)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug Synergy](#) : CK(309) : AC(137)

[Exercise preconditioning protects against doxorubicin-induced cardiac dysfunction.](#) - GMI Summary

Pubmed Data : Vet Microbiol. 2006 Oct 5;117(1):59-65. PMID: [18408619](#)

Article Published Date : Oct 05, 2006

Authors : David S Hydock, Chia-Ying Lien, Carole M Schneider, Reid Hayward

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

"Impaired cognitive function and hippocampal neurogenesis following cancer chemotherapy." - GMI Summary

Pubmed Data : Clin Cancer Res. 2012 Feb 14. Epub 2012 Feb 14. PMID: [22338017](#)

Article Published Date : Feb 14, 2012

Authors : Lori-Ann Christie, Munjal M Acharya, Vipin K Parihar, Anna Nguyen, Vahan Martirosian, Charles L Limoli

Study Type : Animal Study

Additional Links

Diseases : [Brain Injury: Hippocampal Damage : CK\(35\) : AC\(12\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [Cognitive Decline/Dysfunction : CK\(500\) : AC\(80\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#)

Problem Substances : [Cyclophosphamide : CK\(2\) : AC\(1\)](#), [Doxorubicin : CK\(2\) : AC\(1\)](#)

Adverse Pharmacological Actions : [Neurotoxic : CK\(976\) : AC\(155\)](#)

Aged garlic extract and grape seed proanthocyanidin protect against doxorubicin-induced cardiotoxicity. - GMI Summary

Pubmed Data : Can J Physiol Pharmacol. 2009 Aug;87(8):633-40. PMID: [19767888](#)

Article Published Date : Aug 01, 2009

Authors : Erkan Demirkaya, Aslihan Avci, Vural Kesik, Yildirim Karslioglu, Emin Oztas, Erol Kismet, Erdal Gokcay, Ilker Durak, Vedat Koseoglu

Study Type : Animal Study

Additional Links

Substances : [Garlic : CK\(488\) : AC\(156\)](#), [Grape Seed Extract : CK\(172\) : AC\(58\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#), [Proanthocyanidins : CK\(167\) : AC\(45\)](#)

Caffeic acid phenetyl ester, a compound found within bee propolis, protects against doxorubicin-induced cardiotoxicity in rats. - GMI Summary

Pubmed Data : Am J Ind Med. 2010 Sep 30. Epub 2010 Sep 30. PMID: [14745846](#)

Article Published Date : Sep 30, 2010

Authors : Ersin Fadillioglu, Emin Oztas, Hasan Erdogan, Murat Yagmurca, Sadik Sogut, Muharrem Ucar, M Kemal Irmak

Study Type : Animal Study

Additional Links

Substances : [Bee Propolis : CK\(222\) : AC\(88\)](#), [Caffeic acid phenethyl ester : CK\(15\) : AC\(8\)](#)

Diseases : [Cardiotoxicity: Chemotherapy-Induced : CK\(12\) : AC\(6\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Celery has a protective effect against doxorubicin toxicity. - GMI Summary

Pubmed Data : Molecules. 2009 ;14(4):1627-38. Epub 2009 Apr 24. PMID: [19396021](#)

Article Published Date : Jan 01, 2009

Authors : Jovanka Kolarovic, Mira Popovic, Momir Mikov, Radoslav Mitic, Ljiljana Gvozdenovic

Study Type : Animal Study

Additional Links

Substances : [Celery : CK\(28\) : AC\(12\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [Lipid Peroxidation : CK\(333\) : AC\(125\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Curcumin attenuates acute adriamycin myocardial toxicity in rats. - GMI Summary

Pubmed Data : Br J Pharmacol. 1998 Jun;124(3):425-7. PMID: [9647462](#)

Article Published Date : Jun 01, 1998

Authors : N Venkatesan

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Curcumin prevents adriamycin nephrotoxicity in rats. - GMI Summary

Pubmed Data : Br J Pharmacol. 2000 Jan;129(2):231-4. PMID: [10694226](#)

Article Published Date : Jan 01, 2000

Authors : [No authors listed]

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Curcumin protects against doxorubicin (adriamycin)-induced toxicity in rats. - GMI Summary

Pubmed Data : J Med Food. 2009 Apr;12(2):394-402. PMID: [19459743](#)

Article Published Date : Apr 01, 2009

Authors : Ragaa Hosny Mohamad, Amal Mohamad El-Bastawesy, Zekry Khalid Zekry, Hussain A Al-Mehdar, Mohamad Gamil Abdel Monaam Al-Said, Soaad Shaker Aly, Sabry Mohamed Sharawy, Mahmud M El-Merzabani

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemically-Induced Liver Damage](#) : CK(451) : AC(174), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug Side Effect Attenuation](#) : CK(252) : AC(50), [Plant Extracts](#) : CK(3297) : AC(1135)

Diosgenin, a compound isolated from fenugreek, has chemosensitizing activity against human liver cancer cells. - GMI Summary

Pubmed Data : Cancer Lett. 2010 Jan 4. Epub 2010 Jan 4. PMID: [20053498](#)

Article Published Date : Jan 04, 2010

Authors : Feng Li, Prasana Priscilla Fernandez, Peramaiyan Rajendran, Kam M Hui, Gautam Sethi

Study Type : Animal Study

Additional Links

Substances : [Diosgenin](#) : CK(2) : AC(1), [Fenugreek](#) : CK(71) : AC(28)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Grape seed extract has a protective role against doxorubicin-induced cardiotoxicity and genotoxicity in albino mice. - GMI Summary

Pubmed Data : J Med Food. 2010 Aug;13(4):917-25. PMID: [20553142](#)

Article Published Date : Aug 01, 2010

Authors : Emine Yalçın, Ertan Oruç, Kültiğın Cavuşoğlu, Kürşad Yapar

Study Type : Animal Study

Additional Links

Substances : [Grape Seed Extract : CK\(172\) : AC\(58\)](#)

Diseases : [Cardiotoxicity: Chemotherapy-Induced : CK\(12\) : AC\(6\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [DNA damage : CK\(687\) : AC\(287\)](#)

Pharmacological Actions : [Cardioprotective : CK\(627\) : AC\(185\)](#), [Genoprotective : CK\(109\) : AC\(46\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Green tea catechins augment the antitumor activity of doxorubicin in an in vivo mouse model for chemoresistant liver cancer. - GMI Summary

Pubmed Data : Int J Oncol. 2010 Jul ;37(1):111-23. PMID: [20514403](#)

Article Published Date : Jul 01, 2010

Authors : Gang Liang, Anzhou Tang, Xiaozhen Lin, Li Li, Su Zhang, Zhiming Huang, Haihua Tang, Qingdi Quentin Li

Study Type : Animal Study

Additional Links

Substances : [Catechin : CK\(408\) : AC\(130\)](#), [Tea : CK\(951\) : AC\(226\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Hazelnut prevented doxorubicin-induced cataract in low doses. - GMI Summary

Pubmed Data : Med Sci Monit. 2005 Aug;11(8):BR300-4. Epub 2005 Jul 25. PMID: [16049376](#)

Article Published Date : Aug 01, 2005

Authors : Atilla Bayer, Cem Evereklioglu, Erkan Demirkaya, Salih Altun, Yildirim Karslioglu, Gungor Sobaci

Study Type : Animal Study

Additional Links

Substances : [Hazelnut : CK\(12\) : AC\(2\)](#)

Diseases : [Cataract : CK\(175\) : AC\(58\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Loquat seed inhibits oxidative stress associated with adriamycin-induced nephropathy. - GMI Summary

Pubmed Data : Biol Pharm Bull. 2004 Dec;27(12):1961-4. PMID: [15577213](#)

Article Published Date : Dec 01, 2004

Authors : Atsuhide Hamada, Saburo Yoshioka, Daisuke Takuma, Junko Yokota, Tailine Cui, Masahiko Kusunose, Mitsuhiro Miyamura, Shojiro Kyotani, Yutaka Nishioka

Study Type : Animal Study

Additional Links

Substances : [Loquat Seeds : CK\(11\) : AC\(6\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin : CK\(17\) : AC\(10\)](#), [Lipid Peroxidation : CK\(333\) : AC\(125\)](#), [Nephropathy : CK\(161\) : AC\(29\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Glutathione Upregulation : CK\(152\) : AC\(47\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Oleuropein confers protection against doxorubicin-induced cardiotoxicity. - GMI Summary

Pubmed Data : NMR Biomed. 2009 Jul;22(6):585-92. PMID: [19308947](#)

Article Published Date : Jul 01, 2009

Authors : Ioanna Andreadou, Maria Papaefthimiou, Athina Zira, Maria Constantinou, Fragiska Sigala, Alexios-Leandros Skaltsounis, Anna Tsantili-Kakoulidou, Efsthathios K Iliodromitis, Dimitrios T Kremastinos, Emmanuel Mikros

Study Type : Animal Study

Additional Links

Substances : [Oleuropein : CK\(41\) : AC\(29\)](#)

Diseases : [Cardiotoxicity: Chemotherapy-Induced : CK\(12\) : AC\(6\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Antihypertensive Agents : CK\(194\) : AC\(38\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

[Oleuropein prevents doxorubicin-induced cardiotoxicity and improves therapeutic outcome.](#) - GMI Summary

Pubmed Data : J Mol Cell Cardiol. 2007 Mar;42(3):549-58. Epub 2007 Jan 16. PMID: [17223128](#)

Article Published Date : Mar 01, 2007

Authors : Ioanna Andreadou, Fragiska Sigala, Efstathios K Iliodromitis, Maria Papaefthimiou, Constantinos Sigalas, Nektarios Aligiannis, Paraskevi Savvari, Vassilis Gorgoulis, Efstathios Papalabros, Dimitrios Th Kremastinos

Study Type : Animal Study

Additional Links

Substances : [Oleuropein : CK\(41\) : AC\(29\)](#)

Diseases : [Cardiotoxicity: Chemotherapy-Induced : CK\(12\) : AC\(6\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

[Silymarin, a compound found within milk thistle, has a protective effect against Doxorubicin-induced oxidative stress and liver damage.](#) - GMI Summary

Pubmed Data : Toxicol Appl Pharmacol. 2010 Feb 5. Epub 2010 Feb 5. PMID: [20144634](#)

Article Published Date : Feb 05, 2010

Authors : Nirav Patel, Cecil Joseph, George B Corcoran, Sidhartha D Ray

Study Type : Animal Study

Additional Links

Substances : [Milk Thistle : CK\(226\) : AC\(55\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Anti-Apoptotic : CK\(59\) : AC\(37\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Hepatoprotective : CK\(528\) : AC\(257\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

[Andrographis contains a compound which enhances chemosensitivity of cancer cells to doxorubicin.](#) - GMI Summary

Pubmed Data : Biochem Pharmacol. 2010 May 1;79(9):1242-50. Epub 2009 Dec 21. PMID: [20026083](#)

Article Published Date : May 01, 2010

Authors : Jing Zhou, Choon-Nam Ong, Gang-Min Hur, Han-Ming Shen

Study Type : In Vitro Study

Additional Links

Substances : [Andrographis : CK\(80\) : AC\(34\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

[Curcumin reduces multi-drug resistance in uterine cancer cells.](#) - GMI Summary

Pubmed Data : Oncol Rep. 2008 Oct;20(4):731-5. PMID: [18813811](#)

Article Published Date : Oct 01, 2008

Authors : Antonio Angelini, Manuela Iezzi, Concetta Di Febbo, Carmine Di Ilio, Franco Cuccurullo, Ettore Porreca

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Uterine Cancer](#) : CK(24) : AC(10)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Curcumin reduces NF-kappa B factor activation associated with anticancer drugs. - GMI Summary

Pubmed Data : Endocr Relat Cancer. 2009 Dec;16(4):1339-50. Epub 2009 Sep 2. PMID: [12007574](#)

Article Published Date : Dec 01, 2009

Authors : Shuang En Chuang, Pei Yen Yeh, Yen Shen Lu, Gi Ming Lai, Chao Ming Liao, Ming Gao, Ann Lii Cheng

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy](#) : CK(65) : AC(16), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug: Tamoxifen](#) : CK(367) : AC(53)

Genistein acts as a chemosensitizer, contributing to overcoming drug-resistance in prostate, breast, lung and pancreatic cancers. - GMI Summary

Pubmed Data : Cancer Res. 2005 Aug 1;65(15):6934-42. PMID: [16061678](#)

Article Published Date : Aug 01, 2005

Authors : Yiwei Li, Fakhara Ahmed, Shadan Ali, Philip A Philip, Omer Kucuk, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185), [Pancreatic Cancer](#) : CK(524) : AC(160), [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Lion's mane enhances doxorubicin-induced apoptosis in human hepatocellular carcinoma cells. - GMI Summary

Pubmed Data : Cancer Lett. 2010 Nov 28 ;297(2):144-54. PMID: [20554107](#)

Article Published Date : Nov 28, 2010

Authors : Jong Seok Lee, Eock Kee Hong

Study Type : In Vitro Study

Additional Links

Substances : [Lion's Mane \(Hericium Erinaceus\)](#) : CK(31) : AC(6)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Resveratrol attenuates doxorubicin-induced cellular damage by modulating nitric oxide and apoptosis. - GMI Summary

Pubmed Data : Exp Toxicol Pathol. 2010 Dec 6. Epub 2010 Dec 6. PMID: [21144718](#)

Article Published Date : Dec 06, 2010

Authors : Gulperi Oktem, Aysegul Uysal, Onur Oral, Ebru Demirel Sezer, Murat Olukman, Ayşe Erol, Serap A Akgur, Ayhan Bilir

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Resveratrol induces cell-cycle disruption and programmed cell death in chemoresistant melanoma. - GMI Summary

Pubmed Data : J Cell Biochem. 2010 Jul 1;110(4):893-902. PMID: [20564188](#)

Article Published Date : Jul 01, 2010

Authors : Grégory Gatouillat, Emilie Balasse, Débora Joseph-Pietras, Hamid Morjani, Claudie Madoulet

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Melanoma : CK\(169\) : AC\(87\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol reverses doxorubicin resistance in acute myeloid leukemia cells. - GMI Summary

Pubmed Data : Environ Health. 2008;7:21. Epub 2008 May 30. PMID: [20350534](#)

Article Published Date : Jan 01, 2008

Authors : Sin Ho Kweon, Ju Han Song, Tae Sung Kim

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Leukemia: Acute myelogenous leukemia \(AML\) : CK\(96\) : AC\(28\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol sensitizes resistant leukemia cells to the the effects of anticancer drugs. - GMI Summary

Pubmed Data : Neoplasma. 2006;53(5):384-92. PMID: [17013532](#)

Article Published Date : Jan 01, 2006

Authors : J Duraj, J Bodo, M Sulikova, P Rauko, J Sedlak

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Leukemia : CK\(694\) : AC\(270\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Sulforaphane reduces doxorubicin resistance. - GMI Summary

Pubmed Data : Mutat Res. 2006 Oct 10;601(1-2):92-101. Epub 2006 Jul 14. PMID: [16843502](#)

Article Published Date : Oct 10, 2006

Authors : Carmela Fimognari, Michael Nüsse, Monia Lenzi, Davide Sciuscio, Giorgio Cantelli-Forti, Patrizia Hrelia

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

The association of sulforaphane-doxorubicin may therefore allow doxorubicin to be administered at lower doses, thereby reducing its potential toxicity. - GMI Summary

Pubmed Data : Ann N Y Acad Sci. 2007 Jan;1095:62-9. PMID: [17404018](#)

Article Published Date : Jan 01, 2007

Authors : Carmela Fimognari, Monia Lenzi, Davide Sciuscio, Giorgio Cantelli-Forti, Patrizia Hrelia

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Ursolic acid induces doxorubicin-resistant liver cancer cell death. - GMI Summary

Pubmed Data : Cancer Lett. 2010 Dec 1;298(1):128-38. Epub 2010 Jul 13. PMID: [20630652](#)

Article Published Date : Dec 01, 2010

Authors : Lu Yang, Xiaozhuo Liu, Zengbing Lu, Judy Yuet-Wa Chan, Linli Zhou, Kwok-Pui Fung, Ping Wu, Shihua Wu

Study Type : In Vitro Study

Additional Links

Substances : [Ursolic Acid](#) : CK(18) : AC(13)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Genoprotective (AC 7)

Curcumin prevents cisplatin-induced chromosomal abberations in rat bone marrow cells. - GMI Summary

Pubmed Data : Mutat Res. 2000 Feb 16;465(1-2):131-7. PMID: [10708978](#)

Article Published Date : Feb 16, 2000

Authors : L M Antunes, M C Araújo, J D Darin, M L Bianchi

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Genoprotective](#) : CK(109) : AC(46)

Grape seed extract has a protective role against doxorubicin-induced cardiotoxicity and genotoxicity in albino mice. - GMI Summary

Pubmed Data : J Med Food. 2010 Aug;13(4):917-25. PMID: [20553142](#)

Article Published Date : Aug 01, 2010

Authors : Emine Yalçın, Ertan Oruç, Kültiğın Cavuşoğlu, Kürşad Yapar

Study Type : Animal Study

Additional Links

Substances : [Grape Seed Extract](#) : CK(172) : AC(58)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185), [Genoprotective](#) : CK(109) : AC(46)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Grape seed extract prevents gentamicin-induced nephrotoxicity and

genotoxicity in bone marrow cells of mice. - GMI Summary

Pubmed Data : Basic Clin Pharmacol Toxicol. 2006 Sep;99(3):230-6. PMID: [16930296](#)

Article Published Date : Sep 01, 2006

Authors : Ibrahim M El-Ashmawy, Abeer F El-Nahas, Osama M Salama

Study Type : Animal Study

Additional Links

Substances : [Grape Seed Extract](#) : CK(172) : AC(58)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity: Gentamicin](#) : CK(20) : AC(10), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Genoprotective](#) : CK(109) : AC(46), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Saffron, garlic and curcumin protect against cyclophosphamide induced genotoxicity in mice. - GMI Summary

Pubmed Data : Asia Pac J Clin Nutr. 2004;13(3):292-4. PMID: [15331343](#)

Article Published Date : Jan 01, 2004

Authors : Kumpati Premkumar, Sundramoorthy Kavitha, Sathiyavedu T Santhiya, A-Rabandi Ramesh, Jiraporn Suwanteerangkul

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475), [Garlic](#) : CK(488) : AC(156)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9)

Pharmacological Actions : [Antimutagenic Agents](#) : CK(73) : AC(43), [Genoprotective](#) : CK(109) : AC(46)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Curcumin has antimutagenic activity. - GMI Summary

Pubmed Data : Int J Antimicrob Agents. 2008 Jun;31(6):572-6. Epub 2008 Apr 28. PMID: [10682600](#)

Article Published Date : Jun 01, 2008

Authors : X Li, Q Song, B Chen

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Antimutagenic Agents](#) : CK(73) : AC(43), [Genoprotective](#) : CK(109) : AC(46)

Curcumin has antimutagenic potential. - GMI Summary

Pubmed Data : Mutat Res. 2002 Mar 25;515(1-2):197-202. PMID: [11909768](#)

Article Published Date : Mar 25, 2002

Authors : Yogeshwer Shukla, Annu Arora, Pankaj Taneja

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Antimutagenic Agents](#) : CK(73) : AC(43), [Genoprotective](#) : CK(109) : AC(46)

Melatonin protects against the genotoxic potential of arsenic and sodium fluoride in human blood culture. - GMI Summary

Pubmed Data : Ecotoxicol Environ Saf. 2010 Sep;73(6):1333-7. Epub 2010 Jun 20. PMID: [20646762](#)

Article Published Date : Sep 01, 2010

Authors : Hemlata Hemant Pant, Mandava Venkateshvara Rao

Study Type : In Vitro Study

Additional Links

Substances : [Melatonin : CK\(454\) : AC\(115\)](#)

Diseases : [Arsenic Poisoning : CK\(85\) : AC\(26\)](#), [Chemotherapy-Induced Toxicity: Arsenic Trioxide : CK\(3\) : AC\(2\)](#), [Fluoride Toxicity : CK\(147\) : AC\(42\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Genoprotective : CK\(109\) : AC\(46\)](#)

Chemopreventive (AC 5)

[Astaxanthin intervention ameliorates cyclophosphamide-induced oxidative stress, DNA damage and early hepatocarcinogenesis in rat. - GMI Summary](#)

Pubmed Data : Mutat Res. 2010 Feb ;696(1):69-80. Epub 2009 Dec 28. PMID: [20038455](#)

Article Published Date : Feb 01, 2010

Authors : D N Tripathi, G B Jena

Study Type : Animal Study

Additional Links

Substances : [Astaxanthin : CK\(585\) : AC\(104\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide : CK\(25\) : AC\(9\)](#), [DNA damage : CK\(687\) : AC\(287\)](#), [Liver Damage : CK\(598\) : AC\(209\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Chemopreventive : CK\(1254\) : AC\(342\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

[Maitake beta-glucan promotes recovery of leukocytes and myeloid cell function in peripheral blood from paclitaxel hematotoxicity. - GMI Summary](#)

Pubmed Data : Cancer Immunol Immunother. 2010 Feb 6. Epub 2010 Feb 6. PMID: [20140432](#)

Article Published Date : Feb 06, 2010

Authors : Hong Lin, Elisa de Stanchina, Xi Kathy Zhou, Feng Hong, Andrew Seidman, Monica Fornier, Wei-Lie Xiao, Edward J Kennelly, Kathleen Wesa, Barrie R Cassileth, Susanna Cunningham-Rundles

Study Type : Animal Study

Additional Links

Substances : [Beta-glucan : CK\(223\) : AC\(41\)](#), [Maitake Mushroom : CK\(61\) : AC\(34\)](#)

Diseases : [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Paclitaxel : CK\(32\) : AC\(4\)](#), [Myelotoxicity : CK\(31\) : AC\(8\)](#)

Pharmacological Actions : [Chemopreventive : CK\(1254\) : AC\(342\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

[Resveratrol exhibits chemosensitizing and chemopreventive properties. - GMI Summary](#)

Pubmed Data : Chemotherapy. 2010;56(1):60-5. Epub 2010 Mar 19. PMID: [20299793](#)

Article Published Date : Jan 01, 2010

Authors : A M El-Mowafy, M E El-Mesery, H A Salem, M M Al-Gayyar, M M Darweish

Study Type : Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#), [Stilbenes : CK\(123\) : AC\(88\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemopreventive : CK\(1254\) : AC\(342\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Malondialdehyde Down-regulation : CK\(68\) : AC\(18\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

[Saffron extract has a protective effect against genetic damage induced by anti-tumor agents in mice. - GMI Summary](#)

Pubmed Data : Hum Exp Toxicol. 2006 Feb;25(2):79-84. PMID: [16539212](#)

Article Published Date : Feb 01, 2006

Authors : K Premkumar, C Thirunavukkarasu, S K Abraham, S T Santhiya, A Ramesh

Study Type : Animal Study

Additional Links

Substances : [Saffron : CK\(123\) : AC\(32\)](#)

Diseases : [Chemotherapy-Induced Liver Toxicity : CK\(14\) : AC\(8\)](#)

Pharmacological Actions : [Chemopreventive : CK\(1254\) : AC\(342\)](#), [Chemotherapeutic : CK\(3\) : AC\(2\)](#)

Saffron protects against chromosomal damage induced by cisplatin, mitomycin-C and urethane. - GMI Summary

Pubmed Data : Asia Pac J Clin Nutr. 2003;12(4):474-6. PMID: [14672873](#)

Article Published Date : Jan 01, 2003

Authors : Kumpati Premkumar, Suresh K Abraham, Sathiyavedu T Santhiya, Arabandi Ramesh

Study Type : Animal Study

Additional Links

Substances : [Saffron : CK\(123\) : AC\(32\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [DNA damage : CK\(687\) : AC\(287\)](#)

Pharmacological Actions : [Chemopreventive : CK\(1254\) : AC\(342\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Antineoplastic Agents (AC 52)

There is evidence to support the use of topical calendula for prophylaxis of acute dermatitis during radiotherapy and Traumeel S mouthwash in the treatment of chemotherapy-induced stomatitis. - GMI Summary

Pubmed Data : Cochrane Database Syst Rev. 2009(2):CD004845. Epub 2009 Apr 15. PMID: [19370613](#)

Article Published Date : Jan 01, 2009

Authors : Sosie Kassab, Mike Cummings, Saul Berkovitz, Robbert van Haselen, Peter Fisher

Study Type : Meta Analysis

Additional Links

Substances : [Calendula : CK\(41\) : AC\(4\)](#), [Homeopathic Medicine: All : CK\(501\) : AC\(48\)](#),

[Homeopathic Medicine: Traumeel : CK\(40\) : AC\(3\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Dermatitis : CK\(1129\) : AC\(101\)](#), [Radiation Induced Illness : CK\(994\) : AC\(245\)](#), [Radiation Induced Illness: Dermatitis : CK\(30\) : AC\(2\)](#), [Stomatitis: Aphthous : CK\(30\) : AC\(3\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

A proprietary honey-based herbal formula reduces chemotherapy-induced neutropenia and the need for colony-stimulating factors. - GMI Summary

Pubmed Data : Med Oncol. 2006;23(4):549-52. PMID: [17303914](#)

Article Published Date : Jan 01, 2006

Authors : Jamal Zidan, Lika Shetver, Anthony Gershuny, Amira Abzah, Sigalit Tamam, Moshe Stein, Eitan Friedman

Study Type : Human Study

Additional Links

Substances : [Honey: Life Mel Proprietary Formula : CK\(205\) : AC\(31\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Neutropenia : CK\(90\) : AC\(22\)](#), [Neutropenia: Chemotherapy Induced : CK\(82\) : AC\(17\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\) : CK\(33\) : AC\(10\)](#)

Caffeine potentiates chemotherapy for metastatic osteosarcoma. - GMI Summary

Pubmed Data : J Orthop Sci. 2009 Sep;14(5):556-65. Epub 2009 Oct 3. PMID: [19802667](#)

Article Published Date : Sep 01, 2009

Authors : Hiroaki Kimura, Hiroyuki Tsuchiya, Toshiharu Shirai, Hideji Nishida, Katsuhiko Hayashi, Akihiko Takeuchi, Issei Ohnari, Katsuro Tomita

Study Type : Human Study

Additional Links

Substances : [Caffeine : CK\(99\) : AC\(17\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Children treated for solid tumors or lymphoma with chemotherapy have increased caries of the primary teeth. - GMI Summary

Pubmed Data : Int J Paediatr Dent. 2010 Jan;20(1):15-23. PMID: [20059589](#)

Article Published Date : Jan 01, 2010

Authors : Alison Hutton, Moira Bradwell, Martin English, Iain Chapple

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Dental Caries : CK\(247\) : AC\(33\)](#), [Neuroblastoma : CK\(51\) : AC\(31\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

The decrease in neutrophil count caused by breast carcinoma chemotherapy was ameliorated by dietary supplementation with a multivitamin or vitamin E. - GMI Summary

Pubmed Data : Cancer. 2004 Sep 1;101(5):1058-64. PMID: [15329916](#)

Article Published Date : Sep 01, 2004

Authors : Richard F Branda, Shelly J Naud, Elice M Brooks, Zhuan Chen, Hyman Muss

Study Type : Human Study

Additional Links

Substances : [Folic Acid : CK\(572\) : AC\(79\)](#), [Vitamin B-12 : CK\(752\) : AC\(98\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Mucositis : CK\(49\) : AC\(10\)](#), [Neutropenia: Chemotherapy Induced : CK\(82\) : AC\(17\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#)

A compound in ginger known as 6-Gingerol prevents cisplatin-induced acute renal failure in rats. - GMI Summary

Pubmed Data : J Agric Food Chem. 2005 Apr 6;53(7):2446-50. PMID: [16971750](#)

Article Published Date : Apr 06, 2005

Authors : Anurag Kuhad, Naveen Tirkey, Sangeeta Pilkhwal, Kanwaljit Chopra

Study Type : Animal Study

Additional Links

Substances : [Catechols : CK\(15\) : AC\(11\)](#), [Ginger : CK\(299\) : AC\(91\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

AHCC improves treatment outcome and reduces side effects in anticancer drug treated mice. - GMI Summary

Pubmed Data : J Exp Ther Oncol. 2009;8(1):43-51. PMID: [19827270](#)

Article Published Date : Jan 01, 2009

Authors : Kota Shigama, Akihiro Nakaya, Koji Wakame, Hiroshi Nishioka, Hajime Fujii

Study Type : Animal Study

Additional Links

Substances : [AHCC](#) : CK(48) : AC(17)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Myelotoxicity](#) : CK(31) : AC(8)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Curcumin and CAPE may reduce chemotherapy-induced mucosal barrier injury.](#) - GMI Summary

Pubmed Data : Leukemia. 2004 Feb;18(2):276-84. PMID: [14671640](#)

Article Published Date : Feb 01, 2004

Authors : B van't Land, N M A Blijlevens, J Marteiijn, S Timal, J P Donnelly, T J M de Witte, L M'Rabet

Study Type : Animal Study

Additional Links

Substances : [Caffeic acid phenethyl ester](#) : CK(15) : AC(8), [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Mucositis](#) : CK(49) : AC(10)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

[Curcumin inhibits lung cancer cell metastasis.](#) - GMI Summary

Pubmed Data : Clin Exp Metastasis. 2000;18(7):539-45. PMID: [11688958](#)

Article Published Date : Jan 01, 2000

Authors : K Ichiki, N Mitani, Y Doki, H Hara, T Misaki, I Saiki

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancer Metastasis](#) : CK(283) : AC(132), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Anti-metastatic](#) : CK(172) : AC(95), [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711)

[D-methionine provides excellent protection from cisplatin ototoxicity in the rat.](#) - GMI Summary

Pubmed Data : Vasc Med. 2003 May;8(2):77-81. PMID: [8951454](#)

Article Published Date : May 01, 2003

Authors : K C Campbell, L P Rybak, R P Meech, L Hughes

Study Type : Animal Study

Additional Links

Substances : [Methionine](#) : CK(52) : AC(12)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

[L-arginine has a protective effect against cisplatin-induced renal oxidative stress and toxicity.](#) - GMI Summary

Pubmed Data : Basic Clin Pharmacol Toxicol. 2005 Aug;97(2):91-7. PMID: [15998355](#)

Article Published Date : Aug 01, 2005

Authors : Samira Saleh, Ebtehal El-Demerdash

Study Type : Animal Study

Additional Links

Substances : [Arginine](#) : CK(960) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Enzyme Inhibitors](#) : CK(385) : AC(210), [Nitric Oxide Enhancer](#) : CK(127) : AC(33)

[Melatonin, a pineal secretory product with antioxidant properties, protects against cisplatin-induced nephrotoxicity in rats.](#) - GMI Summary

Pubmed Data : J Pineal Res. 2001 Apr;30(3):129-38. PMID: [11316323](#)

Article Published Date : Apr 01, 2001

Authors : M Hara, M Yoshida, H Nishijima, M Yokosuka, M Iigo, R Ohtani-Kaneko, A Shimada, T Hasegawa, Y Akama, K Hirata

Study Type : Animal Study

Additional Links

Substances : [Melatonin](#) : CK(454) : AC(115)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84)

Piperine protects against cisplatin-induced toxicity in auditory cells. - GMI Summary

Pubmed Data : J Nutr Biochem. 2007 Sep;18(9):615-22. Epub 2007 Apr 5. PMID: [17418561](#)

Article Published Date : Sep 01, 2007

Authors : Byung-Min Choi, Sung-Min Kim, Tae-Kwang Park, Guang Li, Sung-Jae Hong, Raekil Park, Hun-Taeg Chung, Bok-Ryang Kim

Study Type : Animal Study

Additional Links

Substances : [Piperidines](#) : CK(45) : AC(17)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087)

Pre-treatment with curcumin enhances oral bioavailability of docetaxel in rats. - GMI Summary

Pubmed Data : Int J Pharm. 2010 Oct 31;399(1-2):116-20. Epub 2010 Aug 18. PMID: [20727390](#)

Article Published Date : Oct 31, 2010

Authors : Yi-Dong Yan, Dae Hwan Kim, Jun Ho Sung, Chul Soon Yong, Han Gon Choi

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy](#) : CK(65) : AC(16)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157), [Enzyme Inhibitors](#) : CK(385) : AC(210)

Additional Keywords : [Chemotherapeutic Synergy: Docetaxel](#) : CK(3) : AC(2), [Drug: Docetaxel](#) : CK(2) : AC(1)

Resveratrol adds to the growth inhibitory/anticancer activity of cisplatin and doxorubicin in vitro and protects against doxorubicin-induced cardiac toxicity both in vitro and in mice. - GMI Summary

Pubmed Data : Am J Obstet Gynecol. 2006 May;194(5):e23-6. Epub 2006 Apr 21. PMID: [16647892](#)

Article Published Date : May 01, 2006

Authors : Youssef A Rezk, Sujata S Balulad, Rebecca S Keller, James A Bennett

Study Type : Animal Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Ovarian Cancer](#) : CK(117) : AC(50), [Uterine Cancer](#) : CK(24) : AC(10)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Rubia cordifolia ameliorates cisplatin-induced nephrotoxicity in mice. - GMI Summary

Pubmed Data : J Cancer Res Ther. 2008 Jul-Sep;4(3):111-5. PMID: [18923202](#)

Article Published Date : Jul 01, 2008

Authors : Jisha Joy, Cherupally Krishnan Krishnan Nair

Study Type : Animal Study

Additional Links

Substances : [Rubia Cordifolia](#) : CK(8) : AC(4)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

[Sulforaphane protects against cisplatin-induced liver and mitochondrial damage.](#) - GMI Summary

Pubmed Data : Toxicology. 2011 Aug 15 ;286(1-3):20-7. Epub 2011 May 6. PMID: [21575670](#)

Article Published Date : Aug 15, 2011

Authors : Leobardo Gaona-Gaona, Eduardo Molina-Jijón, Edilia Tapia, Cecilia Zazueta, Rogelio Hernández-Pando, Mariel Calderón-Oliver, Guillermo Zarco-Márquez, Enrique Pinzón, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemically-Induced Liver Damage](#) : CK(451) : AC(174), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293)

Problem Substances : [Cisplatin](#) : CK(15) : AC(2)

Adverse Pharmacological Actions : [Hepatotoxic](#) : CK(262) : AC(69)

[Sulforaphane protects against cisplatin-induced nephrotoxicity.](#) - GMI Summary

Pubmed Data : Int J Sport Nutr Exerc Metab. 2007 Aug;17(4):352-63. PMID: [19913604](#)

Article Published Date : Aug 01, 2007

Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Edilia Tapia, Omar N Medina-Campos, Dolores Javier Sánchez-González, Claudia María Martínez-Martínez, Karla Mariana Ortiz-Vega, Martha Franco, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Renoprotective](#) : CK(179) : AC(84)

[Taurine has a protective effect against cisplatin-induced nephrotoxicity in rats.](#) - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2007 May;32(9):835-9. PMID: [11901256](#)

Article Published Date : May 01, 2007

Authors : Sherif Y Saad, Ammar C Al-Rikabi

Study Type : Animal Study

Additional Links

Substances : [Taurine](#) : CK(145) : AC(33)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84)

[Testosterone has a preventive role on cisplatin-induced gonadal toxicity.](#) - GMI Summary

Pubmed Data : Fertil Steril. 2010 Mar 15;93(5):1388-93. Epub 2009 Apr 10. PMID: [19362306](#)

Article Published Date : Mar 15, 2010

Authors : Alireza Aminsharifi, Saeed Shakeri, Ali Ariafar, Behnam Moeinjahromi, Prikala V Kumar, Saeed Karbalaeeedoost

Study Type : Animal Study

Additional Links

Substances : [Testosterone](#) : CK(133) : AC(25)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Aloe emodin may decrease the anticancer activity of the chemo-agent cisplatin.](#) - GMI Summary

Pubmed Data : Cell Mol Life Sci. 2005 Jun ;62(11):1275-82. PMID: [15905960](#)

Article Published Date : Jun 01, 2005

Authors : S Mijatovic, D Maksimovic-Ivanic, J Radovic, D Miljkovic, G N Kaludjerovic, T J Sabo, V Trajkovic

Study Type : In Vitro Study

Additional Links

Substances : [Aloe Vera](#) : CK(191) : AC(44), [Emodin](#) : CK(30) : AC(19)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Enzyme Inhibitors](#) : CK(385) : AC(210)

Problem Substances : [Cisplatin](#) : CK(15) : AC(2)

[Curcumin enhances chemotherapeutic agents in prostate cancer cells.](#) - GMI Summary

Pubmed Data : Prostate. 2002 May 15;51(3):211-8. PMID: [11967955](#)

Article Published Date : May 15, 2002

Authors : Tzyh-Chyuan Hour, Jun Chen, Chao-Yuan Huang, Jing-Yi Guan, Shiu-Hui Lu, Yeong-Shiau Pu

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin induces cell cycle arrest and programmed cell death in cisplatin-resistant human ovarian cancer cells.](#) - GMI Summary

Pubmed Data : Cancer Biol Ther. 2007 Feb;6(2):178-84. Epub 2007 Feb 5. PMID: [17218783](#)

Article Published Date : Feb 01, 2007

Authors : Nathan M Weir, Karuppaiyah Selvendiran, Vijay Kumar Kutala, Liyue Tong, Shilpa Vishwanath, Murugesan Rajaram, Susheela Tridandapani, Shrikant Anant, Periannan Kuppusamy

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

[Curcumin induces programmed cell death in human melanoma cells.](#) - GMI Summary

Pubmed Data : Exp Cell Res. 2001 Dec 10;271(2):305-14. PMID: [11716543](#)

Article Published Date : Dec 10, 2001

Authors : J A Bush, K J Cheung, G Li

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Melanoma : CK\(169\) : AC\(87\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Curcumin inhibits growth and sensitizes ovarian cancer cells to cisplatin-mediated killing. - GMI Summary

Pubmed Data : Carcinogenesis. 1982;3(11):1331-8. PMID: [12447990](#)

Article Published Date : Jan 01, 1982

Authors : Marion M Chan, Dunne Fong, Kenneth J Soprano, William F Holmes, Harry Heverling

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Interleukin-6 Downregulation : CK\(497\) : AC\(133\)](#)

Curcumin inhibits multi-drug resistance gene expression in human leukemic cells. - GMI Summary

Pubmed Data : Arch Pharm Res. 2006 Oct;29(10):866-73. PMID: [17121181](#)

Article Published Date : Oct 01, 2006

Authors : Songyot Anuchapreeda, Pattri Thanarattanakorn, Somjai Sittipreechacharn, Singkome Tima, Prasit Chanarat, Pornngarm Limtrakul

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin may act as a chemosensitizing agent in multidrug resistant cancer cells. - GMI Summary

Pubmed Data : Biochem Pharmacol. 2002 Aug 15;64(4):573-82. PMID: [12167476](#)

Article Published Date : Aug 15, 2002

Authors : Songyot Anuchapreeda, Pranee Leechanachai, Melissa M Smith, Suresh V Ambudkar, Pornngarm Limtrakul

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin may be used as a chemosensitizer to make the retinoblastoma cells more sensitive to the effects of chemotherapy. - GMI Summary

Pubmed Data : Curr Eye Res. 2009 Oct;34(10):845-51. PMID: [19895312](#)

Article Published Date : Oct 01, 2009

Authors : Seethalakshmi Thiagarajan, Karthiyayini Thirumalai, Sudarshan Nirmala, Jyotirmay Biswas, Subramanian Krishnakumar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Retinoblastoma](#) : CK(24) : AC(6)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157)

[Curcumin may have chemosensitizing properties in the treatment of human ovarian cancer.](#) - GMI Summary

Pubmed Data : Cell Prolif. 2009 Apr;42(2):195-206. Epub 2009 Feb 18. PMID: [19236381](#)

Article Published Date : Apr 01, 2009

Authors : M Montopoli, E Ragazzi, G Froldi, L Caparrotta

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11), [Drug: Oxaliplatin](#) : CK(6) : AC(5)

[Curcumin promotes programmed cell death in multidrug-resistant human lung cancer cells.](#) - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2010 Aug 13;399(1):1-6. Epub 2010 Jul 11. PMID: [20627087](#)

Article Published Date : Aug 13, 2010

Authors : Jian Zhang, Tao Zhang, Xinyu Ti, Jieran Shi, Changgui Wu, Xinling Ren, Hong Yin

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

[Curcumin promotes programmed cell death of cisplatin-resistant human lung carcinoma cells.](#) - GMI Summary

Pubmed Data : Zhongguo Fei Ai Za Zhi. 2010 Apr;13(4):301-6. PMID: [20677554](#)

Article Published Date : Apr 01, 2010

Authors : Ni Tang, Jian Zhang, Yongping Du

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin](#) : CK(4) : AC(3), [Drug: Cisplatin](#) : CK(31) : AC(11)

[Curcumin reduces NF-kappa B factor activation associated with anticancer drugs.](#) - GMI Summary

Pubmed Data : Endocr Relat Cancer. 2009 Dec;16(4):1339-50. Epub 2009 Sep 2. PMID: [12007574](#)

Article Published Date : Dec 01, 2009

Authors : Shuang En Chuang, Pei Yen Yeh, Yen Shen Lu, Gi Ming Lai, Chao Ming Liao, Ming Gao, Ann Lii Cheng

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy : CK\(65\) : AC\(16\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug: Tamoxifen : CK\(367\) : AC\(53\)](#)

Curcumin reverse multi-drug resistance in multiple myeloma cells. - GMI Summary

Pubmed Data : Ann Hematol. 2010 Apr;89(4):399-404. Epub 2009 Sep 15. PMID: [19756599](#)

Article Published Date : Apr 01, 2010

Authors : Hui Xiao, Qi Xiao, Kejian Zhang, Xuelan Zuo, Umid Kumar Shrestha

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Multiple Myeloma : CK\(125\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin stimulates reactive oxygen species production and potentiates apoptosis induction by the antitumor drugs arsenic trioxide and lonidamine in human myeloid leukemia cell lines. - GMI Summary

Pubmed Data : J Pharmacol Exp Ther. 2010 Oct;335(1):114-23. Epub 2010 Jul 6. PMID: [20605902](#)

Article Published Date : Oct 01, 2010

Authors : Yolanda Sánchez, Gloria P Simón, Eva Calviño, Elena de Blas, Patricio Aller

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Acute Myeloid Leukemia : CK\(51\) : AC\(21\)](#), [Chronic Myeloid Leukemia : CK\(21\) : AC\(11\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Arsenic Trioxide : CK\(1\) : AC\(1\)](#), [Drug: Lonidamine : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin synergistically augments bcr/abl phosphorothioate antisense oligonucleotides to inhibit growth of chronic myelogenous leukemia cells. - GMI Summary

Pubmed Data : Acta Pharmacol Sin. 2007 Jan;28(1):105-10. PMID: [17184589](#)

Article Published Date : Jan 01, 2007

Authors : Kun-Zhong Zhang, Jian-Hua Xu, Xiu-Wang Huang, Li-Xian Wu, Yu Su, Yuan-Zhong Chen

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Leukemia: Chronic myelogenous leukemia \(CML\) : CK\(28\) : AC\(17\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin synergistically potentiates the anti-cancer effects of celecoxib in pancreatic cancer cells. - GMI Summary

Pubmed Data : Biomed Pharmacother. 2005 Oct;59 Suppl 2:S276-80. PMID: [16507392](#)

Article Published Date : Oct 01, 2005

Authors : S Lev-Ari, H Zinger, D Kazanov, D Yona, R Ben-Yosef, A Starr, A Figer, N Arber

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Pancreatic Cancer : CK\(524\) : AC\(160\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [Cyclooxygenase 2 Inhibitors : CK\(274\) : AC\(167\)](#)
Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Derivatives of a compound found in birch have activity against multidrug resistance cancer cells. - GMI Summary

Pubmed Data : Bioorg Med Chem. 2010 Apr 15;18(8):2964-75. Epub 2010 Mar 6. PMID: [20363142](#)

Article Published Date : Apr 15, 2010

Authors : Juan Xiong, Masatoshi Taniguchi, Yoshiki Kashiwada, Michiko Sekiya, Takashi Yamagishi, Yoshihisa Takaishi

Study Type : In Vitro Study

Additional Links

Substances : [Birch : CK\(5\) : AC\(3\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Emodin enhances sensitivity of gallbladder cancer cells to chemotherapy. - GMI Summary

Pubmed Data : Biochem Pharmacol. 2010 Apr 15;79(8):1134-40. Epub 2009 Dec 11. PMID: [20005210](#)

Article Published Date : Apr 15, 2010

Authors : Wei Wang, Yue-ping Sun, Xin-zhi Huang, Min He, Yu-ying Chen, Gui-ying Shi, Hui Li, Jing Yi, Jian Wang

Study Type : In Vitro Study

Additional Links

Substances : [Emodin : CK\(30\) : AC\(19\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Gallbladder Cancer : CK\(56\) : AC\(10\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Gamma tocotrienol has a chemosensitizing property. - GMI Summary

Pubmed Data : J Biol Chem. 2010 Oct 22;285(43):33520-8. Epub 2010 Aug 18. PMID: [20720018](#)

Article Published Date : Oct 22, 2010

Authors : Ramaswamy Kannappan, Vivek R Yadav, Bharat B Aggarwal

Study Type : In Vitro Study

Additional Links

Substances : [Tocotrienol: Gamma : CK\(12\) : AC\(12\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#), [Vitamin E: Gamma-tocotrienol : CK\(42\) : AC\(11\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#)

Pharmacological Actions : [Anti-Angiogenic : CK\(133\) : AC\(99\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Genistein potentiates the effect of arsenic trioxide against human hepatocellular carcinoma. - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 1 ;301(1):75-84. PMID: [21078540](#)

Article Published Date : Feb 01, 2011

Authors : Yong Ma, Jizhou Wang, Lianxin Liu, Huaqiang Zhu, Xiaoning Chen, Shangha Pan, Xueying Sun, Hongchi Jiang

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

[CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Arsenic Trioxide : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Gold exhibits antitumor effects by growth suppression of cultured cancer cells. Gold is less toxic than cisplatin. - GMI Summary

Pubmed Data : Cancer Biother Radiopharm. 1998 Jun;13(3):189-92. PMID: [10850355](#)

Article Published Date : Jun 01, 1998

Authors : T Koide, T Kojima, H Kamei

Study Type : In Vitro Study

Additional Links

Substances : [Gold : CK\(3\) : AC\(2\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Colon Cancer : CK\(375\) : AC\(230\)](#), [Lymphoma : CK\(211\) : AC\(68\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#)

Additional Keywords : [Natural Substances Versus Drugs : CK\(1003\) : AC\(167\)](#)

Quercetin pretreatment sensitizes human cervical cells to cisplatin-induced programmed cell death. - GMI Summary

Pubmed Data : Biochem Pharmacol. 2005 May 1;69(9):1343-50. PMID: [15826605](#)

Article Published Date : May 01, 2005

Authors : J Jakubowicz-Gil, R Paduch, T Piersiak, K Głowniak, A Gawron, M Kandefer-Szerszeń

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cervical Cancer : CK\(322\) : AC\(65\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Resveratrol enhances the anti-tumor activity of rapamycin in breast cancer cell lines. - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 28;301(2):168-76. Epub 2010 Dec 17. PMID: [21168265](#)

Article Published Date : Feb 28, 2011

Authors : Xin He, Yu Wang, Jinhong Zhu, Mohammed Orloff, Charis Eng

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Rapamycin : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol induces cell-cycle disruption and programmed cell death in chemoresistant melanoma. - GMI Summary

Pubmed Data : J Cell Biochem. 2010 Jul 1;110(4):893-902. PMID: [20564188](#)

Article Published Date : Jul 01, 2010

Authors : Grégory Gatouillat, Emilie Balasse, Débora Joseph-Pietras, Hamid Morjani, Claudie Madoulet

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Melanoma : CK\(169\) : AC\(87\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol protects against Cisplatin-induced cardiotoxicity by alleviating oxidative damage. - GMI Summary

Pubmed Data : Cancer Biother Radiopharm. 2009 Dec;24(6):675-80. PMID: [20025547](#)

Article Published Date : Dec 01, 2009

Authors : Jingxuan Wang, Dongning He, Qingyuan Zhang, Ying Han, Shi Jin, Feng Qi

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Sulforaphane protects against cisplatin-induced mitochondrial alterations associated with renal damage. - GMI Summary

Pubmed Data : Toxicol Lett. 2010 Nov 10;199(1):80-92. Epub 2010 Aug 21. PMID: [20732396](#)

Article Published Date : Nov 10, 2010

Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Eduardo Martínez-Abundis, Edilia Tapia, Guillermo Zarco-Márquez, Cecilia Zazueta, José Pedraza-Chaverri

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Mitochondrial Diseases : CK\(145\) : AC\(50\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

The green tea polyphenol EGCG enhances the anti-cancer activity of bortezomib in multiple myeloma cells. - GMI Summary

Pubmed Data : Acta Biochim Biophys Sin (Shanghai). 2009 Dec;41(12):1018-26. PMID: [20011976](#)

Article Published Date : Dec 01, 2009

Authors : Qing Wang, Juan Li, Jingli Gu, Beihui Huang, Ying Zhao, Dong Zheng, Yan Ding, Lijin Zeng

Study Type : In Vitro Study

Additional Links

Substances : [Catechin : CK\(408\) : AC\(130\)](#), [Tea : CK\(951\) : AC\(226\)](#)

Diseases : [Multiple Myeloma : CK\(125\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Caspase-3 Activation : CK\(16\) : AC\(13\)](#), [Caspase-9 Activation : CK\(5\) : AC\(5\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Bortezomib : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Vitamin A and D have an anti-tumor effect against head and neck squamous cell carcinoma. - GMI Summary

Pubmed Data : Auris Nasus Larynx. 2003 Dec;30(4):403-12. PMID: [14656567](#)

Article Published Date : Dec 01, 2003

Authors : Kenichi Satake, Emi Takagi, Akiko Ishii, Yasumasa Kato, Yukari Imagawa, Yuu Kimura, Mamoru Tsukuda

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin A : CK\(358\) : AC\(53\)](#), [Vitamin D : CK\(1493\) : AC\(220\)](#)

Diseases : [Head and Neck Cancer : CK\(36\) : AC\(14\)](#), [Skin Cancer: Squamous Cell : CK\(52\) : AC\(16\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#)

Vitamin K2 augments 5-flourouracil-induced growth inhibition of human hepatocellular carcinoma cells by inhibiting NF-κB activation. - GMI Summary

Pubmed Data : Oncol Rep. 2011 Jan;25(1):159-66. PMID: [21109972](#)

Article Published Date : Jan 01, 2011

Authors : Hao Zhang, Iwata Ozaki, Hiroshi Hamajima, Shinji Iwane, Hirokazu Takahashi, Yasunori Kawaguchi, Yuichiro Eguchi, Kyosuke Yamamoto, Toshihiko Mizuta

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin K : CK\(540\) : AC\(64\)](#), [Vitamin K2 : CK\(254\) : AC\(27\)](#)

Diseases : [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

A variety of natural substances may function as novel anticancer agents, proteasome inhibitors and chemosensitizers. - GMI Summary

Pubmed Data : Drug Resist Updat. 2006 Dec;9(6):263-73. Epub 2007 Jan 2. PMID: [17197231](#)

Article Published Date : Dec 01, 2006

Authors : Kristin R Landis-Piowar, Vesna Milacic, Di Chen, Huanjie Yang, Yunfeng Zhao, Tak Hang Chan, Bing Yan, Q Ping Dou

Study Type : Review

Additional Links

Substances : [Catechin : CK\(408\) : AC\(130\)](#), [Curcumin : CK\(2870\) : AC\(1475\)](#), [Genistein : CK\(457\) : AC\(176\)](#), [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Proteasome Inhibitors : CK\(39\) : AC\(25\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

Additional Keywords : [Stilbenes : CK\(414\) : AC\(245\)](#)

Anticancer drugs may cause kidney disorders. - GMI Summary

Pubmed Data : Drug Saf. 2001 Jan;24(1):19-38. PMID: [11219485](#)

Article Published Date : Jan 01, 2001

Authors : P E Kintzel

Study Type : Review

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Iatrogenic Disease : CK\(62\) : AC\(7\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#)

Curcumin may act as a chemosensitizing agent. - GMI Summary

Pubmed Data : Adv Exp Med Biol. 2007;595:269-300. PMID: [17569216](#)

Article Published Date : Jan 01, 2007

Authors : Pornngarm Limtrakul

Study Type : Review

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Breast Cancer (AC 23)

There is evidence to support the use of topical calendula for prophylaxis of acute dermatitis during radiotherapy and Traumeel S mouthwash in the

treatment of chemotherapy-induced stomatitis. - GMI Summary

Pubmed Data : Cochrane Database Syst Rev. 2009(2):CD004845. Epub 2009 Apr 15. PMID: [19370613](#)

Article Published Date : Jan 01, 2009

Authors : Sosie Kassab, Mike Cummings, Saul Berkovitz, Robbert van Haselen, Peter Fisher

Study Type : Meta Analysis

Additional Links

Substances : [Calendula](#) : CK(41) : AC(4), [Homeopathic Medicine: All](#) : CK(501) : AC(48),

[Homeopathic Medicine: Traumeel](#) : CK(40) : AC(3)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Dermatitis](#) : CK(1129) : AC(101), [Radiation Induced Illness](#) : CK(994) : AC(245), [Radiation Induced Illness: Dermatitis](#) : CK(30) : AC(2), [Stomatitis: Aphthous](#) : CK(30) : AC(3)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

The decrease in neutrophil count caused by breast carcinoma chemotherapy was ameliorated by dietary supplementation with a multivitamin or vitamin E. - GMI Summary

Pubmed Data : Cancer. 2004 Sep 1;101(5):1058-64. PMID: [15329916](#)

Article Published Date : Sep 01, 2004

Authors : Richard F Branda, Shelly J Naud, Elice M Brooks, Zhuan Chen, Hyman Muss

Study Type : Human Study

Additional Links

Substances : [Folic Acid](#) : CK(572) : AC(79), [Vitamin B-12](#) : CK(752) : AC(98), [Vitamin E](#) : CK(1288) : AC(227)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Mucositis](#) : CK(49) : AC(10), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293)

Wheat grass juice may reduce myelotoxicity and need for granulocyte colony-stimulating factors in breast cancer patients receiving chemotherapy. - GMI Summary

Pubmed Data : Nutr Cancer. 2007;58(1):43-8. PMID: [17571966](#)

Article Published Date : Jan 01, 2007

Authors : Gil Bar-Sela, Medy Tsalic, Getta Fried, Hadassah Goldberg

Study Type : Human Study

Additional Links

Substances : [Wheat Grass](#) : CK(182) : AC(11)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Myelotoxicity](#) : CK(31) : AC(8)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

A variety of carotenoids induce reduce resistance to chemotherapy in multidrug resistant lymphoma and human breast cancer cell lines. - GMI Summary

Pubmed Data : In Vivo. 2004 Mar-Apr;18(2):237-44. PMID: [15113052](#)

Article Published Date : Mar 01, 2004

Authors : Joseph Molnár, Nóra Gyémánt, Ilona Mucsi, Annamária Molnár, Margaret Szabó, Tamás Körtvélyesi, András Varga, Péter Molnár, Gyula Tóth

Study Type : Animal Study

Additional Links

Substances : [Carotenoids](#) : CK(1041) : AC(114), [Lycopene](#) : CK(175) : AC(32), [Paprika](#) : CK(8) : AC(6), [Zeaxanthin](#) : CK(67) : AC(10)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Lymphoma](#) : CK(211) : AC(68)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)
Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Curcumin reduced the side effects of mitomycin C in the treatment of breast cancer. - GMI Summary

Pubmed Data : Cancer Sci. 2009 Nov;100(11):2040-5. Epub 2009 Jul 23. PMID: [19703194](#)

Article Published Date : Nov 01, 2009

Authors : Qian-Mei Zhou, Hui Zhang, Yi-Yu Lu, Xiu-Feng Wang, Shi-Bing Su

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Mitomycin-C : CK\(6\) : AC\(4\)](#), [DNA damage : CK\(687\) : AC\(287\)](#)

Pharmacological Actions : [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Drug: Mitomycin : CK\(4\) : AC\(3\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

EGCG sensitizes breast cancer cells to paclitaxel in a mouse model of breast carcinoma. - GMI Summary

Pubmed Data : Breast Cancer Res. 2010 Jan 15;12(1):R8. Epub 2010 Jan 15. PMID: [20078855](#)

Article Published Date : Jan 15, 2010

Authors : Ting Luo, Jiao Wang, Yancun Yin, Hui Hua, Jing Jing, Xiangming Sun, Minjing Li, You Zhang, Yangfu Jiang

Study Type : Animal Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\) : CK\(176\) : AC\(115\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Paclitaxel : CK\(36\) : AC\(13\)](#)

L-carnitine may reduce cardiotoxicities associated with epirubicin toxicity. - GMI Summary

Pubmed Data : Cancer Lett. 2007 Jul 18;252(2):195-207. Epub 2007 Feb 2. PMID: [17275999](#)

Article Published Date : Jul 18, 2007

Authors : Christie E Delaney, Sean P Hopkins, Christina L Addison

Study Type : Animal Study

Additional Links

Substances : [Carnitine : CK\(650\) : AC\(67\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Epirubicin : CK\(2\) : AC\(1\)](#)

Additional Keywords : [Drug: Epirubicin : CK\(2\) : AC\(1\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Soy phytochemicals synergistically enhance the preventive effect of tamoxifen on the growth of estrogen-dependent human breast carcinoma in mice. - GMI Summary

Pubmed Data : Carcinogenesis. 2007 Jun;28(6):1217-23. Epub 2007 Jan 18. PMID: [17234721](#)

Article Published Date : Jun 01, 2007

Authors : Zhiming Mai, George L Blackburn, Jin-Rong Zhou

Study Type : Animal Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#), [Soy : CK\(1697\) : AC\(340\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Tamoxifen : CK\(367\) : AC\(53\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

"Curcumin enhances the anticancer effects of trichostatin a in breast cancer cells." - GMI Summary

Pubmed Data : Mol Carcinog. 2012 Jan 30. Epub 2012 Jan 30. PMID: [22290509](#)

Article Published Date : Jan 30, 2012

Authors : Guang Yan, Kimmer Graham, Susan Lanza-Jacoby

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Caffeic acid sensitizes multidrug-resistant human breast cancer cells to chemotherapy. - GMI Summary

Pubmed Data : Chem Biol Interact. 2011 Feb 21. Epub 2011 Feb 21. PMID: [9216644](#)

Article Published Date : Feb 21, 2011

Authors : C H Ahn, W C Choi, J Y Kong

Study Type : In Vitro Study

Additional Links

Substances : [Caffeic Acid : CK\(15\) : AC\(11\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

DIM (3,3'-diindolylmethane) sensitizes breast tumors to chemotherapy. - GMI Summary

Pubmed Data : Mol Cancer Ther. 2007 Oct;6(10):2757-65. Epub 2007 Oct 3. PMID: [17913854](#)

Article Published Date : Oct 01, 2007

Authors :

K M Wahidur Rahman, Shadan Ali, Amro Aboukameel, Sanila H Sarkar, Zhiwei Wang, Philip A Philip, Wael A Sakr, Avraham Raz

Study Type : In Vitro Study

Additional Links

Substances : [DIM \(3,3'-diindolylmethane\) : CK\(17\) : AC\(9\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

EGCG may act as a chemosensitizing agent in tamoxifen-resistant breast cancer cells. - GMI Summary

Pubmed Data : Mutat Res. 2002 Jun 27;518(1):71-84. PMID: [20149610](#)

Article Published Date : Jun 27, 2002

Authors :

F Farabegoli, A Papi, G Bartolini, R Ostan, M Orlandi

Study Type : In Vitro Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\) : CK\(176\) : AC\(115\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [Drug synergy : CK\(51\) : AC\(14\)](#)

Additional Keywords : [Tamoxifen Resistance : CK\(3\) : AC\(3\)](#)

Genistein acts as a chemosensitizer, contributing to overcoming drug-resistance in prostate, breast, lung and pancreatic cancers. - GMI Summary

Pubmed Data : Cancer Res. 2005 Aug 1;65(15):6934-42. PMID: [16061678](#)

Article Published Date : Aug 01, 2005

Authors : Yiwei Li, Fakhara Ahmed, Shadan Ali, Philip A Philip, Omer Kucuk, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Genistein acts as a radiosensitizing and chemosensitizing agent against the breast cancer cell line MCF-7. - GMI Summary

Pubmed Data : Anticancer Res. 2009 Aug;29(8):3179-83. PMID: [19661332](#)

Article Published Date : Aug 01, 2009

Authors : Johannes Hartmann, Nikola Getoff

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Genistein sensitizes human breast cancer cells to the chemotoxic effects of trastuzumab. - GMI Summary

Pubmed Data : Anticancer Drugs. 2010 Dec 14. Epub 2010 Dec 14. PMID: [21160418](#)

Article Published Date : Dec 14, 2010

Authors : Claus Lattrich, Julia Lubig, Anette Springwald, Regina Goerse, Olaf Ortmann, Oliver Treeck

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Trastuzumab : CK\(1\) : AC\(1\)](#)

Genistein sensitizes inhibitory effect of tamoxifen on the growth of estrogen receptor-positive and HER2-overexpressing human breast cancer cells. - GMI Summary

Pubmed Data : Mol Carcinog. 2007 Jul;46(7):534-42. PMID: [17295235](#)

Article Published Date : Jul 01, 2007

Authors : Zhiming Mai, George L Blackburn, Jin-Rong Zhou

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Drug synergy : CK\(51\) : AC\(14\)](#)

Additional Keywords : [Drug: Tamoxifen : CK\(367\) : AC\(53\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Ginsenoside Rh(2) exhibits activity against adriamycin-resistant breast cancer cells. - GMI Summary

Pubmed Data : Talanta. 2012 Jan 15 ;88:345-51. Epub 2011 Nov 2. PMID: [22265509](#)

Article Published Date : Jan 15, 2012

Authors : Bei Zhou, Xiuli Xiao, Lili Xu, Lian Zhu, Liang Tan, Hao Tang, Youyu Zhang, Qingji Xie, Shouzhao Yao

Study Type : In Vitro Study

Additional Links

Substances : [Ginsenosides : CK\(47\) : AC\(18\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Adriamycin : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Glucosamine's anticancer activity may be due to its ability to inhibit the transglutaminase 2 enzyme. - GMI Summary

Pubmed Data : Cancer Lett. 2008 Sep 18. PMID: [18804908](#)

Article Published Date : Sep 18, 2008

Authors : Dae-Seok Kim, Kang-Seo Park, Kyung-Chae Jeong, Byung Ii Lee, Chang-Hoon Lee, Soo-Youl Kim

Study Type : In Vitro Study

Additional Links

Substances : [Glucosamine : CK\(116\) : AC\(21\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Oleuropein profoundly increases the susceptibility of breast cancer cells to trastuzumab treatment. - GMI Summary

Pubmed Data : BMC Cancer. 2007;7:80. Epub 2007 May 9. PMID: [17490486](#)

Article Published Date : Jan 01, 2007

Authors : Javier A Menendez, Alejandro Vazquez-Martin, Ramon Colomer, Joan Brunet, Alegria Carrasco-Pancorbo, Rocio Garcia-Villalba, Alberto Fernandez-Gutierrez, Antonio Segura-Carretero

Study Type : In Vitro Study

Additional Links

Substances : [Oleuropein : CK\(41\) : AC\(29\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Bitter Principle : CK\(11\) : AC\(2\)](#), [Drug Resistant Cancer : CK\(9\) : AC\(9\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Resveratrol enhances the anti-tumor activity of rapamycin in breast cancer cell lines. - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 28;301(2):168-76. Epub 2010 Dec 17. PMID: [21168265](#)

Article Published Date : Feb 28, 2011

Authors : Xin He, Yu Wang, Jinhong Zhu, Mohammed Orloff, Charis Eng

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Rapamycin : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol improves the efficacy of cyclophosphamide in breast cancer treatment and reduces toxicity. - GMI Summary

Pubmed Data : Cancer Sci. 2011 Jan 28. Epub 2011 Jan 28. PMID: [21276137](#)

Article Published Date : Jan 28, 2011

Authors : Neetu Singh, Manisha Nigam, Vishal Ranjan, Deeba Zaidi, Vivek Kumar Garg, Sharad Sharma, Rashmi Chaturvedi, Rishi Shankar, Sadan Kumar, Ramesh Sharma, Kalyan Mitra, Anil K Balapure, Srikanta K Rath

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)
Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)
Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

The plant derived sesquiterpene coumarins, farnesiferol A and galbanic acid, may be promising candidates to be considered for further studies on the reversal of multidrug resistance phenotype in chemotherapy of cancer patients. - GMI Summary

Pubmed Data : Planta Med. 2011 Apr 11. Epub 2011 Apr 11. PMID: [21484672](#)

Article Published Date : Apr 11, 2011

Authors : Mohammad Yahya Hanafi-Bojd, Mehrdad Iranshahi, Fatemeh Mosaffa, Shahireh Omidvar Tehrani, Fatemeh Kalalinia, Javad Behravan

Study Type : In Vitro Study

Additional Links

Substances : [Farnesiferol A : CK\(1\) : AC\(1\)](#), [Ferula Persica : CK\(1\) : AC\(1\)](#), [Ferula Szowitsiana : CK\(1\) : AC\(1\)](#), [Galbanic Acid : CK\(1\) : AC\(1\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Vitamin D3 sensitizes breast cancer cells to chemotherapy-induced death. - GMI Summary

Pubmed Data : Immunopharmacol Immunotoxicol. 2010 Mar 17. Epub 2010 Mar 17. PMID: [10766196](#)

Article Published Date : Mar 17, 2010

Authors : Q Wang, W Yang, M S Uytingco, S Christakos, R Wieder

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin D : CK\(1493\) : AC\(220\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#)

Renoprotective (AC 15)

A compound in ginger known as 6-Gingerol prevents cisplatin-induced acute renal failure in rats. - GMI Summary

Pubmed Data : J Agric Food Chem. 2005 Apr 6;53(7):2446-50. PMID: [16971750](#)

Article Published Date : Apr 06, 2005

Authors : Anurag Kuhad, Naveen Tirkey, Sangeeta Pilkhwal, Kanwaljit Chopra

Study Type : Animal Study

Additional Links

Substances : [Catechols : CK\(15\) : AC\(11\)](#), [Ginger : CK\(299\) : AC\(91\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

A compound in mangosteen prevents cisplatin-induced toxicity to the kidneys of rats. - GMI Summary

Pubmed Data : Chem Biol Interact. 2010 Oct 6;188(1):144-50. PMID: [20603111](#)

Article Published Date : Oct 06, 2010

Authors : Yesennia Sánchez-Pérez, Rocío Morales-Bárcenas, Claudia M García-Cuellar, Rebeca López-Marure, Mariel Calderon-Oliver, José Pedraza-Chaverri, Yolanda I Chirino

Study Type : Animal Study

Additional Links

Substances : [Mangosteen : CK\(43\) : AC\(21\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Renoprotective : CK\(179\) : AC\(84\)](#)
Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Curcumin oil has a protective effect against cisplatin-induced nephrotoxicity. **- GMI Summary**

Pubmed Data : J Agric Food Chem. 2007 Dec 12;55(25):10150-5. Epub 2007 Nov 15. PMID: [18001039](#)
Article Published Date : Dec 12, 2007
Authors : Anurag Kuhad, Sangeeta Pilkhwal, Sameer Sharma, Naveen Tirkey, Kanwaljit Chopra
Study Type : Animal Study
Additional Links
Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)
Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Inflammation : CK\(1001\) : AC\(341\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)
Pharmacological Actions : [Anti-Inflammatory Agents : CK\(1159\) : AC\(412\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Curcumin prevents adriamycin nephrotoxicity in rats. - GMI Summary

Pubmed Data : Br J Pharmacol. 2000 Jan;129(2):231-4. PMID: [10694226](#)
Article Published Date : Jan 01, 2000
Authors : [No authors listed]
Study Type : Animal Study
Additional Links
Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)
Diseases : [Chemotherapy-Induced Toxicity: Adriamycin : CK\(17\) : AC\(10\)](#), [Kidney Damage: Drug-Induced : CK\(86\) : AC\(18\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)
Pharmacological Actions : [Renoprotective : CK\(179\) : AC\(84\)](#)
Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Curcumin reduced the side effects of mitomycin C in the treatment of breast cancer. - GMI Summary

Pubmed Data : Cancer Sci. 2009 Nov;100(11):2040-5. Epub 2009 Jul 23. PMID: [19703194](#)
Article Published Date : Nov 01, 2009
Authors : Qian-Mei Zhou, Hui Zhang, Yi-Yu Lu, Xiu-Feng Wang, Shi-Bing Su
Study Type : Animal Study
Additional Links
Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)
Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Mitomycin-C : CK\(6\) : AC\(4\)](#), [DNA damage : CK\(687\) : AC\(287\)](#)
Pharmacological Actions : [Renoprotective : CK\(179\) : AC\(84\)](#)
Additional Keywords : [Drug: Mitomycin : CK\(4\) : AC\(3\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Grape seed extract prevents gentamicin-induced nephrotoxicity and genotoxicity in bone marrow cells of mice. - GMI Summary

Pubmed Data : Basic Clin Pharmacol Toxicol. 2006 Sep;99(3):230-6. PMID: [16930296](#)
Article Published Date : Sep 01, 2006
Authors : Ibrahim M El-Ashmawy, Abeer F El-Nahas, Osama M Salama
Study Type : Animal Study
Additional Links
Substances : [Grape Seed Extract : CK\(172\) : AC\(58\)](#)
Diseases : [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity: Gentamicin : CK\(20\) : AC\(10\)](#), [Kidney Damage: Drug-Induced : CK\(86\) : AC\(18\)](#)
Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Genoprotective : CK\(109\) : AC\(46\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)
Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Loquat seed inhibits oxidative stress associated with adriamycin-induced nephropathy. - GMI Summary

Pubmed Data : Biol Pharm Bull. 2004 Dec;27(12):1961-4. PMID: [15577213](#)

Article Published Date : Dec 01, 2004

Authors : Atsuhide Hamada, Saburo Yoshioka, Daisuke Takuma, Junko Yokota, Tailine Cui, Masahiko Kusunose, Mitsuhiko Miyamura, Shojiro Kyotani, Yutaka Nishioka

Study Type : Animal Study

Additional Links

Substances : [Loquat Seeds](#) : CK(11) : AC(6)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10), [Lipid Peroxidation](#) : CK(333) : AC(125), [Nephropathy](#) : CK(161) : AC(29), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Glutathione Upregulation](#) : CK(152) : AC(47), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Plant Extracts](#) : CK(3297) : AC(1135)

Mangosteen protects against cisplatin-induced kidney toxicity. - GMI Summary

Pubmed Data : Free Radic Res. 2009;43(11):1122-32. PMID: [19863372](#)

Article Published Date : Jan 01, 2009

Authors : Jazmin M Pérez-Rojas, Cristino Cruz, Patricia García-López, Dolores J Sánchez-González, Claudia M Martínez-Martínez, Gisela Ceballos, Magali Espinosa, Jorge Meléndez-Zajgla, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Mangosteen](#) : CK(43) : AC(21)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage](#) : CK(118) : AC(41)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Melatonin, a pineal secretory product with antioxidant properties, protects against cisplatin-induced nephrotoxicity in rats. - GMI Summary

Pubmed Data : J Pineal Res. 2001 Apr;30(3):129-38. PMID: [11316323](#)

Article Published Date : Apr 01, 2001

Authors : M Hara, M Yoshida, H Nishijima, M Yokosuka, M Iigo, R Ohtani-Kaneko, A Shimada, T Hasegawa, Y Akama, K Hirata

Study Type : Animal Study

Additional Links

Substances : [Melatonin](#) : CK(454) : AC(115)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84)

Pomegranate seed extract attenuates chemotherapy-induced acute nephrotoxicity and hepatotoxicity. - GMI Summary

Pubmed Data : J Med Food. 2011 May 6. Epub 2011 May 6. PMID: [21548807](#)

Article Published Date : May 06, 2011

Authors : Kerim Cayir, Ali Karadeniz, Nejdet Simsek, Serap Yildirim, Emre Karakuş, Adem Kara, Hürrem Turan Akkoyun, Emin Sengül

Study Type : Animal Study

Additional Links

Substances : [Pomegranate Seed](#) : CK(2) : AC(1)

Diseases : [Chemotherapy-Induced Liver Toxicity](#) : CK(14) : AC(8), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Glutathione S-transferase Inhibitor](#) : CK(3) : AC(2), [Hepatoprotective](#) : CK(528) : AC(257), [Renoprotective](#) : CK(179) : AC(84)

Royal jelly and green tea have a protective effect against cisplatin-induced

nephrotoxicity in mice. - GMI Summary

Pubmed Data : J Chromatogr B Analyt Technol Biomed Life Sci. 2004 Apr 25;803(2):225-31. PMID: [19857080](#)

Article Published Date : Apr 25, 2004

Authors : Kürşad Yapar, Kültiğin Cavuşoğlu, Ertan Oruç, Emine Yalçın

Study Type : Animal Study

Additional Links

Substances : [Green Tea](#) : CK(931) : AC(279), [Royal Jelly](#) : CK(59) : AC(32)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Sulforaphane prevents cell death and inflammation in nephropathy. - GMI Summary

Pubmed Data : J Nutr Biochem. 2011 Jun 16. Epub 2011 Jun 16. PMID: [21684138](#)

Article Published Date : Jun 16, 2011

Authors : Carlos Enrique Guerrero-Beltrán, Partha Mukhopadhyay, Béla Horváth, Mohanraj Rajesh, Edilia Tapia, Itzhel García-Torres, José Pedraza-Chaverri, Pál Pacher

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Nephropathy](#) : CK(161) : AC(29)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Problem Substances : [Cisplatin](#) : CK(15) : AC(2)

Adverse Pharmacological Actions : [Nephrotoxic](#) : CK(143) : AC(33)

Sulforaphane protects against cisplatin-induced nephrotoxicity. - GMI Summary

Pubmed Data : Int J Sport Nutr Exerc Metab. 2007 Aug;17(4):352-63. PMID: [19913604](#)

Article Published Date : Aug 01, 2007

Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Edilia Tapia, Omar N Medina-Campos, Dolores Javier Sánchez-González, Claudia María Martínez-Martínez, Karla Mariana Ortiz-Vega, Martha Franco, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Renoprotective](#) : CK(179) : AC(84)

Taurine has a protective effect against cisplatin-induced nephrotoxicity in rats. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2007 May;32(9):835-9. PMID: [11901256](#)

Article Published Date : May 01, 2007

Authors : Sherif Y Saad, Ammar C Al-Rikabi

Study Type : Animal Study

Additional Links

Substances : [Taurine](#) : CK(145) : AC(33)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84)

Sulforaphane protects against cisplatin-induced mitochondrial alterations associated with renal damage. - GMI Summary

Pubmed Data : Toxicol Lett. 2010 Nov 10;199(1):80-92. Epub 2010 Aug 21. PMID: [20732396](#)

Article Published Date : Nov 10, 2010

Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Eduardo Martínez-Abundis, Edilia Tapia, Guillermo Zarco-Márquez, Cecilia Zazueta, José Pedraza-Chaverri

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Mitochondrial Diseases](#) : CK(145) : AC(50)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Enzyme Inhibitors](#) : CK(385) : AC(210), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11)

Tumor Necrosis Factor (TNF) Alpha Inhibitor (AC 8)

[Coenzyme Q10 treatment ameliorates acute cisplatin nephrotoxicity in mice.](#) - GMI Summary

Pubmed Data : Toxicology. 2010 Jul-Aug;274(1-3):49-56. Epub 2010 May 25. PMID: [20510337](#)

Article Published Date : Jul 01, 2010

Authors : Amr A Fouad, Ali Ibrahim Al-Sultan, Shereen M Refaie, Mohamed T Yacoubi

Study Type : Animal Study

Additional Links

Substances : [Coenzyme Q10](#) : CK(667) : AC(103)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

[Curcumin oil has a protective effect against cisplatin-induced nephrotoxicity.](#) - GMI Summary

Pubmed Data : J Agric Food Chem. 2007 Dec 12;55(25):10150-5. Epub 2007 Nov 15. PMID: [18001039](#)

Article Published Date : Dec 12, 2007

Authors : Anurag Kuhad, Sangeeta Pilkhwal, Sameer Sharma, Naveen Tirkey, Kanwaljit Chopra

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Inflammation](#) : CK(1001) : AC(341), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Anti-Inflammatory Agents](#) : CK(1159) : AC(412), [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

[Curcumin protects against cyclophosphamide-induced haemorrhagic cystitis.](#) - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2004 Apr 16;316(4):1065-72. PMID: [19413659](#)

Article Published Date : Apr 16, 2004

Authors : Hossam M M Arafa

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Bladder Dysfunction](#) : CK(39) : AC(7), [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [Cystitis](#) : CK(2) : AC(1), [Interstitial Cystitis](#) : CK(136) : AC(17)

Pharmacological Actions : [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

[L-carnitine and ginkgo biloba extract exhibits a protective agent in an animal model of bleomycin-induced lung fibrosis](#) - GMI Summary

Pubmed Data : Pharmacol Res. 2002 Jun;45(6):461-7. PMID: [12162946](#)

Article Published Date : Jun 01, 2002

Authors : Mohamed H Daba, Abdel-Aziz H Abdel-Aziz, Adel M Moustafa, Abdulhakeem A Al-Majed, Othman A Al-Shabanah, Hassan A El-Kashef

Study Type : Animal Study

Additional Links

Substances : [Carnitine](#) : CK(650) : AC(67), [Ginkgo biloba](#) : CK(505) : AC(101)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

[Resveratrol exhibits chemosensitizing and chemopreventive properties.](#) - GMI Summary

Pubmed Data : Chemotherapy. 2010;56(1):60-5. Epub 2010 Mar 19. PMID: [20299793](#)

Article Published Date : Jan 01, 2010

Authors : A M El-Mowafy, M E El-Mesery, H A Salem, M M Al-Gayyar, M M Darweish

Study Type : Animal Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600), [Stilbenes](#) : CK(123) : AC(88)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Chemopreventive](#) : CK(1254) : AC(342), [Chemosensitizer](#) : CK(188) : AC(157), [Malondialdehyde Down-regulation](#) : CK(68) : AC(18), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11)

[Curcumin chemosensitizes prostate cancer cells to TRAIL-induce programmed cell death.](#) - GMI Summary

Pubmed Data : J Exp Ther Oncol. 2005;5(2):81-91. PMID: [16471035](#)

Article Published Date : Jan 01, 2005

Authors : Dorrah D Deeb, Hao Jiang, Xiaohua Gao, George Divine, Scott A Dulchavsky, Subhash C Gautam

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[Glucosamine's anticancer activity may be due to its ability to inhibit the transglutaminase 2 enzyme.](#) - GMI Summary

Pubmed Data : Cancer Lett. 2008 Sep 18. PMID: [18804908](#)

Article Published Date : Sep 18, 2008

Authors : Dae-Seok Kim, Kang-Seo Park, Kyung-Chae Jeong, Byung Ii Lee, Chang-Hoon Lee, Soo-Youl Kim

Study Type : In Vitro Study

Additional Links

Substances : [Glucosamine](#) : CK(116) : AC(21)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

[Triptolide, a compound found within Tripterygium wilfordii, sensitizes cholangiocarcinoma cells to programmed cell death.](#) - GMI Summary

Pubmed Data : Anticancer Res. 2006 Jan-Feb;26(1A):259-65. PMID: [16475706](#)

Article Published Date : Jan 01, 2006

Authors : Tasanee Panichakul, Pakamas Intachote, Adisak Wongkajorsilp, Banchob Sripa, Stitaya Sirisinha

Study Type : In Vitro Study

Additional Links

Substances : [Tripterygium wilfordii](#) : CK(104) : AC(26), [Triptolide](#) : CK(11) : AC(9)

Diseases : [Cholangiocarcinoma](#) : CK(23) : AC(11)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157),

[Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Apoptotic (AC 71)

[A variety of carotenoids induce reduce resistance to chemotherapy in multidrug resistant lymphoma and human breast cancer cell lines.](#) - GMI Summary

Pubmed Data : In Vivo. 2004 Mar-Apr;18(2):237-44. PMID: [15113052](#)

Article Published Date : Mar 01, 2004

Authors : Joseph Molnár, Nóra Gyémánt, Ilona Mucsi, Annamária Molnár, Margaret Szabó, Tamás Körtvélyesi, András Varga, Péter Molnár, Gyula Tóth

Study Type : Animal Study

Additional Links

Substances : [Carotenoids](#) : CK(1041) : AC(114), [Lycopene](#) : CK(175) : AC(32), [Paprika](#) : CK(8) : AC(6), [Zeaxanthin](#) : CK(67) : AC(10)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Lymphoma](#) : CK(211) : AC(68)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Curcumin enhances adriamycin-induced human liver-derived hepatoma G2 cell death.](#) - GMI Summary

Pubmed Data : Eur J Pharm Sci. 2011 Jun 14 ;43(3):125-31. Epub 2011 Apr 14. PMID: [21514382](#)

Article Published Date : Jun 14, 2011

Authors : Haoran Qian, Yi Yang, Xianfa Wang

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Hepatoma](#) : CK(23) : AC(22)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Adriamycin](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

[Galangin, a compound found within Alpinia galanga, acts as a chemosensitizer in drug-resistant leukemia cells.](#) - GMI Summary

Pubmed Data : Cancer Lett. 2008 Jul 8;265(2):289-97. Epub 2008 Apr 18. PMID: [18374481](#)

Article Published Date : Jul 08, 2008

Authors : Manlio Tolomeo, Stefania Grimaudo, Antonietta Di Cristina, Rosaria M Pipitone, Luisa Dusonchet, Maria Meli, Lucia Crosta, Nicola Gebbia, Francesco Paolo Invidiata, Lucina Titone, Daniele Simoni

Study Type : Animal Study

Additional Links

Substances : [Alpinia galanga](#) : CK(5) : AC(4), [Flavonoids](#) : CK(887) : AC(289)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28), [Leukemia: Chronic myelogenous leukemia \(CML\)](#) : CK(28) : AC(17)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

[Genistein increases the efficacy of fludarabine in inducing cell death in blood cells from CLL and PLL patients.](#) - GMI Summary

Pubmed Data : Cancer Immunol Immunother. 2007 Apr;56(4):501-14. Epub 2006 Oct 19. PMID:

[17051411](#)

Article Published Date : Apr 01, 2007

Authors : Amal Mansour, Victor T Chang, Shanti Srinivas, Jonathan Harrison, Elizabeth Raveche

Study Type : Animal Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [B-cell prolymphocytic leukemia \(B-PLL\) : CK\(2\) : AC\(1\)](#), [Leukemia: B-Cell : CK\(8\) : AC\(7\)](#), [Leukemia: Chronic Lymphocytic Leukemia \(CLL\) : CK\(52\) : AC\(24\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

[Piperine protects against cisplatin-induced toxicity in auditory cells.](#) - GMI Summary

Pubmed Data : J Nutr Biochem. 2007 Sep;18(9):615-22. Epub 2007 Apr 5. PMID: [17418561](#)

Article Published Date : Sep 01, 2007

Authors : Byung-Min Choi, Sung-Min Kim, Tae-Kwang Park, Guang Li, Sung-Jae Hong, Raekil Park, Hun-Taeg Chung, Bok-Ryang Kim

Study Type : Animal Study

Additional Links

Substances : [Piperidines : CK\(45\) : AC\(17\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#)

[Sulforaphane protects against cisplatin-induced nephrotoxicity.](#) - GMI Summary

Pubmed Data : Int J Sport Nutr Exerc Metab. 2007 Aug;17(4):352-63. PMID: [19913604](#)

Article Published Date : Aug 01, 2007

Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Edilia Tapia, Omar N Medina-Campos, Dolores Javier Sánchez-González, Claudia María Martínez-Martínez, Karla Mariana Ortiz-Vega, Martha Franco, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

[Aloe emodin may decrease the anticancer activity of the chemo-agent cisplatin.](#) - GMI Summary

Pubmed Data : Cell Mol Life Sci. 2005 Jun ;62(11):1275-82. PMID: [15905960](#)

Article Published Date : Jun 01, 2005

Authors : S Mijatovic, D Maksimovic-Ivanic, J Radovic, D Miljkovic, G N Kaludjerovic, T J Sabo, V Trajkovic

Study Type : In Vitro Study

Additional Links

Substances : [Aloe Vera : CK\(191\) : AC\(44\)](#), [Emodin : CK\(30\) : AC\(19\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#)

Problem Substances : [Cisplatin : CK\(15\) : AC\(2\)](#)

[Andrographis contains a compound which enhances chemosensitivity of cancer cells to doxorubicin.](#) - GMI Summary

Pubmed Data : Biochem Pharmacol. 2010 May 1;79(9):1242-50. Epub 2009 Dec 21. PMID: [20026083](#)

Article Published Date : May 01, 2010

Authors : Jing Zhou, Choon-Nam Ong, Gang-Min Hur, Han-Ming Shen

Study Type : In Vitro Study

Additional Links

Substances : [Andrographis : CK\(80\) : AC\(34\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Cannabinoids work synergistically with paclitaxel in gastric cancer cell lines.

- GMI Summary

Pubmed Data : J Surg Res. 2009 Jul;155(1):40-7. Epub 2008 Aug 9. PMID: [19394652](#)

Article Published Date : Jul 01, 2009

Authors : Hideyo Miyato, Joji Kitayama, Hiroharu Yamashita, Daisuke Souma, Masahiro Asakage, Jun Yamada, Hirokazu Nagawa

Study Type : In Vitro Study

Additional Links

Substances : [Cannabinoids : CK\(183\) : AC\(53\)](#)

Diseases : [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Paclitaxel : CK\(36\) : AC\(13\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin acts as a chemosensitizing agent in lung cancer cells.

Summary

Pubmed Data : Biochem Biophys Res Commun. 2005 Jun 17;331(4):1245-52. PMID: [15883009](#)

Article Published Date : Jun 17, 2005

Authors : Sudip Sen, Himani Sharma, Neeta Singh

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Carcinoma: Non-Small-Cell Lung : CK\(19\) : AC\(13\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin augments gemcitabine cytotoxic effect on pancreatic cancer cell lines.

- GMI Summary

Pubmed Data : Cancer Invest. 2007 Sep;25(6):411-8. PMID: [17882652](#)

Article Published Date : Sep 01, 2007

Authors : Shahar Lev-Ari, Akiva Vexler, Alex Starr, Maia Ashkenazy-Voghera, Joel Greif, Dan Aderka, Rami Ben-Yosef

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Pancreatic Cancer : CK\(524\) : AC\(160\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [Cyclooxygenase 2 Inhibitors : CK\(274\) : AC\(167\)](#)

Additional Keywords : [Drug: Gemcitabine : CK\(36\) : AC\(13\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin chemosensitizes prostate cancer cells to TRAIL-induce programmed cell death.

- GMI Summary

Pubmed Data : J Exp Ther Oncol. 2005;5(2):81-91. PMID: [16471035](#)

Article Published Date : Jan 01, 2005

Authors : Dorrah D Deeb, Hao Jiang, Xiaohua Gao, George Divine, Scott A Dulchavsky, Subhash C Gautam

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)
Diseases : [Prostate Cancer](#) : CK(961) : AC(288)
Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)
Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin enhances chemotherapeutic agents in prostate cancer cells.](#) - GMI Summary

Pubmed Data : Prostate. 2002 May 15;51(3):211-8. PMID: [11967955](#)
Article Published Date : May 15, 2002
Authors : Tzyh-Chyuan Hour, Jun Chen, Chao-Yuan Huang, Jing-Yi Guan, Shiu-Hui Lu, Yeong-Shiau Pu
Study Type : In Vitro Study
Additional Links
Substances : [Curcumin](#) : CK(2870) : AC(1475)
Diseases : [Prostate Cancer](#) : CK(961) : AC(288)
Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)
Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin enhances programmed cell death in chemoresistant ovarian cancer cells.](#) - GMI Summary

Pubmed Data : Gynecol Oncol. 2007 Apr;105(1):104-12. Epub 2006 Dec 15. PMID: [17174384](#)
Article Published Date : Apr 01, 2007
Authors : Heather Wahl, Lijun Tan, Kent Griffith, Miheon Choi, J Rebecca Liu
Study Type : In Vitro Study
Additional Links
Substances : [Curcumin](#) : CK(2870) : AC(1475)
Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Ovarian Cancer](#) : CK(117) : AC(50)
Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)
Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin has anti-cancer activity against drug-resistant chronic myeloid leukemia cells.](#) - GMI Summary

Pubmed Data : Mol Cancer Res. 2006 Jul;4(7):457-69. PMID: [16849521](#)
Article Published Date : Jul 01, 2006
Authors : Kamila Wolanin, Adriana Magalska, Grazyna Mosieniak, Rut Klinger, Sharon McKenna, Susanne Vejda, Ewa Sikora, Katarzyna Piwocka
Study Type : In Vitro Study
Additional Links
Substances : [Curcumin](#) : CK(2870) : AC(1475)
Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chronic Myeloid Leukemia](#) : CK(21) : AC(11)
Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

[Curcumin induces cell cycle arrest and programmed cell death in cisplatin-resistant human ovarian cancer cells.](#) - GMI Summary

Pubmed Data : Cancer Biol Ther. 2007 Feb;6(2):178-84. Epub 2007 Feb 5. PMID: [17218783](#)
Article Published Date : Feb 01, 2007
Authors : Nathan M Weir, Karuppayiah Selvendiran, Vijay Kumar Kutala, Liyue Tong, Shilpa Vishwanath, Murugesan Rajaram, Susheela Tridandapani, Shrikant Anant, Periannan Kuppasamy
Study Type : In Vitro Study
Additional Links
Substances : [Curcumin](#) : CK(2870) : AC(1475)
Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Ovarian Cancer](#) : CK(117) : AC(50)
Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) :

Curcumin induces chemo/radio-sensitization in ovarian cancer cells and curcumin nanoparticles inhibit ovarian cancer cell growth. - GMI Summary

Pubmed Data : J Ovarian Res. 2010;3:11. Epub 2010 Apr 29. PMID: [20429876](#)

Article Published Date : Jan 01, 2010

Authors : Murali M Yallapu, Diane M Maher, Vasudha Sundram, Maria C Bell, Meena Jaggi, Subhash C Chauhan

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

Curcumin induces programmed cell death in human melanoma cells. - GMI Summary

Pubmed Data : Exp Cell Res. 2001 Dec 10;271(2):305-14. PMID: [11716543](#)

Article Published Date : Dec 10, 2001

Authors : J A Bush, K J Cheung, G Li

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Melanoma : CK\(169\) : AC\(87\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Curcumin inhibits growth and sensitizes ovarian cancer cells to cisplatin-mediated killing. - GMI Summary

Pubmed Data : Carcinogenesis. 1982;3(11):1331-8. PMID: [12447990](#)

Article Published Date : Jan 01, 1982

Authors : Marion M Chan, Dunne Fong, Kenneth J Soprano, William F Holmes, Harry Heverling

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Interleukin-6 Downregulation : CK\(497\) : AC\(133\)](#)

Curcumin inhibits multi-drug resistant leukemia cells. - GMI Summary

Pubmed Data : Mol Cell Biochem. 2012 Jan ;360(1-2):253-60. Epub 2011 Sep 22. PMID: [21938404](#)

Article Published Date : Jan 01, 2012

Authors : Jin-Jian Lu, Yu-Jun Cai, Jian Ding

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Leukemia: Multi-Drug Resistant : CK\(1\) : AC\(1\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin inhibits pancreatic cancer cell growth and acts as a chemosensitizing agent. - GMI Summary

Pubmed Data : Mol Pharmacol. 2009 Jul;76(1):81-90. Epub 2009 Apr 24. PMID: [19395473](#)

Article Published Date : Jul 01, 2009

Authors : Jun Li, Yun Wang, Chaozhe Yang, Pengfei Wang, Denise K Oelschlager, Yong Zheng, De-An Tian, William E Grizzle, Donald J Buchsbaum, Mei Wan

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Chemotherapeutic Synergy: Gemcitabine](#) : CK(10) : AC(8), [Drug: Gemcitabine](#) : CK(36) : AC(13)

Curcumin may act as a photosensitizer and chemotherapeutic agent in nasopharyngeal carcinoma. - GMI Summary

Pubmed Data : J Environ Pathol Toxicol Oncol. 2006;25(1-2):205-15. PMID: [16566718](#)

Article Published Date : Jan 01, 2006

Authors : H Koon, Albert W N Leung, Kevin K M Yue, Naiki K Mak

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Nasopharyngeal Cancer](#) : CK(58) : AC(21)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin may have chemosensitizing properties in the treatment of human ovarian cancer. - GMI Summary

Pubmed Data : Cell Prolif. 2009 Apr;42(2):195-206. Epub 2009 Feb 18. PMID: [19236381](#)

Article Published Date : Apr 01, 2009

Authors : M Montopoli, E Ragazzi, G Frolidi, L Caparrotta

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11), [Drug: Oxaliplatin](#) : CK(6) : AC(5)

Curcumin promotes programmed cell death in multidrug-resistant human lung cancer cells. - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2010 Aug 13;399(1):1-6. Epub 2010 Jul 11. PMID: [20627087](#)

Article Published Date : Aug 13, 2010

Authors : Jian Zhang, Tao Zhang, Xinyu Ti, Jieran Shi, Changgui Wu, Xinling Ren, Hong Yin

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin promotes programmed cell death of cisplatin-resistant human lung carcinoma cells. - GMI Summary

Pubmed Data : Zhongguo Fei Ai Za Zhi. 2010 Apr;13(4):301-6. PMID: [20677554](#)

Article Published Date : Apr 01, 2010

Authors : Ni Tang, Jian Zhang, Yongping Du

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin](#) : CK(4) : AC(3), [Drug: Cisplatin](#) : CK(31) : AC(11)

[Curcumin promotes programmed cell death, increases chemosensitivity, and inhibits nuclear factor kappaB in esophageal adenocarcinoma.](#) - GMI

Summary

Pubmed Data : Transl Oncol. 2010 Apr;3(2):99-108. PMID: [20360934](#)

Article Published Date : Apr 01, 2010

Authors : Wibisono Hartojo, Amy L Silvers, Dafydd G Thomas, Christopher W Seder, Lin Lin, Hyma Rao, Zhuwen Wang, Joel K Greenson, Thomas J Giordano, Mark B Orringer, Alnawaz Rehemtulla, Mahaveer S Bhojani, David G Beer, Andrew C Chang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Esophageal Cancer](#) : CK(293) : AC(54)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

[Curcumin reduces multi-drug resistance in uterine cancer cells.](#) - GMI

Summary

Pubmed Data : Oncol Rep. 2008 Oct;20(4):731-5. PMID: [18813811](#)

Article Published Date : Oct 01, 2008

Authors : Antonio Angelini, Manuela Iezzi, Concetta Di Febbo, Carmine Di Ilio, Franco Cuccurullo, Ettore Porreca

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Uterine Cancer](#) : CK(24) : AC(10)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

[Curcumin sensitizes cervical cancer cells to curcumin-induced programmed cell death.](#) - GMI Summary

Pubmed Data : J Biol Chem. 2005 Feb 25;280(8):6301-8. Epub 2004 Dec 7. PMID: [15590651](#)

Article Published Date : Feb 25, 2005

Authors : Smitha V Bava, Vineshkumar T Puliappadamba, Ayswaria Deepti, Asha Nair, Devarajan Karunagaran, Ruby John Anto

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cervical Cancer](#) : CK(322) : AC(65)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Taxol](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin sensitizes lung cancer cells to cisplatin-induced programmed cell death.](#) - GMI Summary

Pubmed Data : Phytother Res. 1999 Jun;13(4):318-22. PMID: [19283527](#)

Article Published Date : Jun 01, 1999

Authors : Pithi Chanvorachote, Varisa Pongrakhananon, Sumalee Wannachaiyasit, Sudjit Luanpitpong, Yon Rojanasakul, Ubonthip Nimmannit

Study Type : In Vitro Study

Additional Links**Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185)**Pharmacological Actions** : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin stimulates reactive oxygen species production and potentiates apoptosis induction by the antitumor drugs arsenic trioxide and lonidamine in human myeloid leukemia cell lines. - GMI Summary**Pubmed Data** : J Pharmacol Exp Ther. 2010 Oct;335(1):114-23. Epub 2010 Jul 6. PMID: [20605902](#)**Article Published Date** : Oct 01, 2010**Authors** : Yolanda Sánchez, Gloria P Simón, Eva Calviño, Elena de Blas, Patricio Aller**Study Type** : In Vitro Study**Additional Links****Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Acute Myeloid Leukemia](#) : CK(51) : AC(21), [Chronic Myeloid Leukemia](#) : CK(21) : AC(11)**Pharmacological Actions** : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)**Additional Keywords** : [Drug: Arsenic Trioxide](#) : CK(1) : AC(1), [Drug: Lonidamine](#) : CK(1) : AC(1), [Drug Synergy](#) : CK(309) : AC(137)

Curcumin synergistically augments bcr/abl phosphorothioate antisense oligonucleotides to inhibit growth of chronic myelogenous leukemia cells. - GMI Summary**Pubmed Data** : Acta Pharmacol Sin. 2007 Jan;28(1):105-10. PMID: [17184589](#)**Article Published Date** : Jan 01, 2007**Authors** : Kun-Zhong Zhang, Jian-Hua Xu, Xiu-Wang Huang, Li-Xian Wu, Yu Su, Yuan-Zhong Chen**Study Type** : In Vitro Study**Additional Links****Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Leukemia: Chronic myelogenous leukemia \(CML\)](#) : CK(28) : AC(17)**Pharmacological Actions** : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)**Additional Keywords** : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin synergistically potentiates the anti-cancer effects of celecoxib in pancreatic cancer cells. - GMI Summary**Pubmed Data** : Biomed Pharmacother. 2005 Oct;59 Suppl 2:S276-80. PMID: [16507392](#)**Article Published Date** : Oct 01, 2005**Authors** : S Lev-Ari, H Zinger, D Kazanov, D Yona, R Ben-Yosef, A Starr, A Figer, N Arber**Study Type** : In Vitro Study**Additional Links****Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Pancreatic Cancer](#) : CK(524) : AC(160)**Pharmacological Actions** : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Cyclooxygenase 2 Inhibitors](#) : CK(274) : AC(167)**Additional Keywords** : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin works synergistically with bortezomib in multiple myeloma. - GMI Summary**Pubmed Data** : Zhongguo Shi Yan Xue Ye Xue Za Zhi. 2011 Jun ;19(3):684-8. PMID: [21729550](#)**Article Published Date** : Jun 01, 2011**Authors** : Xiao-Yan Zhang, Qing-Xian Bai, Gao-Sheng Huang, Hui Zhao, Juan-Juan Chen, Li-Jie Yang**Study Type** : In Vitro Study**Additional Links****Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Multiple Myeloma](#) : CK(125) : AC(50)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Bcl-2 protein down-regulation : CK\(40\) : AC\(27\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Bortezomib : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

DHA may induce cell death in chemotherapy resistant colon cancer cells. - GMI Summary

Pubmed Data : Nutr Cancer. 2010 Jul;62(5):611-21. PMID: [20574922](#)

Article Published Date : Jul 01, 2010

Authors : Jens E Slagsvold, Caroline H H Pettersen, Gro L Størvold, Turid Follestad, Hans E Krokan, Svanhild A Schønberg

Study Type : In Vitro Study

Additional Links

Substances : [DHA \(Docosahexaenoic Acid\) : CK\(603\) : AC\(100\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Colon Cancer : CK\(375\) : AC\(230\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

DHA sensitizes neuroblastoma cells to chemotherapy and asenic-induced oxidative stress. - GMI Summary

Pubmed Data : Int J Cancer. 2006 May 15;118(10):2584-93. PMID: [16353135](#)

Article Published Date : May 15, 2006

Authors : Magnus Lindskog, Helena Gleissman, Frida Ponthan, Juan Castro, Per Kogner, John Inge Johnsen

Study Type : In Vitro Study

Additional Links

Substances : [DHA \(Docosahexaenoic Acid\) : CK\(603\) : AC\(100\)](#)

Diseases : [Neuroblastoma : CK\(51\) : AC\(31\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

EGCG sensitizes human cholangiocarcinoma cells to chemotherapy-induced programmed cell death. - GMI Summary

Pubmed Data : Liver Int. 2009 May;29(5):670-7. Epub 2009 Feb 17. PMID: [19226332](#)

Article Published Date : May 01, 2009

Authors : Molly Lang, Roger Henson, Chiara Braconi, Tushar Patel

Study Type : In Vitro Study

Additional Links

Substances : [Catechin : CK\(408\) : AC\(130\)](#), [EGCG \(Epigallocatechin gallate\) : CK\(176\) : AC\(115\)](#)

Diseases : [Cholangiocarcinoma : CK\(23\) : AC\(11\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#), [Drug: Mitomycin : CK\(4\) : AC\(3\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

EGCG, a green tea polyphenol, encourages programmed cell death in prostate cancer cells. - GMI Summary

Pubmed Data : Oncogene. 2008 Mar 27;27(14):2055-63. Epub 2007 Nov 12. PMID: [17998943](#)

Article Published Date : Mar 27, 2008

Authors : I A Siddiqui, A Malik, V M Adhami, M Asim, B B Hafeez, S Sarfaraz, H Mukhtar

Study Type : In Vitro Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\) : CK\(176\) : AC\(115\)](#)

Diseases : [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Emodin enhances sensitivity of gallbladder cancer cells to chemotherapy. - GMI Summary

Pubmed Data : Biochem Pharmacol. 2010 Apr 15;79(8):1134-40. Epub 2009 Dec 11. PMID: [20005210](#)

Article Published Date : Apr 15, 2010

Authors : Wei Wang, Yue-ping Sun, Xin-zhi Huang, Min He, Yu-ying Chen, Gui-ying Shi, Hui Li, Jing Yi, Jian Wang

Study Type : In Vitro Study

Additional Links

Substances : [Emodin : CK\(30\) : AC\(19\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Gallbladder Cancer : CK\(56\) : AC\(10\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Gamma tocotrienol has a chemosensitizing property. - GMI Summary

Pubmed Data : J Biol Chem. 2010 Oct 22;285(43):33520-8. Epub 2010 Aug 18. PMID: [20720018](#)

Article Published Date : Oct 22, 2010

Authors : Ramaswamy Kannappan, Vivek R Yadav, Bharat B Aggarwal

Study Type : In Vitro Study

Additional Links

Substances : [Tocotrienol: Gamma : CK\(12\) : AC\(12\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#), [Vitamin E: Gamma-tocotrienol : CK\(42\) : AC\(11\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#)

Pharmacological Actions : [Anti-Angiogenic : CK\(133\) : AC\(99\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Genistein acts as a chemosensitizer, augmenting the efficacy of cisplatin in pancreatic cancer. - GMI Summary

Pubmed Data : Int J Cancer. 2007 Feb 15;120(4):906-17. PMID: [17131310](#)

Article Published Date : Feb 15, 2007

Authors : Sanjeev Banerjee, Yuxiang Zhang, Zhiwei Wang, Mingxin Che, Paul J Chiao, James L Abbruzzese, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor : CK\(141\) : AC\(68\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin : CK\(4\) : AC\(3\)](#), [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Genistein acts as a chemosensitizer, contributing to overcoming drug-resistance in prostate, breast, lung and pancreatic cancers. - GMI Summary

Pubmed Data : Cancer Res. 2005 Aug 1;65(15):6934-42. PMID: [16061678](#)

Article Published Date : Aug 01, 2005

Authors : Yiwei Li, Fakhara Ahmed, Shadan Ali, Philip A Philip, Omer Kucuk, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies :](#)

Genistein enhances the anti-cancer activity of gemcitabine in osteosarcoma cells. - GMI Summary

Pubmed Data : Anticancer Drugs. 2010 Mar;21(3):288-96. PMID: [20038829](#)

Article Published Date : Mar 01, 2010

Authors : Bo Zhang, Zhong-Li Shi, Bing Liu, Xiao-Bo Yan, Jie Feng, Hui-Min Tao

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Osteosarcoma : CK\(65\) : AC\(40\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Genistein potentiates the effect of arsenic trioxide against human hepatocellular carcinoma. - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 1 ;301(1):75-84. PMID: [21078540](#)

Article Published Date : Feb 01, 2011

Authors : Yong Ma, Jizhou Wang, Lianxin Liu, Huaqiang Zhu, Xiaoning Chen, Shangha Pan, Xueying Sun, Hongchi Jiang

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Arsenic Trioxide : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Genistein sensitizes inhibitory effect of tamoxifen on the growth of estrogen receptor-positive and HER2-overexpressing human breast cancer cells. - GMI Summary

Pubmed Data : Mol Carcinog. 2007 Jul;46(7):534-42. PMID: [17295235](#)

Article Published Date : Jul 01, 2007

Authors : Zhiming Mai, George L Blackburn, Jin-Rong Zhou

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Drug synergy : CK\(51\) : AC\(14\)](#)

Additional Keywords : [Drug: Tamoxifen : CK\(367\) : AC\(53\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Genistein synergizes with arsenic trioxide to suppress human hepatocellular carcinoma. - GMI Summary

Pubmed Data : Cancer Sci. 2010 Apr ;101(4):975-83. Epub 2009 Dec 9. PMID: [20219070](#)

Article Published Date : Apr 01, 2010

Authors : Hongchi Jiang, Yong Ma, Xiaoning Chen, Shangha Pan, Bei Sun, Geoffrey W Krissansen, Xueying Sun

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Arsenic Trioxide : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Lion's mane enhances doxorubicin-induced apoptosis in human hepatocellular carcinoma cells. - GMI Summary

Pubmed Data : Cancer Lett. 2010 Nov 28 ;297(2):144-54. PMID: [20554107](#)

Article Published Date : Nov 28, 2010

Authors : Jong Seok Lee, Eock Kee Hong

Study Type : In Vitro Study

Additional Links

Substances : [Lion's Mane \(Hericium Erinaceus\)](#) : CK(31) : AC(6)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Luteolin has anti-proliferative and chemosensitizing effects on human gastric cancer cells. - GMI Summary

Pubmed Data : Mol Cell Biochem. 2008 Jun;313(1-2):125-32. Epub 2008 Apr 9. PMID: [18398671](#)

Article Published Date : Jun 01, 2008

Authors : Bin Wu, Qiang Zhang, Weiming Shen, Jun Zhu

Study Type : In Vitro Study

Additional Links

Substances : [Luteolin](#) : CK(61) : AC(51)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Gastric Cancer](#) : CK(360) : AC(108)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Melatonin has a synergistic effect with chemotherapeutic drugs on human osteosarcoma cells. - GMI Summary

Pubmed Data : J Pineal Res. 2010 Jan;48(1):72-80. PMID: [20025643](#)

Article Published Date : Jan 01, 2010

Authors : Sara Casado-Zapico, Jezabel Rodriguez-Blanco, Guillermo García-Santos, Vanesa Martín, Ana M Sánchez-Sánchez, Isaac Antolín, Carmen Rodriguez

Study Type : In Vitro Study

Additional Links

Substances : [Melatonin](#) : CK(454) : AC(115)

Diseases : [Osteosarcoma](#) : CK(65) : AC(40)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Paclitaxel and beta-lapachone (a compound within Tabebuia) synergistically induce programmed cell death in human retinoblastoma cells. - GMI Summary

Pubmed Data : J Cell Physiol. 2010 Feb;222(2):433-43. PMID: [19918798](#)

Article Published Date : Feb 01, 2010

Authors : Antonella D'Anneo, Giuseppa Augello, Andrea Santulli, Michela Giuliano, Riccardo di Fiore, Concetta Messina, Giovanni Tesoriere, Renza Vento

Study Type : In Vitro Study

Additional Links

Substances : [Tabebuia](#) : CK(10) : AC(9)

Diseases : [Retinoblastoma](#) : CK(24) : AC(6)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

Pterostilbene and 3'-hydroxypterostilbene are effective in multi-drug resistant leukemia cells. - GMI Summary

Pubmed Data : Indian J Med Res. 2000 Sep;112:73-7. PMID: [15878840](#)

Article Published Date : Sep 01, 2000

Authors : Manlio Tolomeo, Stefania Grimaudo, Antonietta Di Cristina, Marinella Roberti, Daniela Pizzirani, Maria Meli, Luisa Dusonchet, Nicola Gebbia, Vincenzo Abbadessa, Lucia Crosta, Riccardo Barucchello, Giuseppina Grisolia, Francesco Invidiata, Daniele Simoni

Study Type : In Vitro Study

Additional Links

Substances : [Pterostilbene](#) : CK(999) : AC(29)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Leukemia](#) : CK(694) : AC(270)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Stilbenes](#) : CK(414) : AC(245)

Quercetin abrogates chemoresistance in melanoma cells. - GMI Summary

Pubmed Data : BMC Cancer. 2010;10:282. Epub 2010 Jun 11. PMID: [20540768](#)

Article Published Date : Jan 01, 2010

Authors : Thilakavathy Thangasamy, Sivanandane Sittadjody, Geoffrey C Mitchell, Erin E Mendoza, Vijayababu M Radhakrishnan, Kirsten H Limesand, Randy Burd

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin](#) : CK(312) : AC(140)

Diseases : [DNA damage](#) : CK(687) : AC(287), [Melanoma](#) : CK(169) : AC(87)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Quercetin may overcome chemotherapy-resistance in chronic lymphocytic leukemia patients. - GMI Summary

Pubmed Data : Br J Cancer. 2010 Aug 24;103(5):642-8. Epub 2010 Jul 20. PMID: [20648016](#)

Article Published Date : Aug 24, 2010

Authors : M Russo, C Spagnuolo, S Volpe, A Mupo, I Tedesco, G-L Russo

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin](#) : CK(312) : AC(140)

Diseases : [Leukemia: Chronic Lymphocytic Leukemia \(CLL\)](#) : CK(52) : AC(24)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Quercetin may reduce chemotherapy resistance in human pancreatic cancer cells. - GMI Summary

Pubmed Data : Molecules. 2010;15(2):857-70. Epub 2010 Feb 9. PMID: [20335952](#)

Article Published Date : Jan 01, 2010

Authors : Sylwia Borska, Mirosław Sopol, Magdalena Chmielewska, Maciej Zabel, Piotr Dziegiel

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin](#) : CK(312) : AC(140)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Resveratrol primes endometrial cancer cells for programmed cell death. - GMI Summary

Pubmed Data : Biochim Biophys Acta. 2010 Sep;1800(9):912-8. Epub 2010 May 7. PMID: [20457218](#)

Article Published Date : Sep 01, 2010

Authors : Xiuli Sun, Yi Zhang, Jianliu Wang, Lihui Wei, Hui Li, Gregory Hanley, Miaoqing Zhao, Yi Li, Deling Yin

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Endometrial Cancer](#) : CK(239) : AC(43)
Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Glycogen synthase kinase-3beta \(GSK-3beta\) Inhibitor](#) : CK(4) : AC(4)
Additional Keywords : [Stilbenes](#) : CK(414) : AC(245)

Resveratrol attenuates doxorubicin-induced cellular damage by modulating nitric oxide and apoptosis. - GMI Summary

Pubmed Data : Exp Toxicol Pathol. 2010 Dec 6. Epub 2010 Dec 6. PMID: [21144718](#)
Article Published Date : Dec 06, 2010
Authors : Gulperi Oktem, Aysegul Uysal, Onur Oral, Ebru Demirel Sezer, Murat Olukman, Ayşe Erol, Serap A Akgur, Ayhan Bilir
Study Type : In Vitro Study
Additional Links
Substances : [Resveratrol](#) : CK(963) : AC(600)
Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)
Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087)
Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Resveratrol combines favorably with paclitaxel to induce cell death in lung cancer cells. - GMI Summary

Pubmed Data : Anticancer Res. 2003 Sep-Oct;23(5A):4039-46. PMID: [14666716](#)
Article Published Date : Sep 01, 2003
Authors : Tetsuya Kubota, Yoshiki Uemura, Makoto Kobayashi, Hirokuni Taguchi
Study Type : In Vitro Study
Additional Links
Substances : [Resveratrol](#) : CK(963) : AC(600)
Diseases : [Lung Cancer](#) : CK(440) : AC(185)
Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)
Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Stilbenes](#) : CK(414) : AC(245)

Resveratrol down-regulates survivin and induces programmed cell death in human multidrug-resistant cells. - GMI Summary

Pubmed Data : Oncol Rep. 2010 Jan;23(1):279-86. PMID: [19956893](#)
Article Published Date : Jan 01, 2010
Authors : Weiguo Zhao, Pengtao Bao, Haowen Qi, Houcheng You
Study Type : In Vitro Study
Additional Links
Substances : [Resveratrol](#) : CK(963) : AC(600), [Stilbenes](#) : CK(123) : AC(88)
Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)
Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [Survivin Down-Regulation](#) : CK(1) : AC(1)

Resveratrol increase the sensitivity of non-Hodgkin's lymphoma and multiple myeloma cell lines to paclitaxel-induced programmed cell death. - GMI Summary

Pubmed Data : Mol Cancer Ther. 2004 Jan;3(1):71-84. PMID: [14749477](#)
Article Published Date : Jan 01, 2004
Authors : Ali R Jazirehi, Benjamin Bonavida
Study Type : In Vitro Study
Additional Links
Substances : [Resveratrol](#) : CK(963) : AC(600)
Diseases : [Multiple Myeloma](#) : CK(125) : AC(50), [Non-Hodgkin Lymphoma](#) : CK(445) : AC(63)
Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)
Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) :

Resveratrol induces cell-cycle disruption and programmed cell death in chemoresistant melanoma. - GMI Summary

Pubmed Data : J Cell Biochem. 2010 Jul 1;110(4):893-902. PMID: [20564188](#)

Article Published Date : Jul 01, 2010

Authors : Grégory Gatouillat, Emilie Balasse, Débora Joseph-Pietras, Hamid Morjani, Claudie Madoulet

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Melanoma : CK\(169\) : AC\(87\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol may help overcome multi-drug resistance in human cancer cell lines. - GMI Summary

Pubmed Data : Anticancer Res. 2010 Nov;30(11):4587-93. PMID: [21115910](#)

Article Published Date : Nov 01, 2010

Authors : Olga Wesolowska, Jerzy Wisniewski, Aleksandra Bielawska-Pohl, Maria Paprocka, Noelia Duarte, Maria-José U Ferreira, Danuta Dus, Krystyna Michalak

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Colorectal Cancer : CK\(768\) : AC\(299\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol reverses doxorubicin resistance in acute myeloid leukemia cells. - GMI Summary

Pubmed Data : Environ Health. 2008;7:21. Epub 2008 May 30. PMID: [20350534](#)

Article Published Date : Jan 01, 2008

Authors : Sin Ho Kweon, Ju Han Song, Tae Sung Kim

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Leukemia: Acute myelogenous leukemia \(AML\) : CK\(96\) : AC\(28\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol sensitizes resistant leukemia cells to the the effects of anticancer drugs. - GMI Summary

Pubmed Data : Neoplasma. 2006;53(5):384-92. PMID: [17013532](#)

Article Published Date : Jan 01, 2006

Authors : J Duraj, J Bodo, M Sulikova, P Rauko, J Sedlak

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Leukemia : CK\(694\) : AC\(270\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Sulforaphane reduces doxorubicin resistance. - GMI Summary

Pubmed Data : Mutat Res. 2006 Oct 10;601(1-2):92-101. Epub 2006 Jul 14. PMID: [16843502](#)

Article Published Date : Oct 10, 2006

Authors : Carmela Fimognari, Michael Nüsse, Monia Lenzi, Davide Sciuscio, Giorgio Cantelli-Forti, Patrizia Hrelia

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Sulforaphane protects against cisplatin-induced mitochondrial alterations associated with renal damage. - GMI Summary

Pubmed Data : Toxicol Lett. 2010 Nov 10;199(1):80-92. Epub 2010 Aug 21. PMID: [20732396](#)

Article Published Date : Nov 10, 2010

Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Eduardo Martínez-Abundis, Edilia Tapia, Guillermo Zarco-Márquez, Cecilia Zazueta, José Pedraza-Chaverri

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Mitochondrial Diseases](#) : CK(145) : AC(50)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Enzyme Inhibitors](#) : CK(385) : AC(210), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11)

The green tea polyphenol EGCG enhances the anti-cancer activity of bortezomib in multiple myeloma cells. - GMI Summary

Pubmed Data : Acta Biochim Biophys Sin (Shanghai). 2009 Dec;41(12):1018-26. PMID: [20011976](#)

Article Published Date : Dec 01, 2009

Authors : Qing Wang, Juan Li, Jingli Gu, Beihui Huang, Ying Zhao, Dong Zheng, Yan Ding, Lijin Zeng

Study Type : In Vitro Study

Additional Links

Substances : [Catechin](#) : CK(408) : AC(130), [Tea](#) : CK(951) : AC(226)

Diseases : [Multiple Myeloma](#) : CK(125) : AC(50)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Caspase-3 Activation](#) : CK(16) : AC(13), [Caspase-9 Activation](#) : CK(5) : AC(5), [Chemotherapeutic](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Bortezomib](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

Triptolide, a compound found within Tripterygium wilfordii, sensitizes cholangiocarcinoma cells to programmed cell death. - GMI Summary

Pubmed Data : Anticancer Res. 2006 Jan-Feb;26(1A):259-65. PMID: [16475706](#)

Article Published Date : Jan 01, 2006

Authors : Tasanee Panichakul, Pakamas Intachote, Adisak Wongkajorsilp, Banchob Sriipa, Stitaya Sirisinha

Study Type : In Vitro Study

Additional Links

Substances : [Tripterygium wilfordii](#) : CK(104) : AC(26), [Triptolide](#) : CK(11) : AC(9)

Diseases : [Cholangiocarcinoma](#) : CK(23) : AC(11)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic](#) : CK(188) : AC(157), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Vitamin A and D have an anti-tumor effect against head and neck squamous cell carcinoma. - GMI Summary

Pubmed Data : Auris Nasus Larynx. 2003 Dec;30(4):403-12. PMID: [14656567](#)

Article Published Date : Dec 01, 2003

Authors : Kenichi Satake, Emi Takagi, Akiko Ishii, Yasumasa Kato, Yukari Imagawa, Yuu Kimura, Mamoru Tsukuda

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin A : CK\(358\) : AC\(53\)](#), [Vitamin D : CK\(1493\) : AC\(220\)](#)

Diseases : [Head and Neck Cancer : CK\(36\) : AC\(14\)](#), [Skin Cancer: Squamous Cell : CK\(52\) : AC\(16\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#)

Vitamin C augments chemotherapeutic response of cervical carcinoma cells. - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2001 Mar 30;282(2):409-15. PMID: [11401473](#)

Article Published Date : Mar 30, 2001

Authors : V G Reddy, N Khanna, N Singh

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin C : CK\(1208\) : AC\(238\)](#)

Diseases : [Cervical Cancer : CK\(322\) : AC\(65\)](#), [Human Papillomavirus \(HPV\) : CK\(490\) : AC\(23\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Curcumin may act as a chemosensitizing agent. - GMI Summary

Pubmed Data : Adv Exp Med Biol. 2007;595:269-300. PMID: [17569216](#)

Article Published Date : Jan 01, 2007

Authors : Pornngarm Limtrakul

Study Type : Review

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin may work synergistically with taxane chemotherapy for hormone-refractory prostate cancer treatment. - GMI Summary

Pubmed Data : Nutr Cancer. 2010;62(2):148-53. PMID: [20099188](#)

Article Published Date : Jan 01, 2010

Authors : Aurelie Cabrespine-Faugeras, Mathilde Bayet-Robert, Jacques-Olivier Bay, Philippe Chollet, Chantal Barthomeuf

Study Type : Review

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy : CK\(65\) : AC\(16\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Taxane : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Resveratrol has chemosensitizing and/or anti-cancer activity. - GMI Summary

Pubmed Data : Crit Rev Food Sci Nutr. 2009 Oct;49(9):782-99. PMID: [20443159](#)

Article Published Date : Oct 01, 2009

Authors : Thomas E Kraft, Daniel Parisotto, Christina Schempp, Thomas Efferth

Study Type : Review

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Anti-Angiogenic](#) : CK(133) : AC(99), [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agents](#) : CK(188) : AC(157)

Additional Keywords : [Selective Cytotoxicity](#) : CK(41) : AC(36), [Stilbenes](#) : CK(414) : AC(245)

Radiation Induced Illness (AC 8)

[There is evidence to support the use of topical calendula for prophylaxis of acute dermatitis during radiotherapy and Traumeel S mouthwash in the treatment of chemotherapy-induced stomatitis.](#) - GMI Summary

Pubmed Data : Cochrane Database Syst Rev. 2009(2):CD004845. Epub 2009 Apr 15. PMID: [19370613](#)

Article Published Date : Jan 01, 2009

Authors : Sosie Kassab, Mike Cummings, Saul Berkovitz, Robbert van Haselen, Peter Fisher

Study Type : Meta Analysis

Additional Links

Substances : [Calendula](#) : CK(41) : AC(4), [Homeopathic Medicine: All](#) : CK(501) : AC(48), [Homeopathic Medicine: Traumeel](#) : CK(40) : AC(3)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Dermatitis](#) : CK(1129) : AC(101), [Radiation Induced Illness](#) : CK(994) : AC(245), [Radiation Induced Illness: Dermatitis](#) : CK(30) : AC(2), [Stomatitis: Aphthous](#) : CK(30) : AC(3)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

[A combination of geranium extract, Ganoderma lucidum, Codonopsis pilosula and Angelica sinensis, improve the condition of cancer patients receiving chemotherapy/radiotherapy.](#) - GMI Summary

Pubmed Data : Phytother Res. 2009 Jun;23(6):785-90. PMID: [19145638](#)

Article Published Date : Jun 01, 2009

Authors : Shu-Ru Zhuang, Su-Lin Chen, Jih-Hsin Tsai, Chi-Chou Huang, Tzu-Chin Wu, Wen-Shan Liu, Hsien-Chun Tseng, Hong-Sen Lee, Min-Chang Huang, Guang-Tzuu Shane, Cheng-Hua Yang, You-Cheng Shen, Yeong-Yu Yan, Chin-Kun Wang

Study Type : Human Study

Additional Links

Substances : [Angelica](#) : CK(73) : AC(28), [Codonopsis pilosula](#) : CK(23) : AC(4), [Geranium](#) : CK(16) : AC(8), [Reishi Mushroom](#) : CK(109) : AC(43)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Radiation Induced Illness](#) : CK(994) : AC(245)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Oral glutamine supplementation protects lymphocytes and attenuates gut permeability in patients with esophageal cancer during radiochemotherapy.](#) - GMI Summary

Pubmed Data : Ann Surg. 1998 Apr;227(4):485-91. PMID: [9563534](#)

Article Published Date : Apr 01, 1998

Authors : S Yoshida, M Matsui, Y Shirouzu, H Fujita, H Yamana, K Shirouzu

Study Type : Human Study

Additional Links

Substances : [Glutamine](#) : CK(120) : AC(22)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Esophageal Cancer](#) : CK(293) : AC(54), [Radiation Induced Illness](#) : CK(994) : AC(245)

Additional Keywords : [Drug: 5-fluorouracil](#) : CK(88) : AC(23), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Therapy-related acute myeloid leukemia and myelodysplastic syndrome has been reported. - GMI Summary

Pubmed Data : J Med Food. 2005 Fall;8(3):382-5. PMID: [3857944](#)

Article Published Date : Sep 01, 2005

Authors : S D Michels, R W McKenna, D C Arthur, R D Brunning

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28), [Lymphoma](#) : CK(211) : AC(68), [Myelodysplastic Syndrome](#) : CK(188) : AC(17), [Radiation Induced Illness](#) : CK(994) : AC(245)

Additional Keywords : [Iatrogenic Disease](#) : CK(218) : AC(22)

Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33), [Radiotherapy](#) : CK(287) : AC(41)

Vitamin E and N-acetylcysteine are an effective antioxidant adjuvant therapy in children with acute lymphoblastic leukemia to reduce the chemo-radiotherapy toxicity of treatment. - GMI Summary

Pubmed Data : Adv Hematol. 2009;2009:689639. Epub 2009 Oct 20. PMID: [19960046](#)

Article Published Date : Jan 01, 2009

Authors : Youssef Al-Tonbary, Mohammad Al-Haggar, Rasha El-Ashry, Sahar El-Dakroory, Hanan Azzam, Ashraf Fouda

Study Type : Human Study

Additional Links

Substances : [NAC \(N-acetyl-L-cysteine\)](#) : CK(248) : AC(64), [Vitamin E](#) : CK(1288) : AC(227)

Diseases : [Acute lymphoblastic leukemia \(ALL\)](#) : CK(95) : AC(28), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Radiation Induced Illness](#) : CK(994) : AC(245)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Pantothenic acid inhibits radiation-induced tumors and has a synergistic effect with the chemotherapeutic agent mitomycin C. - GMI Summary

Pubmed Data : Oncol Res. 2007;16(8):389-94. PMID: [17913047](#)

Article Published Date : Jan 01, 2007

Authors : Heike Schittl, Nikola Getoff

Study Type : Animal Study

Additional Links

Substances : [Pantothenic Acid \(Vitamin B-5\)](#) : CK(52) : AC(9)

Diseases : [Radiation Induced Illness](#) : CK(994) : AC(245)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radioprotective](#) : CK(453) : AC(180)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Curcumin has radiosensitizing and chemosensitizing effects on tumors while protecting healthy tissue from damage. - GMI Summary

Pubmed Data : Nutr Cancer. 2010 Oct;62(7):919-30. PMID: [20924967](#)

Article Published Date : Oct 01, 2010

Authors : Ajay Goel, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Radiation Induced Illness](#) : CK(994) : AC(245), [Tumors](#) : CK(179) : AC(107)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

Glutamine prevents chemotherapy and radiation toxicity and may increase the efficacy of cancer treatment. - GMI Summary

Pubmed Data : Cancer Treat Rev. 2003 Dec;29(6):501-13. PMID: [14585260](#)

Article Published Date : Dec 01, 2003

Authors : Diane M F Savarese, Gayle Savy, Linda Vahdat, Paul E Wischmeyer, Barbara Corey

Study Type : Review

Additional Links

Substances : [Glutamine : CK\(120\) : AC\(22\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Radiation Induced Illness : CK\(994\) : AC\(245\)](#)

Pharmacological Actions : [Radioprotective : CK\(453\) : AC\(180\)](#)

Chemotherapy (AC 7)

[There are high rates of behavioral symptoms in breast cancer survivors, particularly those treated with chemotherapy - GMI Summary](#)

Pubmed Data : J Clin Oncol. 2011 Aug 8. Epub 2011 Aug 8. PMID: [21825266](#)

Article Published Date : Aug 08, 2011

Authors : Julianne E Bower, Patricia A Ganz, Michael R Irwin, Lorna Kwan, Elizabeth C Breen, Steve W Cole

Study Type : Meta Analysis

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Depression: Unipolar : CK\(601\) : AC\(80\)](#), [Fatigue : CK\(218\) : AC\(29\)](#), [Inflammation : CK\(1001\) : AC\(341\)](#), [Insomnia : CK\(459\) : AC\(54\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#)

Problem Substances : [Chemotherapy : CK\(325\) : AC\(35\)](#)

Adverse Pharmacological Actions : [Inflammatory : CK\(123\) : AC\(32\)](#), [Tumor necrosis factorα \(TNFα\) up-regulation : CK\(42\) : AC\(4\)](#)

[Bi-weekly administration of paclitaxel and cisplatin in patients with advanced esophageal cancer results in a median survival for all patients of 9 months. - GMI Summary](#)

Pubmed Data : Br J Cancer. 2002 Mar 4;86(5):669-73. PMID: [11875723](#)

Article Published Date : Mar 04, 2002

Authors : M B Poole, F A L M Eskens, M E L van der Burg, T A W Splinter, P D Siersema, H W Tilanus, J Verweij, G Stoter, A van der Gaast

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Esophageal Cancer : CK\(293\) : AC\(54\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug: Paclitaxel : CK\(36\) : AC\(13\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#)

[Chemotherapy used in advanced gastric or gastroesophageal adenocarcinoma results in an overall median survival time of between 7-9 months. - GMI Summary](#)

Pubmed Data : J Clin Oncol. 2010 Mar 20;28(9):1547-53. Epub 2010 Feb 16. PMID: [20159816](#)

Article Published Date : Mar 20, 2010

Authors : Jaffer A Ajani, Wuilbert Rodriguez, Gyorgy Bodoky, Vladimir Moiseyenko, Mikhail Lichinitser, Vera Gorbunova, Ihor Vynnychenko, August Garin, Istvan Lang, Silvia Falcon

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Esophageal Cancer : CK\(293\) : AC\(54\)](#), [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Additional Keywords : [Chemotherapy : CK\(20\) : AC\(2\)](#), [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#)

[Memory deficits occur in breast cancer patients who receive either chemotherapy or tamoxifen. - GMI Summary](#)

Pubmed Data : J Psychosoc Oncol. 2011 Sep-Oct;29(5):499-514. PMID: [21882931](#)

Article Published Date : Sep 01, 2011

Authors : Svetlana Prokasheva, Yifat Faran, Julie Cwikel, David B Geffen

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Memory Disorders: Drug-Induced : CK\(74\) : AC\(9\)](#), [Memory Loss : CK\(117\) : AC\(34\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#)

Problem Substances : [Tamoxifen : CK\(294\) : AC\(39\)](#)

Adverse Pharmacological Actions : [Neurotoxic : CK\(976\) : AC\(155\)](#)

[Therapy-related acute myeloid leukemia and myelodysplastic syndrome has been reported.](#) - GMI Summary

Pubmed Data : J Med Food. 2005 Fall;8(3):382-5. PMID: [3857944](#)

Article Published Date : Sep 01, 2005

Authors : S D Michels, R W McKenna, D C Arthur, R D Brunning

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide : CK\(25\) : AC\(9\)](#), [Leukemia: Acute myelogenous leukemia \(AML\) : CK\(96\) : AC\(28\)](#), [Lymphoma : CK\(211\) : AC\(68\)](#), [Myelodysplastic Syndrome : CK\(188\) : AC\(17\)](#), [Radiation Induced Illness : CK\(994\) : AC\(245\)](#)

Additional Keywords : [Iatrogenic Disease : CK\(218\) : AC\(22\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#), [Radiotherapy : CK\(287\) : AC\(41\)](#)

["Impaired cognitive function and hippocampal neurogenesis following cancer chemotherapy."](#) - GMI Summary

Pubmed Data : Clin Cancer Res. 2012 Feb 14. Epub 2012 Feb 14. PMID: [22338017](#)

Article Published Date : Feb 14, 2012

Authors : Lori-Ann Christie, Munjal M Acharya, Vipin K Parihar, Anna Nguyen, Vahan Martirosian, Charles L Limoli

Study Type : Animal Study

Additional Links

Diseases : [Brain Injury: Hippocampal Damage : CK\(35\) : AC\(12\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [Cognitive Decline/Dysfunction : CK\(500\) : AC\(80\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#)

Problem Substances : [Cyclophosphamide : CK\(2\) : AC\(1\)](#), [Doxorubicin : CK\(2\) : AC\(1\)](#)

Adverse Pharmacological Actions : [Neurotoxic : CK\(976\) : AC\(155\)](#)

[Anticancer drugs may cause kidney disorders.](#) - GMI Summary

Pubmed Data : Drug Saf. 2001 Jan;24(1):19-38. PMID: [11219485](#)

Article Published Date : Jan 01, 2001

Authors : P E Kintzel

Study Type : Review

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Iatrogenic Disease : CK\(62\) : AC\(7\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#)

Drug Synergy (AC 41)

[Caffeine potentiates chemotherapy for metastatic osteosarcoma.](#) - GMI Summary

Pubmed Data : J Orthop Sci. 2009 Sep;14(5):556-65. Epub 2009 Oct 3. PMID: [19802667](#)

Article Published Date : Sep 01, 2009

Authors : Hiroaki Kimura, Hiroyuki Tsuchiya, Toshiharu Shirai, Hideji Nishida, Katsuhiko Hayashi,

Akihiko Takeuchi, Issei Ohnari, Katsuro Tomita

Study Type : Human Study

Additional Links

Substances : [Caffeine](#) : CK(99) : AC(17)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug Synergy](#) : CK(309) : AC(137)

Sulforaphane enhances the anticancer activity of a chemo-agent against pancreatic cancer. - GMI Summary

Pubmed Data : Nutr Cancer. 2011 Aug 29. Epub 2011 Aug 29. PMID: [21875325](#)

Article Published Date : Aug 29, 2011

Authors : Yanyan Li, Tao Zhang, Steven J Schwartz, Duxin Sun

Study Type : Transgenic Animal Study

Additional Links

Substances : [Broccoli](#) : CK(435) : AC(185), [Sprouts](#) : CK(76) : AC(36), [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin ameliorates oxaliplatin-induced chemoresistance in HCT116 colorectal cancer cells in vitro and in vivo. - GMI Summary

Pubmed Data : Int J Cancer. 2010 Sep 13. Epub 2010 Sep 13. PMID: [20839263](#)

Article Published Date : Sep 13, 2010

Authors : Lynne M Howells, Stewart Sale, Sathya Neelature Sriramareddy, Glen R B Irving, Donald J L Jones, Christopher J Ottley, D Graham Pearson, Christopher D Mann, Margaret M Manson, David P Berry, Andreas Gescher, William P Steward, Karen Brown

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy](#) : CK(65) : AC(16), [Colorectal Cancer](#) : CK(768) : AC(299)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin ameliorates oxaliplatin-induced chemoresistance in HCT116 colorectal cancer cells in vitro and in vivo. - GMI Summary

Pubmed Data : Int J Cancer. 2010 Sep 13. Epub 2010 Sep 13. PMID: [20839263](#)

Article Published Date : Sep 13, 2010

Authors : Lynne M Howells, Stewart Sale, Sathya Neelature Sriramareddy, Glen R B Irving, Donald J L Jones, Christopher J Ottley, D Graham Pearson, Christopher D Mann, Margaret M Manson, David P Berry, Andreas Gescher, William P Steward, Karen Brown

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy](#) : CK(65) : AC(16), [Colorectal Cancer](#) : CK(768) : AC(299)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Oxaliplatin](#) : CK(6) : AC(5), [Drug Synergy](#) : CK(309) : AC(137)

Curcumin enhances adriamycin-induced human liver-derived hepatoma G2 cell death. - GMI Summary

Pubmed Data : Eur J Pharm Sci. 2011 Jun 14 ;43(3):125-31. Epub 2011 Apr 14. PMID: [21514382](#)

Article Published Date : Jun 14, 2011

Authors : Haoran Qian, Yi Yang, Xianfa Wang

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Hepatoma](#) : CK(23) : AC(22)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Adriamycin](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

Curcumin enhances the effect of cisplatin in suppression of head and neck squamous cell carcinoma. - GMI Summary

Pubmed Data : Mol Cancer Ther. 2010 Oct;9(10):2665-75. PMID: [20937593](#)

Article Published Date : Oct 01, 2010

Authors : Victor M Duarte, Eugene Han, Mysore S Veena, Amanda Salvado, Jeffrey D Suh, Li-Jung Liang, Kym F Faull, Eri S Srivatsan, Marilene B Wang

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Head and Neck Cancer](#) : CK(36) : AC(14)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin has a synergistic effect with cisplatin against fibrosarcoma. - GMI Summary

Pubmed Data : Pharmacol Res. 1999 Mar;39(3):175-9. PMID: [10094841](#)

Article Published Date : Mar 01, 1999

Authors : I Navis, P Sriganth, B Premalatha

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Fibrosarcoma](#) : CK(10) : AC(7)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin has anticancer, chemosensitization and radiosensitization effects in prostate cancer. - GMI Summary

Pubmed Data : Cancer Res. 2007 Mar 1;67(5):1988-96. PMID: [17332326](#)

Article Published Date : Mar 01, 2007

Authors : Mao Li, Zhuo Zhang, Donald L Hill, Hui Wang, Ruiwen Zhang

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Gemcitabine](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

Curcumin reduced the side effects of mitomycin C in the treatment of breast cancer. - GMI Summary

Pubmed Data : Cancer Sci. 2009 Nov;100(11):2040-5. Epub 2009 Jul 23. PMID: [19703194](#)

Article Published Date : Nov 01, 2009

Authors : Qian-Mei Zhou, Hui Zhang, Yi-Yu Lu, Xiu-Feng Wang, Shi-Bing Su

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Mitomycin-C](#) : CK(6) : AC(4), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Mitomycin : CK\(4\) : AC\(3\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

[Green tea catechins augment the antitumor activity of doxorubicin in an in vivo mouse model for chemoresistant liver cancer.](#) - GMI Summary

Pubmed Data : Int J Oncol. 2010 Jul ;37(1):111-23. PMID: [20514403](#)

Article Published Date : Jul 01, 2010

Authors : Gang Liang, Anzhou Tang, Xiaozhen Lin, Li Li, Su Zhang, Zhiming Huang, Haihua Tang, Qingdi Quentin Li

Study Type : Animal Study

Additional Links

Substances : [Catechin : CK\(408\) : AC\(130\)](#), [Tea : CK\(951\) : AC\(226\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

[Resveratrol enhances the anti-tumor effect of immunotherapy in a neuroblastoma model.](#) - GMI Summary

Pubmed Data : Cancer Immunol Immunother. 2011 Feb 22. Epub 2011 Feb 22. PMID: [21340652](#)

Article Published Date : Feb 22, 2011

Authors : Brenda L Soto, Jacquelyn A Hank, Tyler J Van De Voort, Lalita Subramanian, Arthur S Polans, Alexander L Rakhmievich, Richard K Yang, Songwong Seo, KyungMann Kim, Ralph A Reisfeld, Stephen D Gillies, Paul M Sondel

Study Type : Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Neuroblastoma : CK\(51\) : AC\(31\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

[Soy phytochemicals synergistically enhance the preventive effect of tamoxifen on the growth of estrogen-dependent human breast carcinoma in mice.](#) - GMI Summary

Pubmed Data : Carcinogenesis. 2007 Jun;28(6):1217-23. Epub 2007 Jan 18. PMID: [17234721](#)

Article Published Date : Jun 01, 2007

Authors : Zhiming Mai, George L Blackburn, Jin-Rong Zhou

Study Type : Animal Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#), [Soy : CK\(1697\) : AC\(340\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Tamoxifen : CK\(367\) : AC\(53\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

["Curcumin enhances the anticancer effects of trichostatin a in breast cancer cells."](#) - GMI Summary

Pubmed Data : Mol Carcinog. 2012 Jan 30. Epub 2012 Jan 30. PMID: [22290509](#)

Article Published Date : Jan 30, 2012

Authors : Guang Yan, Kimmer Graham, Susan Lanza-Jacoby

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

[Cannabinoids work synergistically with paclitaxel in gastric cancer cell lines.](#) - GMI Summary

Pubmed Data : J Surg Res. 2009 Jul;155(1):40-7. Epub 2008 Aug 9. PMID: [19394652](#)

Article Published Date : Jul 01, 2009

Authors : Hideyo Miyato, Joji Kitayama, Hiroharu Yamashita, Daisuke Souma, Masahiro Asakage, Jun Yamada, Hirokazu Nagawa

Study Type : In Vitro Study

Additional Links

Substances : [Cannabinoids](#) : CK(183) : AC(53)

Diseases : [Gastric Cancer](#) : CK(360) : AC(108)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

Curcumin acts as a chemosensitizing agent in lung cancer cells. - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2005 Jun 17;331(4):1245-52. PMID: [15883009](#)

Article Published Date : Jun 17, 2005

Authors : Sudip Sen, Himani Sharma, Neeta Singh

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Carcinoma: Non-Small-Cell Lung](#) : CK(19) : AC(13), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin augments gemcitabine cytotoxic effect on pancreatic cancer cell lines. - GMI Summary

Pubmed Data : Cancer Invest. 2007 Sep;25(6):411-8. PMID: [17882652](#)

Article Published Date : Sep 01, 2007

Authors : Shahar Lev-Ari, Akiva Vexler, Alex Starr, Maia Ashkenazy-Voghera, Joel Greif, Dan Aderka, Rami Ben-Yosef

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Cyclooxygenase 2 Inhibitors](#) : CK(274) : AC(167)

Additional Keywords : [Drug: Gemcitabine](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

Curcumin chemosensitizes prostate cancer cells to TRAIL-induce programmed cell death. - GMI Summary

Pubmed Data : J Exp Ther Oncol. 2005;5(2):81-91. PMID: [16471035](#)

Article Published Date : Jan 01, 2005

Authors : Dorrah D Deeb, Hao Jiang, Xiaohua Gao, George Divine, Scott A Dulchavsky, Subhash C Gautam

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin enhances chemotherapeutic agents in prostate cancer cells. - GMI Summary

Pubmed Data : Prostate. 2002 May 15;51(3):211-8. PMID: [11967955](#)

Article Published Date : May 15, 2002

Authors : Tzyh-Chyuan Hour, Jun Chen, Chao-Yuan Huang, Jing-Yi Guan, Shiu-Hui Lu, Yeong-Shiau Pu

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin enhances programmed cell death in chemoresistant ovarian cancer cells. - GMI Summary

Pubmed Data : Gynecol Oncol. 2007 Apr;105(1):104-12. Epub 2006 Dec 15. PMID: [17174384](#)

Article Published Date : Apr 01, 2007

Authors : Heather Wahl, Lijun Tan, Kent Griffith, Miheon Choi, J Rebecca Liu

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin has chemosensitizing activity in multidrug resistant tumor cell lines. - GMI Summary

Pubmed Data : Zhong Yao Cai. 2001 Sep;24(9):655-7. PMID: [11799777](#)

Article Published Date : Sep 01, 2001

Authors : H Zhang, L Yang, S Liu, L Ren

Study Type : In Vitro Study

Additional Links

Substances : [Berberine](#) : CK(142) : AC(67), [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin potentiates antitumor activity of l-asparaginase in acute lymphoblastic leukemia. - GMI Summary

Pubmed Data : Leuk Lymphoma. 2012 Jan 25. Epub 2012 Jan 25. PMID: [22185211](#)

Article Published Date : Jan 25, 2012

Authors : Hua Wang, Qi-Rong Geng, Liang Wang, Yue Lu

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Acute lymphoblastic leukemia \(ALL\)](#) : CK(95) : AC(28)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin reverse multidrug resistance of osteosarcoma cells. - GMI Summary

Pubmed Data : Wei Sheng Yan Jiu. 2011 Jan;40(1):103-6. PMID: [21434326](#)

Article Published Date : Jan 01, 2011

Authors : Yang Xiao, Wanchun Wang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Osteosarcoma](#) : CK(65) : AC(40)

Pharmacological Actions : [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Adriamycin : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin sensitizes cervical cancer cells to curcumin-induced programmed cell death. - GMI Summary

Pubmed Data : J Biol Chem. 2005 Feb 25;280(8):6301-8. Epub 2004 Dec 7. PMID: [15590651](#)

Article Published Date : Feb 25, 2005

Authors : Smitha V Bava, Vineshkumar T Puliappadamba, Ayswaria Deepti, Asha Nair, Devarajan Karunagaran, Ruby John Anto

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cervical Cancer : CK\(322\) : AC\(65\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Taxol : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin stimulates reactive oxygen species production and potentiates apoptosis induction by the antitumor drugs arsenic trioxide and lonidamine in human myeloid leukemia cell lines. - GMI Summary

Pubmed Data : J Pharmacol Exp Ther. 2010 Oct;335(1):114-23. Epub 2010 Jul 6. PMID: [20605902](#)

Article Published Date : Oct 01, 2010

Authors : Yolanda Sánchez, Gloria P Simón, Eva Calviño, Elena de Blas, Patricio Aller

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Acute Myeloid Leukemia : CK\(51\) : AC\(21\)](#), [Chronic Myeloid Leukemia : CK\(21\) : AC\(11\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Arsenic Trioxide : CK\(1\) : AC\(1\)](#), [Drug: Lonidamine : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin synergistically augments bcr/abl phosphorothioate antisense oligonucleotides to inhibit growth of chronic myelogenous leukemia cells. - GMI Summary

Pubmed Data : Acta Pharmacol Sin. 2007 Jan;28(1):105-10. PMID: [17184589](#)

Article Published Date : Jan 01, 2007

Authors : Kun-Zhong Zhang, Jian-Hua Xu, Xiu-Wang Huang, Li-Xian Wu, Yu Su, Yuan-Zhong Chen

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Leukemia: Chronic myelogenous leukemia \(CML\) : CK\(28\) : AC\(17\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin synergistically potentiates the anti-cancer effects of celecoxib in pancreatic cancer cells. - GMI Summary

Pubmed Data : Biomed Pharmacother. 2005 Oct;59 Suppl 2:S276-80. PMID: [16507392](#)

Article Published Date : Oct 01, 2005

Authors : S Lev-Ari, H Zinger, D Kazanov, D Yona, R Ben-Yosef, A Starr, A Figer, N Arber

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Pancreatic Cancer : CK\(524\) : AC\(160\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#), [Cyclooxygenase 2 Inhibitors : CK\(274\) : AC\(167\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin works synergistically with bortezomib in multiple myeloma. - GMI Summary

Pubmed Data : Zhongguo Shi Yan Xue Ye Xue Za Zhi. 2011 Jun ;19(3):684-8. PMID: [21729550](#)

Article Published Date : Jun 01, 2011

Authors : Xiao-Yan Zhang, Qing-Xian Bai, Gao-Sheng Huang, Hui Zhao, Juan-Juan Chen, Li-Jie Yang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Multiple Myeloma : CK\(125\) : AC\(50\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Bcl-2 protein down-regulation : CK\(40\) : AC\(27\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Bortezomib : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin works synergistically with cyclophosphide to reverse multi-drug resistance of a human lymphoma cell line. - GMI Summary

Pubmed Data : Zhongguo Shi Yan Xue Ye Xue Za Zhi. 2008 Aug;16(4):804-8. PMID: [18718065](#)

Article Published Date : Aug 01, 2008

Authors : Hui Xiao, Ke-Jian Zhang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Lymphoma : CK\(211\) : AC\(68\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Delta-tocotrienol acts as a chemosensitizing agent. - GMI Summary

Pubmed Data : Br J Pharmacol. 2010 Dec 30. Epub 2010 Dec 30. PMID: [21198544](#)

Article Published Date : Dec 30, 2010

Authors : [No authors listed]

Study Type : In Vitro Study

Additional Links

Substances : [Tocotrienol: Delta : CK\(7\) : AC\(7\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Genistein enhances the anti-cancer activity of gemcitabine in osteosarcoma cells. - GMI Summary

Pubmed Data : Anticancer Drugs. 2010 Mar;21(3):288-96. PMID: [20038829](#)

Article Published Date : Mar 01, 2010

Authors : Bo Zhang, Zhong-Li Shi, Bing Liu, Xiao-Bo Yan, Jie Feng, Hui-Min Tao

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Osteosarcoma : CK\(65\) : AC\(40\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Genistein potentiates the effect of arsenic trioxide against human hepatocellular carcinoma. - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 1 ;301(1):75-84. PMID: [21078540](#)

Article Published Date : Feb 01, 2011

Authors : Yong Ma, Jizhou Wang, Lianxin Liu, Huaqiang Zhu, Xiaoning Chen, Shangha Pan, Xueying Sun, Hongchi Jiang

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Arsenic Trioxide](#) : CK(1) : AC(1), [Drug Synergy](#) : CK(309) : AC(137)

Genistein sensitizes inhibitory effect of tamoxifen on the growth of estrogen receptor-positive and HER2-overexpressing human breast cancer cells. - GMI Summary

Pubmed Data : Mol Carcinog. 2007 Jul;46(7):534-42. PMID: [17295235](#)

Article Published Date : Jul 01, 2007

Authors : Zhiming Mai, George L Blackburn, Jin-Rong Zhou

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Drug synergy](#) : CK(51) : AC(14)

Additional Keywords : [Drug: Tamoxifen](#) : CK(367) : AC(53), [Drug Synergy](#) : CK(309) : AC(137)

Genistein synergizes with arsenic trioxide to suppress human hepatocellular carcinoma. - GMI Summary

Pubmed Data : Cancer Sci. 2010 Apr ;101(4):975-83. Epub 2009 Dec 9. PMID: [20219070](#)

Article Published Date : Apr 01, 2010

Authors : Hongchi Jiang, Yong Ma, Xiaoning Chen, Shangha Pan, Bei Sun, Geoffrey W Krissansen, Xueying Sun

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Arsenic Trioxide](#) : CK(1) : AC(1), [Drug Synergy](#) : CK(309) : AC(137)

Ginsenoside Rh(2) exhibits activity against adriamycin-resistant breast cancer cells. - GMI Summary

Pubmed Data : Talanta. 2012 Jan 15 ;88:345-51. Epub 2011 Nov 2. PMID: [22265509](#)

Article Published Date : Jan 15, 2012

Authors : Bei Zhou, Xiuli Xiao, Lili Xu, Lian Zhu, Liang Tan, Hao Tang, Youyu Zhang, Qingji Xie, Shouzhao Yao

Study Type : In Vitro Study

Additional Links

Substances : [Ginsenosides](#) : CK(47) : AC(18)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Adriamycin](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

Melatonin has a synergistic effect with chemotherapeutic drugs on human osteosarcoma cells. - GMI Summary

Pubmed Data : J Pineal Res. 2010 Jan;48(1):72-80. PMID: [20025643](#)

Article Published Date : Jan 01, 2010

Authors : Sara Casado-Zapico, Jezabel Rodriguez-Blanco, Guillermo García-Santos, Vanesa Martín, Ana M Sánchez-Sánchez, Isaac Antolín, Carmen Rodriguez

Study Type : In Vitro Study

Additional Links

Substances : [Melatonin](#) : CK(454) : AC(115)

Diseases : [Osteosarcoma](#) : CK(65) : AC(40)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[Paclitaxel and beta-lapachone \(a compound within Tabebuia\) synergistically induce programmed cell death in human retinoblastoma cells.](#) - GMI

Summary

Pubmed Data : J Cell Physiol. 2010 Feb;222(2):433-43. PMID: [19918798](#)

Article Published Date : Feb 01, 2010

Authors : Antonella D'Anneo, Giuseppa Augello, Andrea Santulli, Michela Giuliano, Riccardo di Fiore, Concetta Messina, Giovanni Tesoriere, Renza Vento

Study Type : In Vitro Study

Additional Links

Substances : [Tabebuia](#) : CK(10) : AC(9)

Diseases : [Retinoblastoma](#) : CK(24) : AC(6)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agent](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

[Resveratrol enhances the anti-tumor activity of rapamycin in breast cancer cell lines.](#) - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 28;301(2):168-76. Epub 2010 Dec 17. PMID: [21168265](#)

Article Published Date : Feb 28, 2011

Authors : Xin He, Yu Wang, Jinhong Zhu, Mohammed Orloff, Charis Eng

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Rapamycin](#) : CK(1) : AC(1), [Drug Synergy](#) : CK(309) : AC(137), [Stilbenes](#) : CK(414) : AC(245)

[Resveratrol improves the efficacy of cyclophosphamide in breast cancer treatment and reduces toxicity.](#) - GMI Summary

Pubmed Data : Cancer Sci. 2011 Jan 28. Epub 2011 Jan 28. PMID: [21276137](#)

Article Published Date : Jan 28, 2011

Authors : Neetu Singh, Manisha Nigam, Vishal Ranjan, Deebea Zaidi, Vivek Kumar Garg, Sharad Sharma, Rashmi Chaturvedi, Rishi Shankar, Sadan Kumar, Ramesh Sharma, Kalyan Mitra, Anil K Balapure, Srikanta K Rath

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[The green tea polyphenol EGCG enhances the anti-cancer activity of bortezomib in multiple myeloma cells.](#) - GMI Summary

Pubmed Data : Acta Biochim Biophys Sin (Shanghai). 2009 Dec;41(12):1018-26. PMID: [20011976](#)

Article Published Date : Dec 01, 2009

Authors : Qing Wang, Juan Li, Jingli Gu, Beihui Huang, Ying Zhao, Dong Zheng, Yan Ding, Lijin Zeng

Study Type : In Vitro Study

Additional Links

Substances : [Catechin](#) : CK(408) : AC(130), [Tea](#) : CK(951) : AC(226)

Diseases : [Multiple Myeloma](#) : CK(125) : AC(50)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Caspase-3 Activation](#) : CK(16) : AC(13), [Caspase-9 Activation](#) : CK(5) : AC(5), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Bortezomib](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

[Vitamin K2 augments 5-fluorouracil-induced growth inhibition of human hepatocellular carcinoma cells by inhibiting NF-κB activation.](#) - GMI

Summary

Pubmed Data : Oncol Rep. 2011 Jan;25(1):159-66. PMID: [21109972](#)

Article Published Date : Jan 01, 2011

Authors : Hao Zhang, Iwata Ozaki, Hiroshi Hamajima, Shinji Iwane, Hirokazu Takahashi, Yasunori Kawaguchi, Yuichiro Eguchi, Kyosuke Yamamoto, Toshihiko Mizuta

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin K](#) : CK(540) : AC(64), [Vitamin K2](#) : CK(254) : AC(27)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: 5-fluorouracil](#) : CK(88) : AC(23), [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin may work synergistically with taxane chemotherapy for hormone-refractory prostate cancer treatment.](#) - GMI Summary

Pubmed Data : Nutr Cancer. 2010;62(2):148-53. PMID: [20099188](#)

Article Published Date : Jan 01, 2010

Authors : Aurelie Cabrespine-Faugeras, Mathilde Bayet-Robert, Jacques-Olivier Bay, Philippe Chollet, Chantal Barthomeuf

Study Type : Review

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy](#) : CK(65) : AC(16), [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Taxane](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

Antineoplastic Agents (AC 11)

[Carnitine improves fatigue, quality of life, lean body mass and appetite in advanced cancer patients undergoing anticancer therapy.](#) - GMI Summary

Pubmed Data : Nutrition. 2006 Feb;22(2):136-45. PMID: [16459226](#)

Article Published Date : Feb 01, 2006

Authors : Giulia Gramignano, Maria Rita Lusso, Clelia Madeddu, Elena Massa, Roberto Serpe, Laura Deiana, Giovanna Lamonica, Mariele Dessì, Carla Spiga, Giorgio Astara, Antonio Macciò, Giovanni Mantovani

Study Type : Human Study

Additional Links

Substances : [Carnitine](#) : CK(650) : AC(67)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy](#) : CK(65) : AC(16), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Fatigue](#) : CK(218) : AC(29), [Quality of Life: Poor](#) : CK(170) : AC(16)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Brassica rapa \(Mustard Greens\) have a protective effect on cisplatin-induced nephrotoxicity in cells and rats.](#) - GMI Summary

Pubmed Data : Biol Pharm Bull. 2006 Dec;29(12):2436-41. PMID: [17142978](#)

Article Published Date : Dec 01, 2006

Authors : Yang-Hee Kim, Yong-Won Kim, Young-Jun Oh, Nam-In Back, Sun-A Chung, Hae-Gon Chung, Tae-Sook Jeong, Myung-Sook Choi, Kyung-Tae Lee

Study Type : Animal Study

Additional Links

Substances : [Mustard Greens](#) : CK(39) : AC(12)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Plant Extracts](#) : CK(3297) : AC(1135)

[Ginkgo biloba prevents bleomycin-induced oxidative injury in rats.](#) - GMI Summary

Pubmed Data : Toxicol Ind Health. 2006 Feb;22(1):47-52. PMID: [16572711](#)

Article Published Date : Feb 01, 2006

Authors : Hasan Erdogan, Ersin Fadillioğlu, Mahir Kotuk, Mustafa Iraz, Seda Tasdemir, Yesim Oztas, Zeki Yildirim

Study Type : Animal Study

Additional Links

Substances : [Ginkgo biloba](#) : CK(505) : AC(101)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Plant Extracts](#) : CK(3297) : AC(1135)

[Ginsenoside-Rd, a compound found within Ginseing, has a protective effect in cisplatin-induced acute renal failure.](#) - GMI Summary

Pubmed Data : Ren Fail. 2000 Mar;22(2):115-27. PMID: [10803758](#)

Article Published Date : Mar 01, 2000

Authors : T Yokozawa, Z W Liu

Study Type : Animal Study

Additional Links

Substances : [Ginsenosides](#) : CK(47) : AC(18)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Failure: Acute](#) : CK(39) : AC(9)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28)

[Ginsenoside-Rd, a compound found within Ginseng, ameliorates cisplatin-induced renal injury.](#) - GMI Summary

Pubmed Data : Nephron. 2001 Dec;89(4):433-8. PMID: [11721162](#)

Article Published Date : Dec 01, 2001

Authors : T Yokozawa, E Dong

Study Type : Animal Study

Additional Links

Substances : [Ginsenosides](#) : CK(47) : AC(18)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28)

[Green tea tannin eliminates oxidative stress and is beneficial to renal function in cisplatin-induced nephropathy in rats.](#) - GMI Summary

Pubmed Data : J Pharm Pharmacol. 1999 Nov;51(11):1325-31. PMID: [10632092](#)

Article Published Date : Nov 01, 1999

Authors : T Yokozawa, T Nakagawa, K I Lee, E J Cho, K Terasawa, S Takeuchi

Study Type : Animal Study

Additional Links

Substances : [Green Tea](#) : CK(931) : AC(279), [Tannic Acid](#) : CK(20) : AC(16)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#)

Maitake beta-glucan enhances therapeutic effect and reduces myelosuppression and nephrotoxicity of cisplatin in mice. - GMI Summary

Pubmed Data : Int Immunopharmacol. 2009 May;9(5):620-6. Epub 2009 Feb 26. PMID: [19249389](#)

Article Published Date : May 01, 2009

Authors :

Yuki Masuda, Munechika Inoue, Ayu Miyata, Shigeto Mizuno, Hiroaki Nanba

Study Type : Animal Study

Additional Links

Substances : [Beta-glucan : CK\(223\) : AC\(41\)](#), [Maitake Mushroom : CK\(61\) : AC\(34\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Myelotoxicity : CK\(31\) : AC\(8\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Rhus verniciflua Stokes prevents cisplatin-induced cytotoxicity and reactive oxygen species production in renal cells and intact mice. - GMI Summary

Pubmed Data : Phytomedicine. 2009 Mar;16(2-3):188-97. Epub 2009 Jan 15. PMID: [19150236](#)

Article Published Date : Mar 01, 2009

Authors : Joo-Ho Lee, Hyo-Jung Lee, Hyo-Jeong Lee, Won-Cheol Choi, Seong-Woo Yoon, Seong-Gyu Ko, Kwang Seok Ahn, Seung-Hoon Choi, Kyoo-Seok Ahn, John C Lieske, Sung-Hoon Kim

Study Type : Animal Study

Additional Links

Substances : [Sumac : CK\(37\) : AC\(16\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Zingiber officinale (Ginger) alone and in combination with vitamin E partially ameliorated cisplatin-induced nephrotoxicity. - GMI Summary

Pubmed Data : Food Chem Toxicol. 2007 Jun;45(6):921-7. Epub 2006 Nov 29. PMID: [17210214](#)

Article Published Date : Jun 01, 2007

Authors : T A Ajith, V Nivitha, S Usha

Study Type : Animal Study

Additional Links

Substances : [Ginger : CK\(299\) : AC\(91\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Resveratrol protects against Cisplatin-induced cardiotoxicity by alleviating oxidative damage. - GMI Summary

Pubmed Data : Cancer Biother Radiopharm. 2009 Dec;24(6):675-80. PMID: [20025547](#)

Article Published Date : Dec 01, 2009

Authors : Jingxuan Wang, Dongning He, Qingyuan Zhang, Ying Han, Shi Jin, Feng Qi

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Vitamin D3 sensitizes breast cancer cells to chemotherapy-induced death. -

GMI Summary

Pubmed Data : Immunopharmacol Immunotoxicol. 2010 Mar 17. Epub 2010 Mar 17. PMID: [10766196](#)

Article Published Date : Mar 17, 2010

Authors : Q Wang, W Yang, M S Uytingco, S Christakos, R Wieder

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin D : CK\(1493\) : AC\(220\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#)

Vitamin E (AC 6)

The decrease in neutrophil count caused by breast carcinoma chemotherapy was ameliorated by dietary supplementation with a multivitamin or vitamin E. - GMI Summary

Pubmed Data : Cancer. 2004 Sep 1;101(5):1058-64. PMID: [15329916](#)

Article Published Date : Sep 01, 2004

Authors : Richard F Branda, Shelly J Naud, Elice M Brooks, Zhuan Chen, Hyman Muss

Study Type : Human Study

Additional Links

Substances : [Folic Acid : CK\(572\) : AC\(79\)](#), [Vitamin B-12 : CK\(752\) : AC\(98\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Mucositis : CK\(49\) : AC\(10\)](#), [Neutropenia: Chemotherapy Induced : CK\(82\) : AC\(17\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Vitamin E and N-acetylcysteine are an effective antioxidant adjuvant therapy in children with acute lymphoblastic leukemia to reduce the chemo-/radiotherapy toxicity of treatment. - GMI Summary

Pubmed Data : Adv Hematol. 2009;2009:689639. Epub 2009 Oct 20. PMID: [19960046](#)

Article Published Date : Jan 01, 2009

Authors : Youssef Al-Tonbary, Mohammad Al-Haggar, Rasha El-Ashry, Sahar El-Dakroory, Hanan Azzam, Ashraf Fouda

Study Type : Human Study

Additional Links

Substances : [NAC \(N-acetyl-L-cysteine\) : CK\(248\) : AC\(64\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Acute lymphoblastic leukemia \(ALL\) : CK\(95\) : AC\(28\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Radiation Induced Illness : CK\(994\) : AC\(245\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Ascorbic acid and vitamin E protect against cisplatin induced kidney injury in mice. - GMI Summary

Pubmed Data : Clin Chim Acta. 2007 Jan;375(1-2):82-6. Epub 2006 Jun 14. PMID: [16889761](#)

Article Published Date : Jan 01, 2007

Authors : T A Ajith, S Usha, V Nivitha

Study Type : Animal Study

Additional Links

Substances : [Vitamin C : CK\(1208\) : AC\(238\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Zingiber officinale (Ginger) alone and in combination with vitamin E partially ameliorated cisplatin-induced nephrotoxicity. - GMI Summary

Pubmed Data : Food Chem Toxicol. 2007 Jun;45(6):921-7. Epub 2006 Nov 29. PMID: [17210214](#)
Article Published Date : Jun 01, 2007
Authors : T A Ajith, V Nivitha, S Usha
Study Type : Animal Study
Additional Links
Substances : [Ginger](#) : CK(299) : AC(91), [Vitamin E](#) : CK(1288) : AC(227)
Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)
Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Plant Extracts](#) : CK(3297) : AC(1135)

[Gamma tocotrienol has a chemosensitizing property.](#) - GMI Summary

Pubmed Data : J Biol Chem. 2010 Oct 22;285(43):33520-8. Epub 2010 Aug 18. PMID: [20720018](#)
Article Published Date : Oct 22, 2010
Authors : Ramaswamy Kannappan, Vivek R Yadav, Bharat B Aggarwal
Study Type : In Vitro Study
Additional Links
Substances : [Tocotrienol: Gamma](#) : CK(12) : AC(12), [Vitamin E](#) : CK(1288) : AC(227), [Vitamin E: Gamma-tocotrienol](#) : CK(42) : AC(11)
Diseases : [Cancers: All](#) : CK(8323) : AC(2625)
Pharmacological Actions : [Anti-Angiogenic](#) : CK(133) : AC(99), [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

[Vitamin C \(dehydroascorbic acid\) and mixtures of vitamin E and beta-carotene possess antitumor properties upon radiation and increase the chemotherapeutic activity of mitomycin C.](#) - GMI Summary

Pubmed Data : In Vivo. 2004 Nov-Dec;18(6):795-8. PMID: [15646822](#)
Article Published Date : Nov 01, 2004
Authors : Cornelia Kammerer, Nikola Getoff
Study Type : In Vitro Study
Additional Links
Substances : [beta-Carotene](#) : CK(201) : AC(31), [Vitamin C](#) : CK(1208) : AC(238), [Vitamin E](#) : CK(1288) : AC(227)
Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Tumors](#) : CK(179) : AC(107)
Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)
Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

NF-kappaB Inhibitor (AC 21)

[Alpha lipoic acid attenuates cisplatin-induced acute kidney injury in mice by suppressing renal inflammation.](#) - GMI Summary

Pubmed Data : Nephrol Dial Transplant. 2009 Oct;24(10):3012-20. Epub 2009 May 27. PMID: [19474282](#)
Article Published Date : Oct 01, 2009
Authors : Kyung Pyo Kang, Duk Hoon Kim, Yu Jin Jung, Ae Sin Lee, Sik Lee, Sang Yong Lee, Kyu Yun Jang, Mi Jeong Sung, Sung Kwang Park, Won Kim
Study Type : Animal Study
Additional Links
Substances : [Alpha-Lipoic Acid](#) : CK(406) : AC(80)
Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)
Pharmacological Actions : [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

[Curcumin and CAPE may reduce chemotherapy-induced mucosal barrier injury.](#) - GMI Summary

Pubmed Data : Leukemia. 2004 Feb;18(2):276-84. PMID: [14671640](#)
Article Published Date : Feb 01, 2004
Authors : B van't Land, N M A Blijlevens, J Marteiijn, S Timal, J P Donnelly, T J M de Witte, L M'Rabet
Study Type : Animal Study

Additional Links

Substances : [Caffeic acid phenethyl ester](#) : CK(15) : AC(8), [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Mucositis](#) : CK(49) : AC(10)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

[Curcumin protects against cisplatin-induced oxidative injury in rat testis.](#) - GMI Summary

Pubmed Data : Hum Reprod. 2009 Jul;24(7):1717-25. Epub 2009 Mar 11. PMID: [19279034](#)

Article Published Date : Jul 01, 2009

Authors : Yusuf Ozlem Ilbey, Emin Ozbek, Mustafa Cekmen, Abdulmuttalip Simsek, Alper Otuncemur, Adnan Somay

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11)

[Ginkgo biloba has a positive effect on pulmonary interstitial fibrosis in rats](#) - GMI Summary

Pubmed Data : Zhongguo Zhong Xi Yi Jie He Za Zhi. 2000 Jun;20(6):441-3. PMID: [11789230](#)

Article Published Date : Jun 01, 2000

Authors : J Chen, B He, X Liu

Study Type : Animal Study

Additional Links

Substances : [Ginkgo biloba](#) : CK(505) : AC(101)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [NF-kappaB Inhibitor](#) : CK(596) : AC(403), [Transforming growth factor beta \(TGF-β\) inhibitor](#) : CK(32) : AC(9)

[Curcumin acts as a chemosensitizing agent in lung cancer cells.](#) - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2005 Jun 17;331(4):1245-52. PMID: [15883009](#)

Article Published Date : Jun 17, 2005

Authors : Sudip Sen, Himani Sharma, Neeta Singh

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Carcinoma: Non-Small-Cell Lung](#) : CK(19) : AC(13), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin chemosensitizes prostate cancer cells to TRAIL-induce programmed cell death.](#) - GMI Summary

Pubmed Data : J Exp Ther Oncol. 2005;5(2):81-91. PMID: [16471035](#)

Article Published Date : Jan 01, 2005

Authors : Dorrah D Deeb, Hao Jiang, Xiaohua Gao, George Divine, Scott A Dulchavsky, Subhash C Gautam

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311),

[Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin enhances chemotherapeutic agents in prostate cancer cells. - GMI Summary

Pubmed Data : Prostate. 2002 May 15;51(3):211-8. PMID: [11967955](#)

Article Published Date : May 15, 2002

Authors : Tzyh-Chyuan Hour, Jun Chen, Chao-Yuan Huang, Jing-Yi Guan, Shiu-Hui Lu, Yeong-Shiau Pu

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin induces programmed cell death in human melanoma cells. - GMI Summary

Pubmed Data : Exp Cell Res. 2001 Dec 10;271(2):305-14. PMID: [11716543](#)

Article Published Date : Dec 10, 2001

Authors : J A Bush, K J Cheung, G Li

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Melanoma : CK\(169\) : AC\(87\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Curcumin may improve outcome in chemotherapy-refractory Natural killer/T-cell lymphoma (NKTL). - GMI Summary

Pubmed Data : Br J Haematol. 2005 Oct;131(1):59-66. PMID: [16173963](#)

Article Published Date : Oct 01, 2005

Authors : Kihyun Kim, Kyoungju Ryu, Younghyeh Ko, Chaehwa Park

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Lymphoma : CK\(211\) : AC\(68\)](#), [Natural killer/T-cell lymphoma \(NKTL\) : CK\(1\) : AC\(1\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Curcumin promotes programmed cell death, increases chemosensitivity, and inhibits nuclear factor kappaB in esophageal adenocarcinoma. - GMI Summary

Pubmed Data : Transl Oncol. 2010 Apr;3(2):99-108. PMID: [20360934](#)

Article Published Date : Apr 01, 2010

Authors : Wibisono Hartojo, Amy L Silvers, Dafydd G Thomas, Christopher W Seder, Lin Lin, Hyma Rao, Zhuwen Wang, Joel K Greenson, Thomas J Giordano, Mark B Orringer, Alnawaz Rehemtulla, Mahaveer S Bhojani, David G Beer, Andrew C Chang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Esophageal Cancer : CK\(293\) : AC\(54\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Curcumin reduces NF-kappa B factor activation associated with anticancer drugs. - GMI Summary

Pubmed Data : Endocr Relat Cancer. 2009 Dec;16(4):1339-50. Epub 2009 Sep 2. PMID: [12007574](#)

Article Published Date : Dec 01, 2009

Authors : Shuang En Chuang, Pei Yen Yeh, Yen Shen Lu, Gi Ming Lai, Chao Ming Liao, Ming Gao, Ann Lii Cheng

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy : CK\(65\) : AC\(16\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug: Tamoxifen : CK\(367\) : AC\(53\)](#)

Curcumin reverses chemoresistance of human gastric cancer cells. - GMI Summary

Pubmed Data : Oncol Rep. 2011 Aug 2. Epub 2011 Aug 2. PMID: [21811763](#)

Article Published Date : Aug 02, 2011

Authors : Liang-Liang Yu, Jia-Guo Wu, Ning Dai, Hong-Gang Yu, Jian-Min Si

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Inhibitor of Nuclear Factor Kappa-B Kinase \(IKK\) : CK\(2\) : AC\(2\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Curcumin sensitizes cervical cancer cells to curcumin-induced programmed cell death. - GMI Summary

Pubmed Data : J Biol Chem. 2005 Feb 25;280(8):6301-8. Epub 2004 Dec 7. PMID: [15590651](#)

Article Published Date : Feb 25, 2005

Authors : Smitha V Bava, Vineshkumar T Puliappadamba, Ayswaria Deepti, Asha Nair, Devarajan Karunagaran, Ruby John Anto

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cervical Cancer : CK\(322\) : AC\(65\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Taxol : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin synergistically augments bcr/abl phosphorothioate antisense oligonucleotides to inhibit growth of chronic myelogenous leukemia cells. - GMI Summary

Pubmed Data : Acta Pharmacol Sin. 2007 Jan;28(1):105-10. PMID: [17184589](#)

Article Published Date : Jan 01, 2007

Authors : Kun-Zhong Zhang, Jian-Hua Xu, Xiu-Wang Huang, Li-Xian Wu, Yu Su, Yuan-Zhong Chen

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Leukemia: Chronic myelogenous leukemia \(CML\) : CK\(28\) : AC\(17\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin works synergistically with bortezomib in multiple myeloma. - GMI

Summary

Pubmed Data : Zhongguo Shi Yan Xue Ye Xue Za Zhi. 2011 Jun ;19(3):684-8. PMID: [21729550](#)

Article Published Date : Jun 01, 2011

Authors : Xiao-Yan Zhang, Qing-Xian Bai, Gao-Sheng Huang, Hui Zhao, Juan-Juan Chen, Li-Jie Yang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Multiple Myeloma](#) : CK(125) : AC(50)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Bcl-2 protein down-regulation](#) : CK(40) : AC(27), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Bortezomib](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

[Genistein acts as a chemosensitizer, augmenting the efficacy of cisplatin in pancreatic cancer.](#) - GMI Summary

Pubmed Data : Int J Cancer. 2007 Feb 15;120(4):906-17. PMID: [17131310](#)

Article Published Date : Feb 15, 2007

Authors : Sanjeev Banerjee, Yuxiang Zhang, Zhiwei Wang, Mingxin Che, Paul J Chiao, James L Abbruzzese, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor](#) : CK(141) : AC(68), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin](#) : CK(4) : AC(3), [Drug: Cisplatin](#) : CK(31) : AC(11), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Genistein acts as a chemosensitizer, contributing to overcoming drug-resistance in prostate, breast, lung and pancreatic cancers.](#) - GMI Summary

Pubmed Data : Cancer Res. 2005 Aug 1;65(15):6934-42. PMID: [16061678](#)

Article Published Date : Aug 01, 2005

Authors : Yiwei Li, Fakhara Ahmed, Shadan Ali, Philip A Philip, Omer Kucuk, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185), [Pancreatic Cancer](#) : CK(524) : AC(160), [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Genistein enhances the anti-cancer activity of gemcitabine in osteosarcoma cells.](#) - GMI Summary

Pubmed Data : Anticancer Drugs. 2010 Mar;21(3):288-96. PMID: [20038829](#)

Article Published Date : Mar 01, 2010

Authors : Bo Zhang, Zhong-Li Shi, Bing Liu, Xiao-Bo Yan, Jie Feng, Hui-Min Tao

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Osteosarcoma](#) : CK(65) : AC(40)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Genistein potentiates the effect of arsenic trioxide against human hepatocellular carcinoma. - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 1 ;301(1):75-84. PMID: [21078540](#)

Article Published Date : Feb 01, 2011

Authors : Yong Ma, Jizhou Wang, Lianxin Liu, Huaqiang Zhu, Xiaoning Chen, Shangha Pan, Xueying Sun, Hongchi Jiang

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Arsenic Trioxide](#) : CK(1) : AC(1), [Drug Synergy](#) : CK(309) : AC(137)

Triptolide inhibits transcription factor NF-kappa B, which translates into a therapeutic effect against various leukemias, multiple myeloma and myelodysplastic syndrome. - GMI Summary

Pubmed Data : Curr Mol Pharmacol. 2010 Jul 2. Epub 2010 Jul 2. PMID: [20594187](#)

Article Published Date : Jul 02, 2010

Authors : Ota Fuchs

Study Type : In Vitro Study

Additional Links

Substances : [Tripterygium wilfordii](#) : CK(104) : AC(26), [Triptolide](#) : CK(11) : AC(9)

Diseases : [Leukemia](#) : CK(694) : AC(270), [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28), [Leukemia: Chronic Lymphocytic Leukemia \(CLL\)](#) : CK(52) : AC(24), [Leukemia: Chronic myelogenous leukemia \(CML\)](#) : CK(28) : AC(17), [Multiple Myeloma](#) : CK(125) : AC(50), [Myelodysplastic Syndrome](#) : CK(188) : AC(17)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Vitamin K2 augments 5-fluorouracil-induced growth inhibition of human hepatocellular carcinoma cells by inhibiting NF-κB activation. - GMI Summary

Pubmed Data : Oncol Rep. 2011 Jan;25(1):159-66. PMID: [21109972](#)

Article Published Date : Jan 01, 2011

Authors : Hao Zhang, Iwata Ozaki, Hiroshi Hamajima, Shinji Iwane, Hirokazu Takahashi, Yasunori Kawaguchi, Yuichiro Eguchi, Kyosuke Yamamoto, Toshihiko Mizuta

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin K](#) : CK(540) : AC(64), [Vitamin K2](#) : CK(254) : AC(27)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: 5-fluorouracil](#) : CK(88) : AC(23), [Drug Synergy](#) : CK(309) : AC(137)

Anticarcinogenic Agents (AC 14)

Resveratrol exhibits chemosensitizing and chemopreventive properties. - GMI Summary

Pubmed Data : Chemotherapy. 2010;56(1):60-5. Epub 2010 Mar 19. PMID: [20299793](#)

Article Published Date : Jan 01, 2010

Authors : A M El-Mowafy, M E El-Mesery, H A Salem, M M Al-Gayyar, M M Darweish

Study Type : Animal Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600), [Stilbenes](#) : CK(123) : AC(88)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Chemopreventive](#) :

[CK\(1254\) : AC\(342\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Malondialdehyde Down-regulation : CK\(68\) : AC\(18\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)
Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

Sulforaphane protects against cisplatin-induced liver and mitochondrial damage. - GMI Summary

Pubmed Data : Toxicology. 2011 Aug 15 ;286(1-3):20-7. Epub 2011 May 6. PMID: [21575670](#)

Article Published Date : Aug 15, 2011

Authors : Leobardo Gaona-Gaona, Eduardo Molina-Jijón, Edilia Tapia, Cecilia Zazueta, Rogelio Hernández-Pando, Mariel Calderón-Oliver, Guillermo Zarco-Márquez, Enrique Pinzón, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Chemically-Induced Liver Damage : CK\(451\) : AC\(174\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Problem Substances : [Cisplatin : CK\(15\) : AC\(2\)](#)

Adverse Pharmacological Actions : [Hepatotoxic : CK\(262\) : AC\(69\)](#)

Sulforaphane protects against cisplatin-induced nephrotoxicity. - GMI Summary

Pubmed Data : Int J Sport Nutr Exerc Metab. 2007 Aug;17(4):352-63. PMID: [19913604](#)

Article Published Date : Aug 01, 2007

Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Edilia Tapia, Omar N Medina-Campos, Dolores Javier Sánchez-González, Claudia María Martínez-Martínez, Karla Mariana Ortiz-Vega, Martha Franco, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

Curcumin exhibits chemosensitizing properties against multidrug resistance in rat liver cells. - GMI Summary

Pubmed Data : Life Sci. 1998;62(25):2349-58. PMID: [9651124](#)

Article Published Date : Jan 01, 1998

Authors : N Romiti, R Tongiani, F Cervelli, E Chieli

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

EGCG sensitizes human cholangiocarcinoma cells to chemotherapy-induced programmed cell death. - GMI Summary

Pubmed Data : Liver Int. 2009 May;29(5):670-7. Epub 2009 Feb 17. PMID: [19226332](#)

Article Published Date : May 01, 2009

Authors : Molly Lang, Roger Henson, Chiara Braconi, Tushar Patel

Study Type : In Vitro Study

Additional Links

Substances : [Catechin : CK\(408\) : AC\(130\)](#), [EGCG \(Epigallocatechin gallate\) : CK\(176\) : AC\(115\)](#)

Diseases : [Cholangiocarcinoma : CK\(23\) : AC\(11\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) :](#)

[AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#), [Drug: Mitomycin : CK\(4\) : AC\(3\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Resveratrol protects against Cisplatin-induced cardiotoxicity by alleviating oxidative damage. - GMI Summary

Pubmed Data : Cancer Biother Radiopharm. 2009 Dec;24(6):675-80. PMID: [20025547](#)

Article Published Date : Dec 01, 2009

Authors : Jingxuan Wang, Dongning He, Qingyuan Zhang, Ying Han, Shi Jin, Feng Qi

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol sensitizes resistant leukemia cells to the the effects of anticancer drugs. - GMI Summary

Pubmed Data : Neoplasma. 2006;53(5):384-92. PMID: [17013532](#)

Article Published Date : Jan 01, 2006

Authors : J Duraj, J Bodo, M Sulikova, P Rauko, J Sedlak

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Leukemia : CK\(694\) : AC\(270\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Sulforaphane reduces doxorubicin resistance. - GMI Summary

Pubmed Data : Mutat Res. 2006 Oct 10;601(1-2):92-101. Epub 2006 Jul 14. PMID: [16843502](#)

Article Published Date : Oct 10, 2006

Authors : Carmela Fimognari, Michael Nüsse, Monia Lenzi, Davide Sciuscio, Giorgio Cantelli-Forti, Patrizia Hrelia

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Sulforaphane protects against cisplatin-induced mitochondrial alterations associated with renal damage. - GMI Summary

Pubmed Data : Toxicol Lett. 2010 Nov 10;199(1):80-92. Epub 2010 Aug 21. PMID: [20732396](#)

Article Published Date : Nov 10, 2010

Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Eduardo Martínez-Abundis, Edilia Tapia, Guillermo Zarco-Márquez, Cecilia Zazueta, José Pedraza-Chaverri

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Mitochondrial Diseases : CK\(145\) : AC\(50\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#)

[Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

Sulforaphane works synergistically with 5-fluorouracil to inhibit high and low metastasis cell lines of salivary gland adenoid cystic carcinoma. - GMI Summary

Pubmed Data : Cancer Chemother Pharmacol. 2001 Jul;47 Suppl:S38-44. PMID: [18844240](#)

Article Published Date : Jul 01, 2001

Authors : Xiao-Feng Wang, Dong-Mei Wu, Bao-Xin Li, Yan-Jie Lu, Bao-Feng Yang

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Cancer Metastasis : CK\(283\) : AC\(132\)](#), [Salivary Gland Adenoid Cystic Carcinoma. : CK\(3\) : AC\(3\)](#), [Salivary Gland Diseases : CK\(34\) : AC\(6\)](#)

Pharmacological Actions : [Anti-metastatic : CK\(172\) : AC\(95\)](#), [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: 5-fluorouracil : CK\(88\) : AC\(23\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

The association of sulforaphane-doxorubicin may therefore allow doxorubicin to be administered at lower doses, thereby reducing its potential toxicity. - GMI Summary

Pubmed Data : Ann N Y Acad Sci. 2007 Jan;1095:62-9. PMID: [17404018](#)

Article Published Date : Jan 01, 2007

Authors : Carmela Fimognari, Monia Lenzi, Davide Sciuscio, Giorgio Cantelli-Forti, Patrizia Hrelia

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Curcumin may work synergistically with taxane chemotherapy for hormone-refractory prostate cancer treatment. - GMI Summary

Pubmed Data : Nutr Cancer. 2010;62(2):148-53. PMID: [20099188](#)

Article Published Date : Jan 01, 2010

Authors : Aurelie Cabrespine-Faugeras, Mathilde Bayet-Robert, Jacques-Olivier Bay, Philippe Chollet, Chantal Barthomeuf

Study Type : Review

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy : CK\(65\) : AC\(16\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Taxane : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Ginger has therapeutic properties relevant to cancer treatment. - GMI Summary

Pubmed Data : J BUON. 2011 Jul-Sep;16(3):414-24. PMID: [22006742](#)

Article Published Date : Jul 01, 2011

Authors : M M Pereira, R Haniadka, P P Chacko, P L Palatty, M S Baliga

Study Type : Review

Additional Links

Substances : [Ginger : CK\(299\) : AC\(91\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radioprotective : CK\(453\) : AC\(180\)](#)

Resveratrol has chemosensitizing and/or anti-cancer activity. - GMI Summary

Pubmed Data : Crit Rev Food Sci Nutr. 2009 Oct;49(9):782-99. PMID: [20443159](#)

Article Published Date : Oct 01, 2009

Authors : Thomas E Kraft, Daniel Parisotto, Christina Schempp, Thomas Efferth

Study Type : Review

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Anti-Angiogenic : CK\(133\) : AC\(99\)](#), [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Selective Cytotoxicity : CK\(41\) : AC\(36\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Ginger (AC 5)

Ginger root powder is effective in reducing severity of acute and delayed chemotherapy-induced nausea and vomiting as additional therapy to ondansetron and dexamethasone in patients receiving chemotherapy. - GMI Summary

Pubmed Data : Pediatr Blood Cancer. 2010 Sep 14. Epub 2010 Sep 14. PMID: [20842754](#)

Article Published Date : Sep 14, 2010

Authors : Anu Kochanujan Pillai, Kamlesh K Sharma, Yogendra K Gupta, Sameer Bakhshi

Study Type : Human Study

Additional Links

Substances : [Ginger : CK\(299\) : AC\(91\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Nausea: Chemotherapy-Induced : CK\(60\) : AC\(5\)](#)

Pharmacological Actions : [Antiemetics : CK\(40\) : AC\(4\)](#)

A compound in ginger known as 6-Gingerol prevents cisplatin-induced acute renal failure in rats. - GMI Summary

Pubmed Data : J Agric Food Chem. 2005 Apr 6;53(7):2446-50. PMID: [16971750](#)

Article Published Date : Apr 06, 2005

Authors : Anurag Kuhad, Naveen Tirkey, Sangeeta Pilkhwal, Kanwaljit Chopra

Study Type : Animal Study

Additional Links

Substances : [Catechols : CK\(15\) : AC\(11\)](#), [Ginger : CK\(299\) : AC\(91\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

Ginger protects against doxorubicin-induced acute kidney injury. - GMI Summary

Pubmed Data : Food Chem Toxicol. 2008 Sep;46(9):3178-81. Epub 2008 Jul 17. PMID: [18680783](#)

Article Published Date : Sep 01, 2008

Authors : T A Ajith, M S Aswathy, U Hema

Study Type : Animal Study

Additional Links

Substances : [Ginger : CK\(299\) : AC\(91\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Zingiber officinale (Ginger) alone and in combination with vitamin E partially ameliorated cisplatin-induced nephrotoxicity. - GMI Summary

Pubmed Data : Food Chem Toxicol. 2007 Jun;45(6):921-7. Epub 2006 Nov 29. PMID: [17210214](#)
Article Published Date : Jun 01, 2007
Authors : T A Ajith, V Nivitha, S Usha
Study Type : Animal Study
Additional Links
Substances : [Ginger : CK\(299\) : AC\(91\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)
Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)
Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Ginger has therapeutic properties relevant to cancer treatment. - GMI Summary

Pubmed Data : J BUON. 2011 Jul-Sep;16(3):414-24. PMID: [22006742](#)
Article Published Date : Jul 01, 2011
Authors : M M Pereira, R Haniadka, P P Chacko, P L Palatty, M S Baliga
Study Type : Review
Additional Links
Substances : [Ginger : CK\(299\) : AC\(91\)](#)
Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)
Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radioprotective : CK\(453\) : AC\(180\)](#)

Sulforaphane (AC 11)

Sulforaphane enhances the anticancer activity of a chemo-agent against pancreatic cancer. - GMI Summary

Pubmed Data : Nutr Cancer. 2011 Aug 29. Epub 2011 Aug 29. PMID: [21875325](#)
Article Published Date : Aug 29, 2011
Authors : Yanyan Li, Tao Zhang, Steven J Schwartz, Duxin Sun
Study Type : Transgenic Animal Study
Additional Links
Substances : [Broccoli : CK\(435\) : AC\(185\)](#), [Sprouts : CK\(76\) : AC\(36\)](#), [Sulforaphane : CK\(294\) : AC\(168\)](#)
Diseases : [Pancreatic Cancer : CK\(524\) : AC\(160\)](#)
Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)
Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Sulforaphane increases the effectiveness of various cytotoxic drugs against pancreatic cancer stem cells without inducing additional toxicity in mice. - GMI Summary

Pubmed Data : J Med Food. 2004 Summer;7(2):157-61. PMID: [20940707](#)
Article Published Date : Jun 01, 2004
Authors : Georgios Kallifatidis, Sabrina Labsch, Vanessa Rausch, Juergen Mattern, Jury Gladkich, Gerhard Moldenhauer, Markus W Büchler, Alexei V Salnikov, Ingrid Herr
Study Type : Transgenic Animal Study
Additional Links
Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)
Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#)
Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)
Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Sulforaphane prevents cell death and inflammation in nephropathy. - GMI Summary

Pubmed Data : J Nutr Biochem. 2011 Jun 16. Epub 2011 Jun 16. PMID: [21684138](#)
Article Published Date : Jun 16, 2011
Authors : Carlos Enrique Guerrero-Beltrán, Partha Mukhopadhyay, Béla Horváth, Mohanraj Rajesh, Edilia Tapia, Itzhel García-Torres, José Pedraza-Chaverri, Pál Pacher

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Nephropathy](#) : CK(161) : AC(29)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Problem Substances : [Cisplatin](#) : CK(15) : AC(2)

Adverse Pharmacological Actions : [Nephrotoxic](#) : CK(143) : AC(33)

[Sulforaphane protects against cisplatin-induced liver and mitochondrial damage.](#) - GMI Summary

Pubmed Data : Toxicology. 2011 Aug 15 ;286(1-3):20-7. Epub 2011 May 6. PMID: [21575670](#)

Article Published Date : Aug 15, 2011

Authors : Leobardo Gaona-Gaona, Eduardo Molina-Jijón, Edilia Tapia, Cecilia Zazueta, Rogelio Hernández-Pando, Mariel Calderón-Oliver, Guillermo Zarco-Márquez, Enrique Pinzón, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemically-Induced Liver Damage](#) : CK(451) : AC(174), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293)

Problem Substances : [Cisplatin](#) : CK(15) : AC(2)

Adverse Pharmacological Actions : [Hepatotoxic](#) : CK(262) : AC(69)

[Sulforaphane protects against cisplatin-induced nephrotoxicity.](#) - GMI Summary

Pubmed Data : Int J Sport Nutr Exerc Metab. 2007 Aug;17(4):352-63. PMID: [19913604](#)

Article Published Date : Aug 01, 2007

Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Edilia Tapia, Omar N Medina-Campos, Dolores Javier Sánchez-González, Claudia María Martínez-Martínez, Karla Mariana Ortiz-Vega, Martha Franco, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Renoprotective](#) : CK(179) : AC(84)

[Sulforaphane reduces doxorubicin resistance.](#) - GMI Summary

Pubmed Data : Mutat Res. 2006 Oct 10;601(1-2):92-101. Epub 2006 Jul 14. PMID: [16843502](#)

Article Published Date : Oct 10, 2006

Authors : Carmela Fimognari, Michael Nüsse, Monia Lenzi, Davide Sciuscio, Giorgio Cantelli-Forti, Patrizia Hrelia

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Sulforaphane potentiates oxaliplatin-induced cell growth inhibition in colorectal cancer cells.](#) - GMI Summary

Pubmed Data : Cancer Chemother Pharmacol. 2010 Aug 6. Epub 2010 Aug 6. PMID: [20689952](#)

Article Published Date : Aug 06, 2010

Authors : Bettina M Kaminski, Andreas Weigert, Bernhard Brüne, Marco Schumacher, Uwe Wenzel, Dieter Steinhilber, Jürgen Stein, Sandra Ulrich

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Colon Cancer](#) : CK(375) : AC(230), [Colorectal Cancer](#) : CK(768) : AC(299), [Colorectal Tumors](#) : CK(15) : AC(4)

Pharmacological Actions : [Chemotherapeutic Agents](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Oxaliplatin](#) : CK(6) : AC(5), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Sulforaphane protects against cisplatin-induced mitochondrial alterations associated with renal damage. - GMI Summary

Pubmed Data : Toxicol Lett. 2010 Nov 10;199(1):80-92. Epub 2010 Aug 21. PMID: [20732396](#)

Article Published Date : Nov 10, 2010

Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Eduardo Martínez-Abundis, Edilia Tapia, Guillermo Zarco-Márquez, Cecilia Zazueta, José Pedraza-Chaverri

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Mitochondrial Diseases](#) : CK(145) : AC(50)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Enzyme Inhibitors](#) : CK(385) : AC(210), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11)

Sulforaphane protects against sulfur mustard cytotoxicity. - GMI Summary

Pubmed Data : Cutan Ocul Toxicol. 2006;25(3):155-63. PMID: [16980241](#)

Article Published Date : Jan 01, 2006

Authors : Clark L Gross, Eric W Nealley, Mary T Nipwoda, William J Smith

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Sulforaphane works synergistically with 5-fluorouracil to inhibit high and low metastasis cell lines of salivary gland adenoid cystic carcinoma. - GMI Summary

Pubmed Data : Cancer Chemother Pharmacol. 2001 Jul;47 Suppl:S38-44. PMID: [18844240](#)

Article Published Date : Jul 01, 2001

Authors : Xiao-Feng Wang, Dong-Mei Wu, Bao-Xin Li, Yan-Jie Lu, Bao-Feng Yang

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Cancer Metastasis](#) : CK(283) : AC(132), [Salivary Gland Adenoid Cystic Carcinoma](#) : CK(3) : AC(3), [Salivary Gland Diseases](#) : CK(34) : AC(6)

Pharmacological Actions : [Anti-metastatic](#) : CK(172) : AC(95), [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Chemotherapeutic Agents](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-fluorouracil](#) : CK(88) : AC(23), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

The association of sulforaphane-doxorubicin may therefore allow doxorubicin to be administered at lower doses, thereby reducing its potential toxicity. - GMI Summary

Pubmed Data : Ann N Y Acad Sci. 2007 Jan;1095:62-9. PMID: [17404018](#)

Article Published Date : Jan 01, 2007

Authors : Carmela Fimognari, Monia Lenzi, Davide Sciuscio, Giorgio Cantelli-Forti, Patrizia Hrelia
Study Type : In Vitro Study
Additional Links
Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)
Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)
Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)
Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Cardioprotective (AC 8)

[Aged garlic extract protects against doxorubicin-induced cardiotoxicity in rats.](#) - GMI Summary

Pubmed Data : Nutrition. 2006 Feb;22(2):136-45. PMID: [20060872](#)

Article Published Date : Feb 01, 2006

Authors : Huda Alkreathy, Zoheir A Damanhour, Nessar Ahmed, Mark Slevin, Soad S Ali, Abdel-Moneim M Osman

Study Type : Animal Study

Additional Links

Substances : [Garlic : CK\(488\) : AC\(156\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Cardioprotective : CK\(627\) : AC\(185\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

[Curcumin attenuates acute adriamycin myocardial toxicity in rats.](#) - GMI Summary

Pubmed Data : Br J Pharmacol. 1998 Jun;124(3):425-7. PMID: [9647462](#)

Article Published Date : Jun 01, 1998

Authors : N Venkatesan

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin : CK\(17\) : AC\(10\)](#)

Pharmacological Actions : [Cardioprotective : CK\(627\) : AC\(185\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

[Grape seed extract has a protective role against doxorubicin-induced cardiotoxicity and genotoxicity in albino mice.](#) - GMI Summary

Pubmed Data : J Med Food. 2010 Aug;13(4):917-25. PMID: [20553142](#)

Article Published Date : Aug 01, 2010

Authors : Emine Yalçın, Ertan Oruç, Kültiğın Cavuşoğlu, Kürşad Yapar

Study Type : Animal Study

Additional Links

Substances : [Grape Seed Extract : CK\(172\) : AC\(58\)](#)

Diseases : [Cardiotoxicity: Chemotherapy-Induced : CK\(12\) : AC\(6\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [DNA damage : CK\(687\) : AC\(287\)](#)

Pharmacological Actions : [Cardioprotective : CK\(627\) : AC\(185\)](#), [Genoprotective : CK\(109\) : AC\(46\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

[Panax Notoginseng has a protective effect against doxorubicin-induced cardiotoxicity in mice.](#) - GMI Summary

Pubmed Data : Planta Med. 2008 Feb;74(3):203-9. Epub 2008 Feb 8. PMID: [18260050](#)

Article Published Date : Feb 01, 2008

Authors : Li Liu, Run Shi, Qiang Shi, Yiyu Cheng, Yang Huo

Study Type : Animal Study

Additional Links

Substances : [Panax Notoginseng](#) : CK(42) : AC(9)
Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)
Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)
Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Resveratrol attenuates doxorubicin-induced cardiomyocyte (heart cell) death in mice. - GMI Summary

Pubmed Data : Cardiovasc Res. 2011 Feb 16. Epub 2011 Feb 16. PMID: [21278141](#)

Article Published Date : Feb 16, 2011

Authors : Chi Zhang, Yansheng Feng, Shunlin Qu, Xing Wei, Honglin Zhu, Qi Luo, Meidong Liu, Guangwen Chen, Xianzhong Xiao

Study Type : Animal Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)

Resveratrol protects against arsenic trioxide-induced cardiotoxicity in vitro and in vivo. - GMI Summary

Pubmed Data : Br J Pharmacol. 2008 May;154(1):105-13. Epub 2008 Mar 10. PMID: [18332854](#)

Article Published Date : May 01, 2008

Authors : X-Y Zhao, G-Y Li, Y Liu, L-M Chai, J-X Chen, Y Zhang, Z-M Du, Y-J Lu, B-F Yang

Study Type : Animal Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Arsenic Poisoning](#) : CK(85) : AC(26), [Chemotherapy-Induced Toxicity: Arsenic Trioxide](#) : CK(3) : AC(2)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)

Additional Keywords : [Stilbenes](#) : CK(414) : AC(245)

Spirulina has a protective effect against doxorubicin-induced cardiotoxicity in mice. - GMI Summary

Pubmed Data : Phytother Res. 2005 Dec;19(12):1030-7. PMID: [16372368](#)

Article Published Date : Dec 01, 2005

Authors : Mahmood Khan, Jagdish Chandra Shobha, Iyyapu Krishna Mohan, Madireddi Umamaheswara Rao Naidu, Challa Sundaram, Shashi Singh, Periannan Kuppusamy, Vijay Kumar Kutala

Study Type : Animal Study

Additional Links

Substances : [Spirulina](#) : CK(77) : AC(23)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Rehmannia protects against adriamycin-induced cytotoxicity in cardiac muscle cells. - GMI Summary

Pubmed Data : Life Sci. 2005 Mar 18;76(18):2027-42. PMID: [15826871](#)

Article Published Date : Mar 18, 2005

Authors : Han-Jung Chae, Hyung-Ryong Kim, Do-Sung Kim, Eun-Rhan Woo, Yong-Gon Cho, Soo-Wan Chae

Study Type : In Vitro Study

Additional Links

Substances : [Rehmannia](#) : CK(145) : AC(36)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)

Hepatoprotective (AC 5)

[Coriandrum sativum has a protective effect on carbon tetrachloride-induced hepatotoxicity in mice. - GMI Summary](#)

Pubmed Data : Food Chem Toxicol. 2009 Apr;47(4):702-8. Epub 2008 Dec 29. PMID: [19146910](#)

Article Published Date : Apr 01, 2009

Authors : S Sreelatha, P R Padma, M Umadevi

Study Type : Animal Study

Additional Links

Substances : [Coriandrum sativum](#) : CK(53) : AC(27)

Diseases : [Chemotherapy-Induced Liver Toxicity](#) : CK(14) : AC(8)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Hepatoprotective](#) : CK(528) : AC(257)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

[Curcumin inhibits lipid peroxidation and cholesterol levels in mice. - GMI Summary](#)

Pubmed Data : Indian J Physiol Pharmacol. 1992 Oct;36(4):239-43. PMID: [1291474](#)

Article Published Date : Oct 01, 1992

Authors : K K Soudamini, M C Unnikrishnan, K B Soni, R Kuttan

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [Lipid Peroxidation](#) : CK(333) : AC(125)

Pharmacological Actions : [Hepatoprotective](#) : CK(528) : AC(257)

[Noni protects the liver from chemotoxicity - Article 1 - GMI Summary](#)

Pubmed Data : Plant Foods Hum Nutr. 2008 Sep;63(3):141-5. Epub 2008 Jul 25. PMID: [18654853](#)

Article Published Date : Sep 01, 2008

Authors : Mian-Ying Wang, Gary Anderson, Diane Nowicki, Jaraka Jensen

Study Type : Animal Study

Additional Links

Substances : [Noni](#) : CK(85) : AC(43)

Diseases : [Chemotherapy-Induced Liver Toxicity](#) : CK(14) : AC(8)

Pharmacological Actions : [Hepatoprotective](#) : CK(528) : AC(257)

[Pomegranate seed extract attenuates chemotherapy-induced acute nephrotoxicity and hepatotoxicity. - GMI Summary](#)

Pubmed Data : J Med Food. 2011 May 6. Epub 2011 May 6. PMID: [21548807](#)

Article Published Date : May 06, 2011

Authors : Kerim Cayir, Ali Karadeniz, Nejdett Simsek, Serap Yildirim, Emre Karakuş, Adem Kara, Hürrem Turan Akkoyun, Emin Sengül

Study Type : Animal Study

Additional Links

Substances : [Pomegranate Seed](#) : CK(2) : AC(1)

Diseases : [Chemotherapy-Induced Liver Toxicity](#) : CK(14) : AC(8), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Glutathione S-transferase Inhibitor](#) : CK(3) : AC(2), [Hepatoprotective](#) : CK(528) : AC(257), [Renoprotective](#) : CK(179) : AC(84)

[Silymarin, a compound found within milk thistle, has a protective effect against Doxorubicin-induced oxidative stress and liver damage. - GMI Summary](#)

Pubmed Data : Toxicol Appl Pharmacol. 2010 Feb 5. Epub 2010 Feb 5. PMID: [20144634](#)

Article Published Date : Feb 05, 2010

Authors : Nirav Patel, Cecil Joseph, George B Corcoran, Sidhartha D Ray

Study Type : Animal Study

Additional Links

Substances : [Milk Thistle](#) : CK(226) : AC(55)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Anti-Apoptotic](#) : CK(59) : AC(37), [Antioxidants](#) : CK(3530) : AC(1293), [Hepatoprotective](#) : CK(528) : AC(257)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Grape Seed Extract (AC 4)

[Aged garlic extract and grape seed proanthocyanidin protect against doxorubicin-induced cardiotoxicity.](#) - GMI Summary

Pubmed Data : Can J Physiol Pharmacol. 2009 Aug;87(8):633-40. PMID: [19767888](#)

Article Published Date : Aug 01, 2009

Authors : Erkan Demirkaya, Aslihan Avci, Vural Kesik, Yildirim Karslioglu, Emin Oztas, Erol Kismet, Erdal Gokcay, Ilker Durak, Vedat Koseoglu

Study Type : Animal Study

Additional Links

Substances : [Garlic](#) : CK(488) : AC(156), [Grape Seed Extract](#) : CK(172) : AC(58)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Plant Extracts](#) : CK(3297) : AC(1135), [Proanthocyanidins](#) : CK(167) : AC(45)

[Grape seed extract has a protective role against doxorubicin-induced cardiotoxicity and genotoxicity in albino mice.](#) - GMI Summary

Pubmed Data : J Med Food. 2010 Aug;13(4):917-25. PMID: [20553142](#)

Article Published Date : Aug 01, 2010

Authors : Emine Yalçın, Ertan Oruç, Kültiğin Cavuşoğlu, Kürşad Yapar

Study Type : Animal Study

Additional Links

Substances : [Grape Seed Extract](#) : CK(172) : AC(58)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185), [Genoprotective](#) : CK(109) : AC(46)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

[Grape seed extract prevents gentamicin-induced nephrotoxicity and genotoxicity in bone marrow cells of mice.](#) - GMI Summary

Pubmed Data : Basic Clin Pharmacol Toxicol. 2006 Sep;99(3):230-6. PMID: [16930296](#)

Article Published Date : Sep 01, 2006

Authors : Ibrahim M El-Ashmawy, Abeer F El-Nahas, Osama M Salama

Study Type : Animal Study

Additional Links

Substances : [Grape Seed Extract](#) : CK(172) : AC(58)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity: Gentamicin](#) : CK(20) : AC(10), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Genoprotective](#) : CK(109) : AC(46), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

[Grape seed extract protects against cisplatin-induced oxidative stress in rats.](#) - GMI Summary

Pubmed Data : Food Chem Toxicol. 2009 Jun;47(6):1176-1183. PMID: [19425235](#)

Article Published Date : Jun 01, 2009

Authors : M I Yousef, A A Saad, L K El-Shennawy
Study Type : Animal Study
Additional Links
Substances : [Grape Seed Extract : CK\(172\) : AC\(58\)](#)
Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)
Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Maitake Mushroom (AC 4)

[Maitake beta-glucan enhances therapeutic effect and reduces myelosuppression and nephrotoxicity of cisplatin in mice.](#) - GMI Summary

Pubmed Data : Int Immunopharmacol. 2009 May;9(5):620-6. Epub 2009 Feb 26. PMID: [19249389](#)
Article Published Date : May 01, 2009
Authors :

Yuki Masuda, Munechika Inoue, Ayu Miyata, Shigeto Mizuno, Hiroaki Nanba

Study Type : Animal Study
Additional Links
Substances : [Beta-glucan : CK\(223\) : AC\(41\)](#), [Maitake Mushroom : CK\(61\) : AC\(34\)](#)
Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Myelotoxicity : CK\(31\) : AC\(8\)](#)
Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

[Maitake beta-glucan promotes recovery of leukocytes and myeloid cell function in peripheral blood from paclitaxel hematotoxicity.](#) - GMI Summary

Pubmed Data : Cancer Immunol Immunother. 2010 Feb 6. Epub 2010 Feb 6. PMID: [20140432](#)
Article Published Date : Feb 06, 2010
Authors : Hong Lin, Elisa de Stanchina, Xi Kathy Zhou, Feng Hong, Andrew Seidman, Monica Fornier, Wei-Lie Xiao, Edward J Kennelly, Kathleen Wesa, Barrie R Cassileth, Susanna Cunningham-Rundles
Study Type : Animal Study
Additional Links
Substances : [Beta-glucan : CK\(223\) : AC\(41\)](#), [Maitake Mushroom : CK\(61\) : AC\(34\)](#)
Diseases : [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Paclitaxel : CK\(32\) : AC\(4\)](#), [Myelotoxicity : CK\(31\) : AC\(8\)](#)
Pharmacological Actions : [Chemopreventive : CK\(1254\) : AC\(342\)](#)
Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

[Maitake beta-glucan MD-fraction enhances bone marrow colony formation and reduces doxorubicin toxicity in vitro.](#) - GMI Summary

Pubmed Data : Int Immunopharmacol. 2004 Jan;4(1):91-9. PMID: [14975363](#)
Article Published Date : Jan 01, 2004
Authors : Hong Lin, Yu-Hong She, Barrie R Cassileth, Frank Sirotnak, Susanna Cunningham Rundles
Study Type : In Vitro Study
Additional Links
Substances : [Maitake Mushroom : CK\(61\) : AC\(34\)](#)
Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)
Pharmacological Actions : [Hematopoietic : CK\(20\) : AC\(9\)](#)
Additional Keywords : [Colony-Stimulating Factors \(CSFs\) : CK\(33\) : AC\(10\)](#)

[Maitake enhances granulopoiesis and mobilization of granulocytes by increasing granulocyte colony-stimulating factor.](#) - GMI Summary

Pubmed Data : Int Immunopharmacol. 2009 Jun 30. PMID: [19573626](#)
Article Published Date : Jun 30, 2009
Authors : Koichi Ito, Yuki Masuda, Yoshihiko Yamasaki, Yoshinobu Yokota, Hiroaki Nanba

Study Type : Commentary

Additional Links

Substances : [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Leukopenia: Chemotherapy Induced](#) : CK(25) : AC(5), [Neutropenia](#) : CK(90) : AC(22), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17), [Neutropenia: Cyclic](#) : CK(48) : AC(16)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\)](#) : CK(33) : AC(10)

Melatonin (AC 5)

[Melatonin, a pineal secretory product with antioxidant properties, protects against cisplatin-induced nephrotoxicity in rats.](#) - GMI Summary

Pubmed Data : J Pineal Res. 2001 Apr;30(3):129-38. PMID: [11316323](#)

Article Published Date : Apr 01, 2001

Authors : M Hara, M Yoshida, H Nishijima, M Yokosuka, M Iigo, R Ohtani-Kaneko, A Shimada, T Hasegawa, Y Akama, K Hirata

Study Type : Animal Study

Additional Links

Substances : [Melatonin](#) : CK(454) : AC(115)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84)

[Melatonin decreases the toxicity and increases the efficacy of chemotherapy in patients with metastatic solid tumors and poor clinical status.](#) - GMI Summary

Pubmed Data : Eur J Cancer. 1999 Nov;35(12):1688-92. PMID: [10674014](#)

Article Published Date : Nov 01, 1999

Authors : P Lissoni, S Barni, M Mandalà, A Ardizzoia, F Paolorossi, M Vaghi, R Longarini, F Malugani, G Tancini

Study Type : In Vitro Study

Additional Links

Substances : [Melatonin](#) : CK(454) : AC(115)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Pharmacological Actions : [Drug synergy](#) : CK(51) : AC(14)

[Melatonin has a synergistic effect with chemotherapeutic drugs on human osteosarcoma cells.](#) - GMI Summary

Pubmed Data : J Pineal Res. 2010 Jan;48(1):72-80. PMID: [20025643](#)

Article Published Date : Jan 01, 2010

Authors : Sara Casado-Zapico, Jezabel Rodriguez-Blanco, Guillermo García-Santos, Vanesa Martín, Ana M Sánchez-Sánchez, Isaac Antolín, Carmen Rodriguez

Study Type : In Vitro Study

Additional Links

Substances : [Melatonin](#) : CK(454) : AC(115)

Diseases : [Osteosarcoma](#) : CK(65) : AC(40)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[Melatonin protects against the genotoxic potential of arsenic and sodium fluoride in human blood culture.](#) - GMI Summary

Pubmed Data : Ecotoxicol Environ Saf. 2010 Sep;73(6):1333-7. Epub 2010 Jun 20. PMID: [20646762](#)

Article Published Date : Sep 01, 2010

Authors : Hemlata Hemant Pant, Mandava Venkateshvara Rao

Study Type : In Vitro Study

Additional Links

Substances : [Melatonin](#) : CK(454) : AC(115)

Diseases : [Arsenic Poisoning](#) : CK(85) : AC(26), [Chemotherapy-Induced Toxicity: Arsenic Trioxide](#) : CK(3) : AC(2), [Fluoride Toxicity](#) : CK(147) : AC(42)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Genoprotective](#) : CK(109) : AC(46)

Melatonin sensitizes kidney cancer cells to kahweol-induced programmed cell death. - GMI Summary

Pubmed Data : J Pineal Res. 2011 Jan 18. Epub 2011 Jan 18. PMID: [21244481](#)

Article Published Date : Jan 18, 2011

Authors : Hee Jung Um, Jong-Wook Park, Taeg Kyu Kwon

Study Type : In Vitro Study

Additional Links

Substances : [Kahweol](#) : CK(1) : AC(1), [Melatonin](#) : CK(454) : AC(115)

Diseases : [Renal Cancer](#) : CK(5) : AC(3)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Natural Substance Synergy](#) : CK(127) : AC(77)

Radioprotective (AC 5)**Pantothenic acid inhibits radiation-induced tumors and has a synergistic effect with the chemotherapeutic agent mitomycin C. - GMI Summary**

Pubmed Data : Oncol Res. 2007;16(8):389-94. PMID: [17913047](#)

Article Published Date : Jan 01, 2007

Authors : Heike Schittl, Nikola Getoff

Study Type : Animal Study

Additional Links

Substances : [Pantothenic Acid \(Vitamin B-5\)](#) : CK(52) : AC(9)

Diseases : [Radiation Induced Illness](#) : CK(994) : AC(245)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radioprotective](#) : CK(453) : AC(180)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Delta-tocotrienol protects mouse and human hematopoietic progenitors from gamma-irradiation. - GMI Summary

Pubmed Data : Haematologica. 2010 Dec;95(12):1996-2004. Epub 2010 Sep 7. PMID: [20823133](#)

Article Published Date : Dec 01, 2010

Authors : [No authors listed]

Study Type : In Vitro Study

Additional Links

Substances : [Tocotrienol: Delta](#) : CK(7) : AC(7)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Radiation Induced Illness: Bone Marrow](#) : CK(22) : AC(12)

Pharmacological Actions : [Radioprotective](#) : CK(453) : AC(180)

Reishi extract protects against radiation and chemotherapy associated toxicity. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2006 Oct;31(19):1618-22. PMID: [17165589](#)

Article Published Date : Oct 01, 2006

Authors : Dan-Hua Wang, Xin-Chu Weng

Study Type : In Vitro Study

Additional Links

Substances : [Reishi Mushroom](#) : CK(109) : AC(43)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Liver Cancer](#) : CK(758) : AC(265), [Radiation Disaster Associated Toxicity](#) : CK(942) : AC(268)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Radioprotective](#) : CK(453) :

Ginger has therapeutic properties relevant to cancer treatment. - GMI Summary

Pubmed Data : J BUON. 2011 Jul-Sep;16(3):414-24. PMID: [22006742](#)

Article Published Date : Jul 01, 2011

Authors : M M Pereira, R Haniadka, P P Chacko, P L Palatty, M S Baliga

Study Type : Review

Additional Links

Substances : [Ginger : CK\(299\) : AC\(91\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radioprotective : CK\(453\) : AC\(180\)](#)

Glutamine prevents chemotherapy and radiation toxicity and may increase the efficacy of cancer treatment. - GMI Summary

Pubmed Data : Cancer Treat Rev. 2003 Dec;29(6):501-13. PMID: [14585260](#)

Article Published Date : Dec 01, 2003

Authors : Diane M F Savarese, Gayle Savy, Linda Vahdat, Paul E Wischmeyer, Barbara Corey

Study Type : Review

Additional Links

Substances : [Glutamine : CK\(120\) : AC\(22\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Radiation Induced Illness : CK\(994\) : AC\(245\)](#)

Pharmacological Actions : [Radioprotective : CK\(453\) : AC\(180\)](#)

Caffeic acid phenethyl ester (AC 3)

Caffeic acid phenethyl ester, a compound found within bee propolis, protects against doxorubicin-induced cardiotoxicity in rats. - GMI Summary

Pubmed Data : Am J Ind Med. 2010 Sep 30. Epub 2010 Sep 30. PMID: [14745846](#)

Article Published Date : Sep 30, 2010

Authors : Ersin Fadillioglu, Emin Oztas, Hasan Erdogan, Murat Yagmurca, Sadik Sogut, Muharrem Ucar, M Kemal Irmak

Study Type : Animal Study

Additional Links

Substances : [Bee Propolis : CK\(222\) : AC\(88\)](#), [Caffeic acid phenethyl ester : CK\(15\) : AC\(8\)](#)

Diseases : [Cardiotoxicity: Chemotherapy-Induced : CK\(12\) : AC\(6\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Curcumin and CAPE may reduce chemotherapy-induced mucosal barrier injury. - GMI Summary

Pubmed Data : Leukemia. 2004 Feb;18(2):276-84. PMID: [14671640](#)

Article Published Date : Feb 01, 2004

Authors : B van't Land, N M A Blijlevens, J Marteiijn, S Timal, J P Donnelly, T J M de Witte, L M'Rabet

Study Type : Animal Study

Additional Links

Substances : [Caffeic acid phenethyl ester : CK\(15\) : AC\(8\)](#), [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Mucositis : CK\(49\) : AC\(10\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

A number of plant polyphenols have chemosensitizing and radiosensitizing activity. - GMI Summary

Pubmed Data : Antioxid Redox Signal. 2005 Nov-Dec;7(11-12):1630-47. PMID: [16356126](#)

Article Published Date : Nov 01, 2005

Authors : Amit K Garg, Thomas A Buchholz, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Betulinic acid](#) : CK(6) : AC(6), [Caffeic acid phenethyl ester](#) : CK(15) : AC(8), [Curcumin](#) : CK(2870) : AC(1475), [Emodin](#) : CK(30) : AC(19), [Flavonoids](#) : CK(887) : AC(289), [Genistein](#) : CK(457) : AC(176), [Green Tea](#) : CK(931) : AC(279), [Polyphenols](#) : CK(417) : AC(171), [Resveratrol](#) : CK(963) : AC(600), [Silymarin](#) : CK(36) : AC(6), [Ursolic Acid](#) : CK(18) : AC(13)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

Oleuropein (AC 3)

[Oleuropein confers protection against doxorubicin-induced cardiotoxicity.](#) - GMI Summary

Pubmed Data : NMR Biomed. 2009 Jul;22(6):585-92. PMID: [19308947](#)

Article Published Date : Jul 01, 2009

Authors : Ioanna Andreadou, Maria Papaefthimiou, Athina Zira, Maria Constantinou, Fragiska Sigala, Alexios-Leandros Skaltsounis, Anna Tsantili-Kakoulidou, Efstathios K Iliodromitis, Dimitrios T Kremastinos, Emmanuel Mikros

Study Type : Animal Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antihypertensive Agents](#) : CK(194) : AC(38), [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

[Oleuropein prevents doxorubicin-induced cardiotoxicity and improves therapeutic outcome.](#) - GMI Summary

Pubmed Data : J Mol Cell Cardiol. 2007 Mar;42(3):549-58. Epub 2007 Jan 16. PMID: [17223128](#)

Article Published Date : Mar 01, 2007

Authors : Ioanna Andreadou, Fragiska Sigala, Efstathios K Iliodromitis, Maria Papaefthimiou, Constantinos Sigalas, Nektarios Aligiannis, Paraskevi Savvari, Vassilis Gorgoulis, Efstathios Papalabros, Dimitrios Th Kremastinos

Study Type : Animal Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Oxidative Stress](#) : CK(1858) : AC(703)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Oleuropein profoundly increases the susceptibility of breast cancer cells to trastuzumab treatment.](#) - GMI Summary

Pubmed Data : BMC Cancer. 2007;7:80. Epub 2007 May 9. PMID: [17490486](#)

Article Published Date : Jan 01, 2007

Authors : Javier A Menendez, Alejandro Vazquez-Martin, Ramon Colomer, Joan Brunet, Alegria Carrasco-Pancorbo, Rocio Garcia-Villalba, Alberto Fernandez-Gutierrez, Antonio Segura-Carretero

Study Type : In Vitro Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Bitter Principle](#) : CK(11) : AC(2), [Drug Resistant Cancer](#) : CK(9) : AC(9), [Plant Extracts](#) : CK(3297) : AC(1135)

Chemosensitizer (AC 157)

[Caffeine potentiates chemotherapy for metastatic osteosarcoma.](#) - GMI Summary

Pubmed Data : J Orthop Sci. 2009 Sep;14(5):556-65. Epub 2009 Oct 3. PMID: [19802667](#)

Article Published Date : Sep 01, 2009

Authors : Hiroaki Kimura, Hiroyuki Tsuchiya, Toshiharu Shirai, Hideji Nishida, Katsuhiko Hayashi, Akihiko Takeuchi, Issei Ohnari, Katsuro Tomita

Study Type : Human Study

Additional Links

Substances : [Caffeine](#) : CK(99) : AC(17)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug Synergy](#) : CK(309) : AC(137)

[Resveratrol enhances antitumor activity of TRAIL in prostate cancer xenografts.](#) - GMI Summary

Pubmed Data : PLoS One. 2010;5(12):e15627. Epub 2010 Dec 28. PMID: [21209944](#)

Article Published Date : Jan 01, 2010

Authors : Suthakar Ganapathy, Qinghe Chen, Karan P Singh, Sharmila Shankar, Rakesh K Srivastava

Study Type : Transgenic Animal Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Vascular Endothelial Growth Factor Regulator](#) : CK(28) : AC(13)

[Sulforaphane enhances the anticancer activity of a chemo-agent against pancreatic cancer.](#) - GMI Summary

Pubmed Data : Nutr Cancer. 2011 Aug 29. Epub 2011 Aug 29. PMID: [21875325](#)

Article Published Date : Aug 29, 2011

Authors : Yanyan Li, Tao Zhang, Steven J Schwartz, Duxin Sun

Study Type : Transgenic Animal Study

Additional Links

Substances : [Broccoli](#) : CK(435) : AC(185), [Sprouts](#) : CK(76) : AC(36), [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[Sulforaphane increases the effectiveness of various cytotoxic drugs against pancreatic cancer stem cells without inducing additional toxicity in mice.](#) - GMI Summary

Pubmed Data : J Med Food. 2004 Summer;7(2):157-61. PMID: [20940707](#)

Article Published Date : Jun 01, 2004

Authors : Georgios Kallifatidis, Sabrina Labsch, Vanessa Rausch, Juergen Mattern, Jury Gladkich, Gerhard Moldenhauer, Markus W Büchler, Alexei V Salnikov, Ingrid Herr

Study Type : Transgenic Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

A variety of carotenoids induce reduce resistance to chemotherapy in multidrug resistant lymphoma and human breast cancer cell lines. - GMI Summary

Pubmed Data : In Vivo. 2004 Mar-Apr;18(2):237-44. PMID: [15113052](#)

Article Published Date : Mar 01, 2004

Authors : Joseph Molnár, Nóra Gyémánt, Ilona Mucsi, Annamária Molnár, Margaret Szabó, Tamás Körtvélyesi, András Varga, Péter Molnár, Gyula Tóth

Study Type : Animal Study

Additional Links

Substances : [Carotenoids : CK\(1041\) : AC\(114\)](#), [Lycopene : CK\(175\) : AC\(32\)](#), [Paprika : CK\(8\) : AC\(6\)](#), [Zeaxanthin : CK\(67\) : AC\(10\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Lymphoma : CK\(211\) : AC\(68\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Cholesterol derived from LDL acts as a chemosensitizer in multidrug resistant lymphoblastic leukemia cells. - GMI Summary

Pubmed Data : Biochem Cell Biol. 2007 Oct;85(5):638-46. PMID: [17901905](#)

Article Published Date : Oct 01, 2007

Authors : Yu Shu, Hu Liu

Study Type : Animal Study

Additional Links

Substances : [Cholesterol : CK\(392\) : AC\(43\)](#)

Diseases : [Acute lymphoblastic leukemia \(ALL\) : CK\(95\) : AC\(28\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Leukemia: T-cell acute Lymphoblastic : CK\(35\) : AC\(14\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin ameliorates oxaliplatin-induced chemoresistance in HCT116 colorectal cancer cells in vitro and in vivo. - GMI Summary

Pubmed Data : Int J Cancer. 2010 Sep 13. Epub 2010 Sep 13. PMID: [20839263](#)

Article Published Date : Sep 13, 2010

Authors : Lynne M Howells, Stewart Sale, Sathya Neelature Sriramareddy, Glen R B Irving, Donald J L Jones, Christopher J Ottley, D Graham Pearson, Christopher D Mann, Margaret M Manson, David P Berry, Andreas Gescher, William P Steward, Karen Brown

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy : CK\(65\) : AC\(16\)](#), [Colorectal Cancer : CK\(768\) : AC\(299\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin ameliorates oxaliplatin-induced chemoresistance in HCT116 colorectal cancer cells in vitro and in vivo. - GMI Summary

Pubmed Data : Int J Cancer. 2010 Sep 13. Epub 2010 Sep 13. PMID: [20839263](#)

Article Published Date : Sep 13, 2010

Authors : Lynne M Howells, Stewart Sale, Sathya Neelature Sriramareddy, Glen R B Irving, Donald J L Jones, Christopher J Ottley, D Graham Pearson, Christopher D Mann, Margaret M Manson, David P Berry, Andreas Gescher, William P Steward, Karen Brown

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy : CK\(65\) : AC\(16\)](#), [Colorectal Cancer : CK\(768\) : AC\(299\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Oxaliplatin : CK\(6\) : AC\(5\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin enhances adriamycin-induced human liver-derived hepatoma G2 cell death. - GMI Summary

Pubmed Data : Eur J Pharm Sci. 2011 Jun 14 ;43(3):125-31. Epub 2011 Apr 14. PMID: [21514382](#)

Article Published Date : Jun 14, 2011

Authors : Haoran Qian, Yi Yang, Xianfa Wang

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Hepatoma : CK\(23\) : AC\(22\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Adriamycin : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin enhances the effect of cisplatin in suppression of head and neck squamous cell carcinoma. - GMI Summary

Pubmed Data : Mol Cancer Ther. 2010 Oct;9(10):2665-75. PMID: [20937593](#)

Article Published Date : Oct 01, 2010

Authors : Victor M Duarte, Eugene Han, Mysore S Veena, Amanda Salvado, Jeffrey D Suh, Li-Jung Liang, Kym F Faull, Eri S Srivatsan, Marilene B Wang

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Head and Neck Cancer : CK\(36\) : AC\(14\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin has a synergistic effect with cisplatin against fibrosarcoma. - GMI Summary

Pubmed Data : Pharmacol Res. 1999 Mar;39(3):175-9. PMID: [10094841](#)

Article Published Date : Mar 01, 1999

Authors : I Navis, P Sriganth, B Premalatha

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Fibrosarcoma : CK\(10\) : AC\(7\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin has anticancer, chemosensitization and radiosensitization effects in prostate cancer. - GMI Summary

Pubmed Data : Cancer Res. 2007 Mar 1;67(5):1988-96. PMID: [17332326](#)

Article Published Date : Mar 01, 2007

Authors : Mao Li, Zhuo Zhang, Donald L Hill, Hui Wang, Ruiwen Zhang

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Additional Keywords : [Drug: Gemcitabine : CK\(36\) : AC\(13\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Diosgenin, a compound isolated from fenugreek, has chemosensitizing activity against human liver cancer cells. - GMI Summary

Pubmed Data : Cancer Lett. 2010 Jan 4. Epub 2010 Jan 4. PMID: [20053498](#)

Article Published Date : Jan 04, 2010

Authors : Feng Li, Prasanna Priscilla Fernandez, Peramaiyan Rajendran, Kam M Hui, Gautam Sethi

Study Type : Animal Study

Additional Links

Substances : [Diosgenin](#) : CK(2) : AC(1), [Fenugreek](#) : CK(71) : AC(28)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[EGCG sensitizes breast cancer cells to paclitaxel in a mouse model of breast carcinoma.](#) - GMI Summary

Pubmed Data : Breast Cancer Res. 2010 Jan 15;12(1):R8. Epub 2010 Jan 15. PMID: [20078855](#)

Article Published Date : Jan 15, 2010

Authors : Ting Luo, Jiao Wang, Yancun Yin, Hui Hua, Jing Jing, Xiangming Sun, Minjing Li, You Zhang, Yangfu Jiang

Study Type : Animal Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\)](#) : CK(176) : AC(115)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13)

[Galangin, a compound found within Alpinia galanga, acts as a chemosensitizer in drug-resistant leukemia cells.](#) - GMI Summary

Pubmed Data : Cancer Lett. 2008 Jul 8;265(2):289-97. Epub 2008 Apr 18. PMID: [18374481](#)

Article Published Date : Jul 08, 2008

Authors : Manlio Tolomeo, Stefania Grimaudo, Antonietta Di Cristina, Rosaria M Pipitone, Luisa Dusonchet, Maria Meli, Lucia Crosta, Nicola Gebbia, Francesco Paolo Invidiata, Lucina Titone, Daniele Simoni

Study Type : Animal Study

Additional Links

Substances : [Alpinia galanga](#) : CK(5) : AC(4), [Flavonoids](#) : CK(887) : AC(289)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28), [Leukemia: Chronic myelogenous leukemia \(CML\)](#) : CK(28) : AC(17)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

[Genistein increases the efficacy of fludarabine in inducing cell death in blood cells from CLL and PLL patients.](#) - GMI Summary

Pubmed Data : Cancer Immunol Immunother. 2007 Apr;56(4):501-14. Epub 2006 Oct 19. PMID: [17051411](#)

Article Published Date : Apr 01, 2007

Authors : Amal Mansour, Victor T Chang, Shanti Srinivas, Jonathan Harrison, Elizabeth Raveche

Study Type : Animal Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [B-cell prolymphocytic leukemia \(B-PLL\)](#) : CK(2) : AC(1), [Leukemia: B-Cell](#) : CK(8) : AC(7), [Leukemia: Chronic Lymphocytic Leukemia \(CLL\)](#) : CK(52) : AC(24)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

[Green tea catechins augment the antitumor activity of doxorubicin in an in vivo mouse model for chemoresistant liver cancer.](#) - GMI Summary

Pubmed Data : Int J Oncol. 2010 Jul ;37(1):111-23. PMID: [20514403](#)

Article Published Date : Jul 01, 2010

Authors : Gang Liang, Anzhou Tang, Xiaozhen Lin, Li Li, Su Zhang, Zhiming Huang, Haihua Tang, Qingdi Quentin Li

Study Type : Animal Study

Additional Links

Substances : [Catechin](#) : CK(408) : AC(130), [Tea](#) : CK(951) : AC(226)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Liver Cancer](#) : CK(758) : AC(265)
Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)
Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug Synergy](#) : CK(309) : AC(137)

Pantothenic acid inhibits radiation-induced tumors and has a synergistic effect with the chemotherapeutic agent mitomycin C. - GMI Summary

Pubmed Data : Oncol Res. 2007;16(8):389-94. PMID: [17913047](#)

Article Published Date : Jan 01, 2007

Authors : Heike Schittl, Nikola Getoff

Study Type : Animal Study

Additional Links

Substances : [Pantothenic Acid \(Vitamin B-5\)](#) : CK(52) : AC(9)

Diseases : [Radiation Induced Illness](#) : CK(994) : AC(245)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radioprotective](#) : CK(453) : AC(180)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Pre-treatment with curcumin enhances oral bioavailability of docetaxel in rats. - GMI Summary

Pubmed Data : Int J Pharm. 2010 Oct 31;399(1-2):116-20. Epub 2010 Aug 18. PMID: [20727390](#)

Article Published Date : Oct 31, 2010

Authors : Yi-Dong Yan, Dae Hwan Kim, Jun Ho Sung, Chul Soon Yong, Han Gon Choi

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy](#) : CK(65) : AC(16)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157), [Enzyme Inhibitors](#) : CK(385) : AC(210)

Additional Keywords : [Chemotherapeutic Synergy: Docetaxel](#) : CK(3) : AC(2), [Drug: Docetaxel](#) : CK(2) : AC(1)

Resveratrol enhances the anti-tumor effect of immunotherapy in a neuroblastoma model. - GMI Summary

Pubmed Data : Cancer Immunol Immunother. 2011 Feb 22. Epub 2011 Feb 22. PMID: [21340652](#)

Article Published Date : Feb 22, 2011

Authors : Brenda L Soto, Jacquelyn A Hank, Tyler J Van De Voort, Lalita Subramanian, Arthur S Polans, Alexander L Rakhmievich, Richard K Yang, Songwong Seo, KyungMann Kim, Ralph A Reisfeld, Stephen D Gillies, Paul M Sondel

Study Type : Animal Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Neuroblastoma](#) : CK(51) : AC(31)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Resveratrol enhances the sensitivity of cholangiocarcinoma to chemotherapeutic agents. - GMI Summary

Pubmed Data : Lab Invest. 2010 May 10. Epub 2010 May 10. PMID: [20458282](#)

Article Published Date : May 10, 2010

Authors : Gabriel A Frampton, Eric A Lazcano, Huang Li, Akimuddin Mohamad, Sharon DeMorrow

Study Type : Animal Study

Additional Links

Diseases : [Cholangiocarcinoma](#) : CK(23) : AC(11)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Resveratrol exhibits chemosensitizing and chemopreventive properties. - GMI

Summary

Pubmed Data : Chemotherapy. 2010;56(1):60-5. Epub 2010 Mar 19. PMID: [20299793](#)

Article Published Date : Jan 01, 2010

Authors : A M El-Mowafy, M E El-Mesery, H A Salem, M M Al-Gayyar, M M Darweish

Study Type : Animal Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600), [Stilbenes](#) : CK(123) : AC(88)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Chemopreventive](#) : CK(1254) : AC(342), [Chemosensitizer](#) : CK(188) : AC(157), [Malondialdehyde Down-regulation](#) : CK(68) : AC(18), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11)

Soy phytochemicals synergistically enhance the preventive effect of tamoxifen on the growth of estrogen-dependent human breast carcinoma in mice. - GMI Summary

Pubmed Data : Carcinogenesis. 2007 Jun;28(6):1217-23. Epub 2007 Jan 18. PMID: [17234721](#)

Article Published Date : Jun 01, 2007

Authors : Zhiming Mai, George L Blackburn, Jin-Rong Zhou

Study Type : Animal Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176), [Soy](#) : CK(1697) : AC(340)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Tamoxifen](#) : CK(367) : AC(53), [Drug Synergy](#) : CK(309) : AC(137)

"Curcumin enhances the anticancer effects of trichostatin a in breast cancer cells." - GMI Summary

Pubmed Data : Mol Carcinog. 2012 Jan 30. Epub 2012 Jan 30. PMID: [22290509](#)

Article Published Date : Jan 30, 2012

Authors : Guang Yan, Kimmer Graham, Susan Lanza-Jacoby

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

A tocotrienol-rich fraction from rice bran enhances cisplatin-induced cytotoxicity in human mesothelioma cells. - GMI Summary

Pubmed Data : Phytother Res. 2010 Feb 1. Epub 2010 Feb 1. PMID: [20127663](#)

Article Published Date : Feb 01, 2010

Authors : Keisuke Nakashima, Nantiga Virgona, Mio Miyazawa, Takashi Watanabe, Tomohiro Yano

Study Type : In Vitro Study

Additional Links

Substances : [Rice Bran](#) : CK(29) : AC(14), [Tocotrienols](#) : CK(21) : AC(16)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Mesothelioma](#) : CK(30) : AC(9)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Acerola demonstrates cytotoxic potential against tumor cell lines. - GMI Summary

Pubmed Data : Phytother Res. 2004 Mar;18(3):212-23. PMID: [15103668](#)

Article Published Date : Mar 01, 2004

Authors :

Noboru Motohashi, Hidetsugu Wakabayashi, Teruo Kurihara, Hidetaka Fukushima, Tomoko Yamada, Masami Kawase, Yoshitaka Soharu, Satoru Tani, Yoshiaki Shirataki, Hiroshi Sakagami, Kazue Satoh, Hideki Nakashima, Annamária Molnár, Gabriella Spengler, Nóra Gyémánt, Katalin Ugocsai, Joseph Molnár

Study Type : In Vitro Study

Additional Links

Substances : [Acerola : CK\(10\) : AC\(7\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Antitumor : CK\(1\) : AC\(1\)](#)

[Ampelopsin, a compound found within the Japanese Raisin Tree, reverses multidrug resistance in cancer cells.](#) - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2009 Mar;34(6):761-5. PMID: [19624024](#)

Article Published Date : Mar 01, 2009

Authors : Jiantao Ye, Yilei Zheng, Deyu Liu

Study Type : In Vitro Study

Additional Links

Substances : [Japanese Raisin Tree : CK\(1\) : AC\(1\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

[Andrographis contains a compound which enhances chemosensitivity of cancer cells to doxorubicin.](#) - GMI Summary

Pubmed Data : Biochem Pharmacol. 2010 May 1;79(9):1242-50. Epub 2009 Dec 21. PMID: [20026083](#)

Article Published Date : May 01, 2010

Authors : Jing Zhou, Choon-Nam Ong, Gang-Min Hur, Han-Ming Shen

Study Type : In Vitro Study

Additional Links

Substances : [Andrographis : CK\(80\) : AC\(34\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

[Artesunate and bufalin may have value in treating multi-drug resistant human leukemia cells.](#) - GMI Summary

Pubmed Data : Blood Cells Mol Dis. 2002 Mar-Apr;28(2):160-8. PMID: [12064912](#)

Article Published Date : Mar 01, 2002

Authors : Thomas Efferth, Mary Davey, Armin Olbrich, Gerhard Rücker, Erich Gebhart, Ross Davey

Study Type : In Vitro Study

Additional Links

Substances : [Artesunate : CK\(1\) : AC\(1\)](#), [Bufalin : CK\(1\) : AC\(1\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Leukemia : CK\(694\) : AC\(270\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

[Caffeic acid sensitizes multidrug-resistant human breast cancer cells to chemotherapy.](#) - GMI Summary

Pubmed Data : Chem Biol Interact. 2011 Feb 21. Epub 2011 Feb 21. PMID: [9216644](#)

Article Published Date : Feb 21, 2011

Authors : C H Ahn, W C Choi, J Y Kong

Study Type : In Vitro Study

Additional Links

Substances : [Caffeic Acid : CK\(15\) : AC\(11\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Camptothecin acts synergistically with imatinib and overcomes imatinib resistance in chronic myelogenous leukemia (CML) cells. - GMI Summary

Pubmed Data : Cancer Lett. 2007 Jul 8;252(1):75-85. Epub 2007 Jan 16. PMID: [17223257](#)

Article Published Date : Jul 08, 2007

Authors : Dong-Sik Ju, Mi-Ju Kim, Jae-Ho Bae, Hye-Soon Song, Byung-Seon Chung, Min-Ki Lee, Chi-Dug Kang, Hyun-Sun Lee, Dong-Wan Kim, Sun-Hee Kim

Study Type : In Vitro Study

Additional Links

Substances : [Camptothecin : CK\(5\) : AC\(5\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Leukemia: Acute myelogenous leukemia \(AML\) : CK\(96\) : AC\(28\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Cannabinoids work synergistically with paclitaxel in gastric cancer cell lines. - GMI Summary

Pubmed Data : J Surg Res. 2009 Jul;155(1):40-7. Epub 2008 Aug 9. PMID: [19394652](#)

Article Published Date : Jul 01, 2009

Authors : Hideyo Miyato, Joji Kitayama, Hiroharu Yamashita, Daisuke Souma, Masahiro Asakage, Jun Yamada, Hirokazu Nagawa

Study Type : In Vitro Study

Additional Links

Substances : [Cannabinoids : CK\(183\) : AC\(53\)](#)

Diseases : [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Paclitaxel : CK\(36\) : AC\(13\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Capsaicin potentiates the vitamin D3-induced and all-trans retinoic acid-induced differentiation of human promyelocytic leukemia cells. - GMI Summary

Pubmed Data : Eur J Pharmacol. 2001 May 25;420(2-3):83-90. PMID: [11408028](#)

Article Published Date : May 25, 2001

Authors : S N Kang, S W Chung, T S Kim

Study Type : In Vitro Study

Additional Links

Substances : [Capsaicin : CK\(47\) : AC\(25\)](#), [Vitamin D : CK\(1493\) : AC\(220\)](#)

Diseases : [Promyelocytic leukemia : CK\(137\) : AC\(75\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#), [Natural Substance Synergy : CK\(127\) : AC\(77\)](#)

Carotenoids extracted from red paprika, Valencia orange and Golden delicious apple exhibit anti-H. pylori and anti-multidrug resistance activity. - GMI Summary

Pubmed Data : Phytother Res. 2005 Aug;19(8):700-7. PMID: [16177974](#)

Article Published Date : Aug 01, 2005

Authors : Péter Molnár, Masami Kawase, Kazue Satoh, Yoshitaka Sohara, Toru Tanaka, Satoru Tani, Hiroshi Sakagami, Hideki Nakashima, Noboru Motohashi, Nóra Gyémánt, Joseph Molnár

Study Type : In Vitro Study

Additional Links

Substances : [Apple: Golden Delicious : CK\(2\) : AC\(2\)](#), [Carotenoids : CK\(1041\) : AC\(114\)](#), [Orange : CK\(127\) : AC\(28\)](#), [Paprika : CK\(8\) : AC\(6\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Helicobacter Pylori Infection : CK\(294\) : AC\(61\)](#)
Pharmacological Actions : [Anti-Bacterial Agents : CK\(901\) : AC\(280\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Cleistocalyx operculatus contains a compound which reverses multi-drug resistance in human liver cancer cells. - GMI Summary

Pubmed Data : Phytomedicine. 2011 May 17. Epub 2011 May 17. PMID: [21596545](#)

Article Published Date : May 17, 2011

Authors : Hai-Ya Huang, Jiang-Long Niu, Li-Ming Zhao, Yan-Hua Lu

Study Type : In Vitro Study

Additional Links

Substances : [Cleistocalyx Operculatus : CK\(1\) : AC\(1\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Crocetin exhibits anti-cancer and chemosensitizing properties. - GMI Summary

Pubmed Data : Acta Pharmacol Sin. 2011 Oct 10. Epub 2011 Oct 10. PMID: [21986580](#)

Article Published Date : Oct 10, 2011

Authors : Ying-Jia Zhong, Fang Shi, Xue-Lian Zheng, Qiong Wang, Lan Yang, Hong Sun, Fan He, Lin Zhang, Yong Lin, Yong Qin, Lin-Chuan Liao, Xia Wang

Study Type : In Vitro Study

Additional Links

Substances : [Crocetin : CK\(5\) : AC\(2\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin acts as a chemosensitizing agent in lung cancer cells. - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2005 Jun 17;331(4):1245-52. PMID: [15883009](#)

Article Published Date : Jun 17, 2005

Authors : Sudip Sen, Himani Sharma, Neeta Singh

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Carcinoma: Non-Small-Cell Lung : CK\(19\) : AC\(13\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin appears to have value in multi-drug chemoresistance. - GMI Summary

Pubmed Data : J Clin Rheumatol. 2010 Feb 2. Epub 2010 Feb 2. PMID: [14680379](#)

Article Published Date : Feb 02, 2010

Authors : Heleen M Wortelboer, Mustafa Usta, Astrid E van der Velde, Marelle G Boersma, Bert Spenkelink, Jelmer J van Zanden, Ivonne M C M Rietjens, Peter J van Bladeren, Nicole H P Cnubben

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin augments gemcitabine cytotoxic effect on pancreatic cancer cell lines. - GMI Summary

Pubmed Data : Cancer Invest. 2007 Sep;25(6):411-8. PMID: [17882652](#)

Article Published Date : Sep 01, 2007

Authors : Shahar Lev-Ari, Akiva Vexler, Alex Starr, Maia Ashkenazy-Voghera, Joel Greif, Dan Aderka, Rami Ben-Yosef

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Cyclooxygenase 2 Inhibitors](#) : CK(274) : AC(167)

Additional Keywords : [Drug](#): [Gemcitabine](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

Curcumin chemosensitizes prostate cancer cells to TRAIL-induce programmed cell death. - GMI Summary

Pubmed Data : J Exp Ther Oncol. 2005;5(2):81-91. PMID: [16471035](#)

Article Published Date : Jan 01, 2005

Authors : Dorrah D Deeb, Hao Jiang, Xiaohua Gao, George Divine, Scott A Dulchavsky, Subhash C Gautam

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin displays chemosensitizing activity in combination with paclitaxel. - GMI Summary

Pubmed Data : Int J Biochem Cell Biol. 2010 Sep 29. Epub 2010 Sep 29. PMID: [20883815](#)

Article Published Date : Sep 29, 2010

Authors : Smitha V Bava, Chanickal N Sreekanth, Arun Kumar T Thulasidasan, Nikhil P Anto, Vino T Cherian, Vineshkumar T Puliappadamba, Sajna G Menon, Santhosh D Ravichandran, Ruby John Anto

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Cervical Cancer](#) : CK(322) : AC(65)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin enhances chemotherapeutic agents in prostate cancer cells. - GMI Summary

Pubmed Data : Prostate. 2002 May 15;51(3):211-8. PMID: [11967955](#)

Article Published Date : May 15, 2002

Authors : Tzyh-Chyuan Hour, Jun Chen, Chao-Yuan Huang, Jing-Yi Guan, Shiu-Hui Lu, Yeong-Shiau Pu

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin enhances programmed cell death in chemoresistant ovarian cancer cells. - GMI Summary

Pubmed Data : Gynecol Oncol. 2007 Apr;105(1):104-12. Epub 2006 Dec 15. PMID: [17174384](#)

Article Published Date : Apr 01, 2007

Authors : Heather Wahl, Lijun Tan, Kent Griffith, Miheon Choi, J Rebecca Liu

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin exhibits chemosensitizing properties against multidrug resistance in rat liver cells. - GMI Summary

Pubmed Data : Life Sci. 1998;62(25):2349-58. PMID: [9651124](#)

Article Published Date : Jan 01, 1998

Authors : N Romiti, R Tongiani, F Cervelli, E Chieli

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin has anti-cancer activity against drug-resistant chronic myeloid leukemia cells. - GMI Summary

Pubmed Data : Mol Cancer Res. 2006 Jul;4(7):457-69. PMID: [16849521](#)

Article Published Date : Jul 01, 2006

Authors : Kamila Wolanin, Adriana Magalska, Grazyna Mosieniak, Rut Klinger, Sharon McKenna, Susanne Vejda, Ewa Sikora, Katarzyna Piwocka

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chronic Myeloid Leukemia : CK\(21\) : AC\(11\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin has chemosensitizing activity in multidrug resistant tumor cell lines. - GMI Summary

Pubmed Data : Zhong Yao Cai. 2001 Sep;24(9):655-7. PMID: [11799777](#)

Article Published Date : Sep 01, 2001

Authors : H Zhang, L Yang, S Liu, L Ren

Study Type : In Vitro Study

Additional Links

Substances : [Berberine : CK\(142\) : AC\(67\)](#), [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin improves chemotherapy by simultaneously sensitising cancer cells and reducing side effects. - GMI Summary

Pubmed Data : Eur J Cancer. 2011 May 24. Epub 2011 May 24. PMID: [21616659](#)

Article Published Date : May 24, 2011

Authors : Qian-Mei Zhou, Xiu-Feng Wang, Xin-Jun Liu, Hui Zhang, Yi-Yu Lu, Shuang Huang, Shi-Bing Su

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Mitomycin-C : CK\(6\) : AC\(4\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Cytoprotective : CK\(10\) : AC\(8\)](#)

Additional Keywords : [Drug: Mitomycin : CK\(4\) : AC\(3\)](#)

Curcumin induces cell cycle arrest and programmed cell death in cisplatin-resistant human ovarian cancer cells. - GMI Summary

Pubmed Data : Cancer Biol Ther. 2007 Feb;6(2):178-84. Epub 2007 Feb 5. PMID: [17218783](#)

Article Published Date : Feb 01, 2007

Authors : Nathan M Weir, Karuppaiah Selvendiran, Vijay Kumar Kutala, Liyue Tong, Shilpa Vishwanath, Murugesan Rajaram, Susheela Tridandapani, Shrikant Anant, Periannan Kuppusamy

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin induces chemo/radio-sensitization in ovarian cancer cells and curcumin nanoparticles inhibit ovarian cancer cell growth. - GMI Summary

Pubmed Data : J Ovarian Res. 2010;3:11. Epub 2010 Apr 29. PMID: [20429876](#)

Article Published Date : Jan 01, 2010

Authors : Murali M Yallapu, Diane M Maher, Vasudha Sundram, Maria C Bell, Meena Jaggi, Subhash C Chauhan

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

Curcumin induces programmed cell death in human melanoma cells. - GMI Summary

Pubmed Data : Exp Cell Res. 2001 Dec 10;271(2):305-14. PMID: [11716543](#)

Article Published Date : Dec 10, 2001

Authors : J A Bush, K J Cheung, G Li

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Melanoma : CK\(169\) : AC\(87\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Curcumin inhibits growth and sensitizes ovarian cancer cells to cisplatin-mediated killing. - GMI Summary

Pubmed Data : Carcinogenesis. 1982;3(11):1331-8. PMID: [12447990](#)

Article Published Date : Jan 01, 1982

Authors : Marion M Chan, Dunne Fong, Kenneth J Soprano, William F Holmes, Harry Heverling

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Interleukin-6 Downregulation : CK\(497\) : AC\(133\)](#)

Curcumin inhibits multi drug resistance associated protein (MRP1) in

retinoblastoma cells. - GMI Summary

Pubmed Data : Bioinformation. 2012 ;8(1):13-9. Epub 2012 Jan 6. PMID: [22359429](#)

Article Published Date : Jan 01, 2012

Authors : Seethalakshmi Sreenivasan, Sathyabaarathi Ravichandran, Umashankar Vetrivel, Subramanian Krishnakumar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Retinoblastoma](#) : CK(24) : AC(6)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin inhibits multi-drug resistance gene expression in human leukemic cells. - GMI Summary

Pubmed Data : Arch Pharm Res. 2006 Oct;29(10):866-73. PMID: [17121181](#)

Article Published Date : Oct 01, 2006

Authors : Songyot Anuchapreeda, Pattri Thanarattanakorn, Somjai Sittipreechacharn, Singkome Tima, Prasit Chanarat, Pornngarm Limtrakul

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin inhibits multi-drug resistant leukemia cells. - GMI Summary

Pubmed Data : Mol Cell Biochem. 2012 Jan ;360(1-2):253-60. Epub 2011 Sep 22. PMID: [21938404](#)

Article Published Date : Jan 01, 2012

Authors : Jin-Jian Lu, Yu-Jun Cai, Jian Ding

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Leukemia: Multi-Drug Resistant](#) : CK(1) : AC(1)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin inhibits multi-drug resistant pancreatic cancer. - GMI Summary

Pubmed Data : Cancer Chemother Pharmacol. 2010 Nov 30. Epub 2010 Nov 30. PMID: [21116627](#)

Article Published Date : Nov 30, 2010

Authors : Yan Li, Jezrael L Revalde, Glen Reid, James W Paxton

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin inhibits pancreatic cancer cell growth and acts as a chemosensitizing agent. - GMI Summary

Pubmed Data : Mol Pharmacol. 2009 Jul;76(1):81-90. Epub 2009 Apr 24. PMID: [19395473](#)

Article Published Date : Jul 01, 2009

Authors : Jun Li, Yun Wang, Chaozhe Yang, Pengfei Wang, Denise K Oelschlager, Yong Zheng, De-An Tian, William E Grizzle, Donald J Buchsbaum, Mei Wan

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)
Additional Keywords : [Chemotherapeutic Synergy: Gemcitabine : CK\(10\) : AC\(8\)](#), [Drug: Gemcitabine : CK\(36\) : AC\(13\)](#)

Curcumin may act as a chemosensitizer in multi-drug resistant cancer. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2010 Sep;35(18):2460-3. PMID: [21141501](#)

Article Published Date : Sep 01, 2010

Authors : Yanfen Huang, Gaixia Dong, Xingqiu Hong, Hui Chai, Xiaofeng Yuan

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin may act as a chemosensitizing agent in multidrug resistant cancer cells. - GMI Summary

Pubmed Data : Biochem Pharmacol. 2002 Aug 15;64(4):573-82. PMID: [12167476](#)

Article Published Date : Aug 15, 2002

Authors : Songyot Anuchapreeda, Pranee Leechanachai, Melissa M Smith, Suresh V Ambudkar, Porn-ngarm Limtrakul

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin may act as a photosensitizer and chemotherapeutic agent in nasopharyngeal carcinoma. - GMI Summary

Pubmed Data : J Environ Pathol Toxicol Oncol. 2006;25(1-2):205-15. PMID: [16566718](#)

Article Published Date : Jan 01, 2006

Authors : H Koon, Albert W N Leung, Kevin K M Yue, Naiki K Mak

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Nasopharyngeal Cancer : CK\(58\) : AC\(21\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin may be used as a chemosensitizer to make the retinoblastoma cells more sensitive to the effects of chemotherapy. - GMI Summary

Pubmed Data : Curr Eye Res. 2009 Oct;34(10):845-51. PMID: [19895312](#)

Article Published Date : Oct 01, 2009

Authors : Seethalakshmi Thiagarajan, Karthiyayini Thirumalai, Sudarshan Nirmala, Jyotirmay Biswas, Subramanian Krishnakumar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Retinoblastoma : CK\(24\) : AC\(6\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin may contribute to overcoming chemoresistance of FOLFOX.- surviving colon cancer cells. - GMI Summary

Pubmed Data : Vet Med (Praha). 1989 Aug;34(8):467-74. PMID: [20332435](#)

Article Published Date : Aug 01, 1989

Authors : Bhaumik B Patel, Deepshika Gupta, Althea A Elliott, Vivek Sengupta, Yingjie Yu, Adhip P N Majumdar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Colon Cancer](#) : CK(375) : AC(230)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23), [Drug: Oxaliplatin](#) : CK(6) : AC(5)

Curcumin may have chemosensitizing properties in the treatment of human ovarian cancer. - GMI Summary

Pubmed Data : Cell Prolif. 2009 Apr;42(2):195-206. Epub 2009 Feb 18. PMID: [19236381](#)

Article Published Date : Apr 01, 2009

Authors : M Montopoli, E Ragazzi, G Froldi, L Caparrotta

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11), [Drug: Oxaliplatin](#) : CK(6) : AC(5)

Curcumin may improve outcome in chemotherapy-refractory Natural killer/T-cell lymphoma (NKTL). - GMI Summary

Pubmed Data : Br J Haematol. 2005 Oct;131(1):59-66. PMID: [16173963](#)

Article Published Date : Oct 01, 2005

Authors : Kihyun Kim, Kyoungju Ryu, Younghyeh Ko, Chaehwa Park

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Lymphoma](#) : CK(211) : AC(68), [Natural killer/T-cell lymphoma \(NKTL\)](#) : CK(1) : AC(1)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Enzyme Inhibitors](#) : CK(385) : AC(210), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Curcumin may sensitize cancer cells to chemotherapy. - GMI Summary

Pubmed Data : Mol Cancer Ther. 2006 Apr;5(4):952-61. PMID: [16648566](#)

Article Published Date : Apr 01, 2006

Authors : Deborah Chirnomas, Toshiyasu Taniguchi, Michelle de la Vega, Ami P Vaidya, Maria Vasserman, Anne-Renee Hartman, Richard Kennedy, Rosemary Foster, Jennifer Mahoney, Michael V Seiden, Alan D D'Andrea

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11)

Curcumin potentiates antitumor activity of l-asparaginase in acute lymphoblastic leukemia. - GMI Summary

Pubmed Data : Leuk Lymphoma. 2012 Jan 25. Epub 2012 Jan 25. PMID: [22185211](#)

Article Published Date : Jan 25, 2012

Authors : Hua Wang, Qi-Rong Geng, Liang Wang, Yue Lu
Study Type : In Vitro Study
Additional Links
Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)
Diseases : [Acute lymphoblastic leukemia \(ALL\) : CK\(95\) : AC\(28\)](#)
Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)
Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin promotes programmed cell death in multidrug-resistant human lung cancer cells. - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2010 Aug 13;399(1):1-6. Epub 2010 Jul 11. PMID: [20627087](#)

Article Published Date : Aug 13, 2010

Authors : Jian Zhang, Tao Zhang, Xinyu Ti, Jieran Shi, Changgui Wu, Xinling Ren, Hong Yin

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin promotes programmed cell death, increases chemosensitivity, and inhibits nuclear factor kappaB in esophageal adenocarcinoma. - GMI Summary

Pubmed Data : Transl Oncol. 2010 Apr;3(2):99-108. PMID: [20360934](#)

Article Published Date : Apr 01, 2010

Authors : Wibisono Hartojo, Amy L Silvers, Dafydd G Thomas, Christopher W Seder, Lin Lin, Hyma Rao, Zhuwen Wang, Joel K Greenson, Thomas J Giordano, Mark B Orringer, Alnawaz Rehemtulla, Mahaveer S Bhojani, David G Beer, Andrew C Chang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Esophageal Cancer : CK\(293\) : AC\(54\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Curcumin reduces chemo-resistance of melanoma cells to tamoxifen. - GMI Summary

Pubmed Data : Cancer Biol Ther. 2011 Jan 29;11(2). Epub 2011 Jan 29. PMID: [21088500](#)

Article Published Date : Jan 29, 2011

Authors : Sudipa June Chatterjee, Siyaram Pandey

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Melanoma : CK\(169\) : AC\(87\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin reduces multi-drug resistance in uterine cancer cells. - GMI Summary

Pubmed Data : Oncol Rep. 2008 Oct;20(4):731-5. PMID: [18813811](#)

Article Published Date : Oct 01, 2008

Authors : Antonio Angelini, Manuela Iezzi, Concetta Di Febbo, Carmine Di Ilio, Franco Cuccurullo, Ettore Porreca

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Uterine Cancer : CK\(24\) : AC\(10\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)
Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Curcumin reverse multi-drug resistance in multiple myeloma cells. - GMI Summary

Pubmed Data : Ann Hematol. 2010 Apr;89(4):399-404. Epub 2009 Sep 15. PMID: [19756599](#)

Article Published Date : Apr 01, 2010

Authors : Hui Xiao, Qi Xiao, Kejian Zhang, Xuelan Zuo, Umid Kumar Shrestha

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Multiple Myeloma : CK\(125\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin reverse multidrug resistance of osteosarcoma cells. - GMI Summary

Pubmed Data : Wei Sheng Yan Jiu. 2011 Jan;40(1):103-6. PMID: [21434326](#)

Article Published Date : Jan 01, 2011

Authors : Yang Xiao, Wanchun Wang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Osteosarcoma : CK\(65\) : AC\(40\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Adriamycin : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin reverses chemoresistance of human gastric cancer cells. - GMI Summary

Pubmed Data : Oncol Rep. 2011 Aug 2. Epub 2011 Aug 2. PMID: [21811763](#)

Article Published Date : Aug 02, 2011

Authors : Liang-Liang Yu, Jia-Guo Wu, Ning Dai, Hong-Gang Yu, Jian-Min Si

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Inhibitor of Nuclear Factor Kappa-B Kinase \(IKK\) : CK\(2\) : AC\(2\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Curcumin sensitizes cervical cancer cells to curcumin-induced programmed cell death. - GMI Summary

Pubmed Data : J Biol Chem. 2005 Feb 25;280(8):6301-8. Epub 2004 Dec 7. PMID: [15590651](#)

Article Published Date : Feb 25, 2005

Authors : Smitha V Bava, Vineshkumar T Puliappadamba, Ayswaria Deepti, Asha Nair, Devarajan Karunagaran, Ruby John Anto

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cervical Cancer : CK\(322\) : AC\(65\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Taxol : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin sensitizes lung cancer cells to cisplatin-induced programmed cell death. - GMI Summary

Pubmed Data : Phytother Res. 1999 Jun;13(4):318-22. PMID: [19283527](#)

Article Published Date : Jun 01, 1999

Authors : Pithi Chanvorachote, Varisa Pongrakhananon, Sumalee Wannachaiyasit, Sudjit Luanpitpong, Yon Rojanasakul, Ubonthip Nimmannit

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin stimulates reactive oxygen species production and potentiates apoptosis induction by the antitumor drugs arsenic trioxide and lonidamine in human myeloid leukemia cell lines. - GMI Summary

Pubmed Data : J Pharmacol Exp Ther. 2010 Oct;335(1):114-23. Epub 2010 Jul 6. PMID: [20605902](#)

Article Published Date : Oct 01, 2010

Authors : Yolanda Sánchez, Gloria P Simón, Eva Calviño, Elena de Blas, Patricio Aller

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Acute Myeloid Leukemia : CK\(51\) : AC\(21\)](#), [Chronic Myeloid Leukemia : CK\(21\) : AC\(11\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Arsenic Trioxide : CK\(1\) : AC\(1\)](#), [Drug: Lonidamine : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin synergistically augments bcr/abl phosphorothioate antisense oligonucleotides to inhibit growth of chronic myelogenous leukemia cells. - GMI Summary

Pubmed Data : Acta Pharmacol Sin. 2007 Jan;28(1):105-10. PMID: [17184589](#)

Article Published Date : Jan 01, 2007

Authors : Kun-Zhong Zhang, Jian-Hua Xu, Xiu-Wang Huang, Li-Xian Wu, Yu Su, Yuan-Zhong Chen

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Leukemia: Chronic myelogenous leukemia \(CML\) : CK\(28\) : AC\(17\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin synergistically potentiates the anti-cancer effects of celecoxib in pancreatic cancer cells. - GMI Summary

Pubmed Data : Biomed Pharmacother. 2005 Oct;59 Suppl 2:S276-80. PMID: [16507392](#)

Article Published Date : Oct 01, 2005

Authors : S Lev-Ari, H Zinger, D Kazanov, D Yona, R Ben-Yosef, A Starr, A Figer, N Arber

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Pancreatic Cancer : CK\(524\) : AC\(160\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Cyclooxygenase 2 Inhibitors : CK\(274\) : AC\(167\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin works synergistically with bortezomib in multiple myeloma. - GMI Summary

Pubmed Data : Zhongguo Shi Yan Xue Ye Xue Za Zhi. 2011 Jun ;19(3):684-8. PMID: [21729550](#)

Article Published Date : Jun 01, 2011

Authors : Xiao-Yan Zhang, Qing-Xian Bai, Gao-Sheng Huang, Hui Zhao, Juan-Juan Chen, Li-Jie Yang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Multiple Myeloma](#) : CK(125) : AC(50)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Bcl-2 protein down-regulation](#) : CK(40) : AC(27), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Bortezomib](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

Curcumin works synergistically with cyclophosphide to reverse multi-drug resistance of a human lymphoma cell line. - GMI Summary

Pubmed Data : Zhongguo Shi Yan Xue Ye Xue Za Zhi. 2008 Aug;16(4):804-8. PMID: [18718065](#)

Article Published Date : Aug 01, 2008

Authors : Hui Xiao, Ke-Jian Zhang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Lymphoma](#) : CK(211) : AC(68)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin works synergistically with the chemotoxic agent FOLFOX to eliminate colon cancer stem cells. - GMI Summary

Pubmed Data : Transl Oncol. 2009 Dec;2(4):321-8. PMID: [19956394](#)

Article Published Date : Dec 01, 2009

Authors : Yingjie Yu, Shailender S Kanwar, Bhaumik B Patel, Jyoti Nautiyal, Fazlul H Sarkar, Adhip Pn Majumdar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy](#) : CK(65) : AC(16)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Cancer Stem Cells](#) : CK(4) : AC(3), [Drug: FOLFOX](#) : CK(1) : AC(1)

Delta-tocotrienol acts as a chemosensitizing agent. - GMI Summary

Pubmed Data : Br J Pharmacol. 2010 Dec 30. Epub 2010 Dec 30. PMID: [21198544](#)

Article Published Date : Dec 30, 2010

Authors : [No authors listed]

Study Type : In Vitro Study

Additional Links

Substances : [Tocotrienol: Delta](#) : CK(7) : AC(7)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Derivatives of a compound found in birch have activity against multidrug resistance cancer cells. - GMI Summary

Pubmed Data : Bioorg Med Chem. 2010 Apr 15;18(8):2964-75. Epub 2010 Mar 6. PMID: [20363142](#)

Article Published Date : Apr 15, 2010

Authors : Juan Xiong, Masatoshi Taniguchi, Yoshiki Kashiwada, Michiko Sekiya, Takashi Yamagishi, Yoshihisa Takaishi

Study Type : In Vitro Study

Additional Links

Substances : [Birch](#) : CK(5) : AC(3)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)
Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157)

[DHA may induce cell death in chemotherapy resistant colon cancer cells.](#) - GMI Summary

Pubmed Data : Nutr Cancer. 2010 Jul;62(5):611-21. PMID: [20574922](#)

Article Published Date : Jul 01, 2010

Authors : Jens E Slagsvold, Caroline H H Pettersen, Gro L Størvold, Turid Follestad, Hans E Krokan, Svanhild A Schønberg

Study Type : In Vitro Study

Additional Links

Substances : [DHA \(Docosahexaenoic Acid\)](#) : CK(603) : AC(100)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Colon Cancer](#) : CK(375) : AC(230)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

[DHA sensitizes neuroblastoma cells to chemotherapy and asenic-induced oxidative stress.](#) - GMI Summary

Pubmed Data : Int J Cancer. 2006 May 15;118(10):2584-93. PMID: [16353135](#)

Article Published Date : May 15, 2006

Authors : Magnus Lindskog, Helena Gleissman, Frida Ponthan, Juan Castro, Per Kogner, John Inge Johnsen

Study Type : In Vitro Study

Additional Links

Substances : [DHA \(Docosahexaenoic Acid\)](#) : CK(603) : AC(100)

Diseases : [Neuroblastoma](#) : CK(51) : AC(31), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[DIM \(3,3'-diindolylmethane\) sensitizes breast tumors to chemotherapy.](#) - GMI Summary

Pubmed Data : Mol Cancer Ther. 2007 Oct;6(10):2757-65. Epub 2007 Oct 3. PMID: [17913854](#)

Article Published Date : Oct 01, 2007

Authors :

K M Wahidur Rahman, Shadan Ali, Amro Aboukameel, Sanila H Sarkar, Zhiwei Wang, Philip A Philip, Wael A Sakr, Avraham Raz

Study Type : In Vitro Study

Additional Links

Substances : [DIM \(3,3'-diindolylmethane\)](#) : CK(17) : AC(9)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[EGCG has anti-leukemia activity and enhances imatinib-induced cell death.](#) - GMI Summary

Pubmed Data : Cancer Sci. 2009 Feb;100(2):349-56. PMID: [19200260](#)

Article Published Date : Feb 01, 2009

Authors : Reo Iwasaki, Kinji Ito, Takaomi Ishida, Makoto Hamanoue, Souichi Adachi, Toshiki Watanabe, Yuko Sato

Study Type : In Vitro Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\)](#) : CK(176) : AC(115)

Diseases : [Leukemia: Chronic myelogenous leukemia \(CML\)](#) : CK(28) : AC(17)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

EGCG may act as a chemosensitizing agent in tamoxifen-resistant breast cancer cells. - GMI Summary

Pubmed Data : Mutat Res. 2002 Jun 27;518(1):71-84. PMID: [20149610](#)

Article Published Date : Jun 27, 2002

Authors :

F Farabegoli, A Papi, G Bartolini, R Ostan, M Orlandi

Study Type : In Vitro Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\) : CK\(176\) : AC\(115\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Drug synergy : CK\(51\) : AC\(14\)](#)

Additional Keywords : [Tamoxifen Resistance : CK\(3\) : AC\(3\)](#)

EGCG sensitizes human cholangiocarcinoma cells to chemotherapy-induced programmed cell death. - GMI Summary

Pubmed Data : Liver Int. 2009 May;29(5):670-7. Epub 2009 Feb 17. PMID: [19226332](#)

Article Published Date : May 01, 2009

Authors : Molly Lang, Roger Henson, Chiara Braconi, Tushar Patel

Study Type : In Vitro Study

Additional Links

Substances : [Catechin : CK\(408\) : AC\(130\)](#), [EGCG \(Epigallocatechin gallate\) : CK\(176\) : AC\(115\)](#)

Diseases : [Cholangiocarcinoma : CK\(23\) : AC\(11\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#), [Drug: Mitomycin : CK\(4\) : AC\(3\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

EGCG, a green tea polyphenol, encourages programmed cell death in prostate cancer cells. - GMI Summary

Pubmed Data : Oncogene. 2008 Mar 27;27(14):2055-63. Epub 2007 Nov 12. PMID: [17998943](#)

Article Published Date : Mar 27, 2008

Authors : I A Siddiqui, A Malik, V M Adhami, M Asim, B B Hafeez, S Sarfaraz, H Mukhtar

Study Type : In Vitro Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\) : CK\(176\) : AC\(115\)](#)

Diseases : [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Emodin enhances sensitivity of gallbladder cancer cells to chemotherapy. - GMI Summary

Pubmed Data : Biochem Pharmacol. 2010 Apr 15;79(8):1134-40. Epub 2009 Dec 11. PMID: [20005210](#)

Article Published Date : Apr 15, 2010

Authors : Wei Wang, Yue-ping Sun, Xin-zhi Huang, Min He, Yu-ying Chen, Gui-ying Shi, Hui Li, Jing Yi, Jian Wang

Study Type : In Vitro Study

Additional Links

Substances : [Emodin : CK\(30\) : AC\(19\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Gallbladder Cancer : CK\(56\) : AC\(10\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Flavanoid rich honey may act as chemosensitizers in multidrug resistant cancers. - GMI Summary

Pubmed Data : Med Hypotheses. 2011 Jan 17. Epub 2011 Jan 17. PMID: [21247706](#)

Article Published Date : Jan 17, 2011

Authors : Saravana Kumar Jaganathan

Study Type : In Vitro Study

Additional Links

Substances : [Biochanin A](#) : CK(9) : AC(7), [Chrysin](#) : CK(15) : AC(13), [Flavonoids](#) : CK(887) : AC(289), [Genistein](#) : CK(457) : AC(176), [Honey](#) : CK(205) : AC(42), [Kaempferol](#) : CK(27) : AC(22), [Naringenin](#) : CK(17) : AC(12), [Quercetin](#) : CK(312) : AC(140)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Gamma tocotrienol has a chemosensitizing property. - GMI Summary

Pubmed Data : J Biol Chem. 2010 Oct 22;285(43):33520-8. Epub 2010 Aug 18. PMID: [20720018](#)

Article Published Date : Oct 22, 2010

Authors : Ramaswamy Kannappan, Vivek R Yadav, Bharat B Aggarwal

Study Type : In Vitro Study

Additional Links

Substances : [Tocotrienol: Gamma](#) : CK(12) : AC(12), [Vitamin E](#) : CK(1288) : AC(227), [Vitamin E: Gamma-tocotrienol](#) : CK(42) : AC(11)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625)

Pharmacological Actions : [Anti-Angiogenic](#) : CK(133) : AC(99), [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Genistein acts as a chemosensitizer, augmenting the efficacy of cisplatin in pancreatic cancer. - GMI Summary

Pubmed Data : Int J Cancer. 2007 Feb 15;120(4):906-17. PMID: [17131310](#)

Article Published Date : Feb 15, 2007

Authors : Sanjeev Banerjee, Yuxiang Zhang, Zhiwei Wang, Mingxin Che, Paul J Chiao, James L Abbruzzese, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor](#) : CK(141) : AC(68), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin](#) : CK(4) : AC(3), [Drug: Cisplatin](#) : CK(31) : AC(11), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Genistein acts as a radiosensitizing and chemosensitizing agent against the breast cancer cell line MCF-7. - GMI Summary

Pubmed Data : Anticancer Res. 2009 Aug;29(8):3179-83. PMID: [19661332](#)

Article Published Date : Aug 01, 2009

Authors : Johannes Hartmann, Nikola Getoff

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Genistein enhances the anti-cancer activity of gemcitabine in osteosarcoma cells. - GMI Summary

Pubmed Data : Anticancer Drugs. 2010 Mar;21(3):288-96. PMID: [20038829](#)

Article Published Date : Mar 01, 2010

Authors : Bo Zhang, Zhong-Li Shi, Bing Liu, Xiao-Bo Yan, Jie Feng, Hui-Min Tao

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Osteosarcoma : CK\(65\) : AC\(40\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Genistein potentiates the effect of arsenic trioxide against human hepatocellular carcinoma. - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 1 ;301(1):75-84. PMID: [21078540](#)

Article Published Date : Feb 01, 2011

Authors : Yong Ma, Jizhou Wang, Lianxin Liu, Huaqiang Zhu, Xiaoning Chen, Shangha Pan, Xueying Sun, Hongchi Jiang

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Arsenic Trioxide : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Genistein sensitizes human breast cancer cells to the chemotoxic effects of trastuzumab. - GMI Summary

Pubmed Data : Anticancer Drugs. 2010 Dec 14. Epub 2010 Dec 14. PMID: [21160418](#)

Article Published Date : Dec 14, 2010

Authors : Claus Lattrich, Julia Lubig, Anette Springwald, Regina Goerse, Olaf Ortmann, Oliver Treeck

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Trastuzumab : CK\(1\) : AC\(1\)](#)

Genistein sensitizes inhibitory effect of tamoxifen on the growth of estrogen receptor-positive and HER2-overexpressing human breast cancer cells. - GMI Summary

Pubmed Data : Mol Carcinog. 2007 Jul;46(7):534-42. PMID: [17295235](#)

Article Published Date : Jul 01, 2007

Authors : Zhiming Mai, George L Blackburn, Jin-Rong Zhou

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Drug synergy : CK\(51\) : AC\(14\)](#)

Additional Keywords : [Drug: Tamoxifen : CK\(367\) : AC\(53\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Genistein synergizes with arsenic trioxide to suppress human hepatocellular carcinoma. - GMI Summary

Pubmed Data : Cancer Sci. 2010 Apr ;101(4):975-83. Epub 2009 Dec 9. PMID: [20219070](#)

Article Published Date : Apr 01, 2010

Authors : Hongchi Jiang, Yong Ma, Xiaoning Chen, Shangha Pan, Bei Sun, Geoffrey W Krissansen, Xueying Sun

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Arsenic Trioxide](#) : CK(1) : AC(1), [Drug Synergy](#) : CK(309) : AC(137)

Ginsenoside Rh(2) exhibits activity against adriamycin-resistant breast cancer cells. - GMI Summary

Pubmed Data : Talanta. 2012 Jan 15 ;88:345-51. Epub 2011 Nov 2. PMID: [22265509](#)

Article Published Date : Jan 15, 2012

Authors : Bei Zhou, Xiuli Xiao, Lili Xu, Lian Zhu, Liang Tan, Hao Tang, Youyu Zhang, Qingji Xie, Shouzhao Yao

Study Type : In Vitro Study

Additional Links

Substances : [Ginsenosides](#) : CK(47) : AC(18)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Adriamycin](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

Glucosamine's anticancer activity may be due to its ability to inhibit the transglutaminase 2 enzyme. - GMI Summary

Pubmed Data : Cancer Lett. 2008 Sep 18. PMID: [18804908](#)

Article Published Date : Sep 18, 2008

Authors : Dae-Seok Kim, Kang-Seo Park, Kyung-Chae Jeong, Byung li Lee, Chang-Hoon Lee, Soo-Youl Kim

Study Type : In Vitro Study

Additional Links

Substances : [Glucosamine](#) : CK(116) : AC(21)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

Hedyotiscone A, a compound isolated from Hedyotis corymbosa, reverses multidrug resistance in human hepatoma cells. - GMI Summary

Pubmed Data : Xenobiotica. 2012 Feb 21. Epub 2012 Feb 21. PMID: [22352391](#)

Article Published Date : Feb 21, 2012

Authors : Grace Gar-Lee Yue, Julia Kin-Ming Lee, Ling Cheng, Ben Chung-Lap Chan, Lei Jiang, Kwok-Pui Fung, Ping-Chung Leung, Clara Bik-San Lau

Study Type : In Vitro Study

Additional Links

Substances : [Hedyotis corymbosa](#) : CK(3) : AC(1), [Hedyotiscone A](#) : CK(1) : AC(1)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Hepatoma: Multidrug Resistant](#) : CK(1) : AC(1)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Lion's mane enhances doxorubicin-induced apoptosis in human hepatocellular carcinoma cells. - GMI Summary

Pubmed Data : Cancer Lett. 2010 Nov 28 ;297(2):144-54. PMID: [20554107](#)

Article Published Date : Nov 28, 2010

Authors : Jong Seok Lee, Eock Kee Hong

Study Type : In Vitro Study

Additional Links

Substances : [Lion's Mane \(Hericium Erinaceus\)](#) : CK(31) : AC(6)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Lobelia can reverse multidrug resistance in tumor cells. - GMI Summary

Pubmed Data : Toxicol Pathol. 2010;38(3):366-71. Epub 2010 Mar 9. PMID: [18222670](#)

Article Published Date : Jan 01, 2010

Authors : Yonggang Ma, Michael Wink

Study Type : In Vitro Study

Additional Links

Substances : [Lobelia : CK\(8\) : AC\(5\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Tumors : CK\(179\) : AC\(107\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Loquat contains a compound which may have chemosensitizing properties. - GMI Summary

Pubmed Data : Bioorg Med Chem. 2011 Jan 15;19(2):1002-9. Epub 2010 Oct 25. PMID: [21087868](#)

Article Published Date : Jan 15, 2011

Authors : Petra H Pfisterer, Chenxi Shen, Zaneta Nikolovska-Coleska, Lilianna Schyschka, Daniela Schuster, Anita Rudy, Gerhard Wolber, Angelika M Vollmar, Judith M Rollinger, Hermann Stuppner

Study Type : In Vitro Study

Additional Links

Substances : [Flavonoids : CK\(887\) : AC\(289\)](#), [Loquat : CK\(65\) : AC\(31\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Luteolin has anti-proliferative and chemosensitizing effects on human gastric cancer cells. - GMI Summary

Pubmed Data : Mol Cell Biochem. 2008 Jun;313(1-2):125-32. Epub 2008 Apr 9. PMID: [18398671](#)

Article Published Date : Jun 01, 2008

Authors : Bin Wu, Qiang Zhang, Weiming Shen, Jun Zhu

Study Type : In Vitro Study

Additional Links

Substances : [Luteolin : CK\(61\) : AC\(51\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Macelignan, a phytoestrogen extracted from mace, increases drug sensitivity in multidrug resistance cancer cells. - GMI Summary

Pubmed Data : Nutr Cancer. 2009;61(4):538-43. PMID: [19838926](#)

Article Published Date : Jan 01, 2009

Authors : Young Bin Im, Ilho Ha, Keon Wook Kang, Moo-Yeol Lee, Hyo-Kyung Han

Study Type : In Vitro Study

Additional Links

Substances : [Maca : CK\(80\) : AC\(21\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Melatonin has a synergistic effect with chemotherapeutic drugs on human osteosarcoma cells. - GMI Summary

Pubmed Data : J Pineal Res. 2010 Jan;48(1):72-80. PMID: [20025643](#)

Article Published Date : Jan 01, 2010

Authors : Sara Casado-Zapico, Jezabel Rodriguez-Blanco, Guillermo García-Santos, Vanesa Martín, Ana M Sánchez-Sánchez, Isaac Antolín, Carmen Rodriguez

Study Type : In Vitro Study

Additional Links

Substances : [Melatonin](#) : CK(454) : AC(115)

Diseases : [Osteosarcoma](#) : CK(65) : AC(40)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[Melatonin sensitizes kidney cancer cells to kahweol-induced programmed cell death.](#) - GMI Summary

Pubmed Data : J Pineal Res. 2011 Jan 18. Epub 2011 Jan 18. PMID: [21244481](#)

Article Published Date : Jan 18, 2011

Authors : Hee Jung Um, Jong-Wook Park, Taeg Kyu Kwon

Study Type : In Vitro Study

Additional Links

Substances : [Kahweol](#) : CK(1) : AC(1), [Melatonin](#) : CK(454) : AC(115)

Diseases : [Renal Cancer](#) : CK(5) : AC(3)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Natural Substance Synergy](#) : CK(127) : AC(77)

[Oleuropein profoundly increases the susceptibility of breast cancer cells to trastuzumab treatment.](#) - GMI Summary

Pubmed Data : BMC Cancer. 2007;7:80. Epub 2007 May 9. PMID: [17490486](#)

Article Published Date : Jan 01, 2007

Authors : Javier A Menendez, Alejandro Vazquez-Martin, Ramon Colomer, Joan Brunet, Alegria Carrasco-Pancorbo, Rocio Garcia-Villalba, Alberto Fernandez-Gutierrez, Antonio Segura-Carretero

Study Type : In Vitro Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Bitter Principle](#) : CK(11) : AC(2), [Drug Resistant Cancer](#) : CK(9) : AC(9), [Plant Extracts](#) : CK(3297) : AC(1135)

[Paclitaxel and beta-lapachone \(a compound within Tabebuia\) synergistically induce programmed cell death in human retinoblastoma cells.](#) - GMI Summary

Pubmed Data : J Cell Physiol. 2010 Feb;222(2):433-43. PMID: [19918798](#)

Article Published Date : Feb 01, 2010

Authors : Antonella D'Anneo, Giuseppa Augello, Andrea Santulli, Michela Giuliano, Riccardo di Fiore, Concetta Messina, Giovanni Tesoriere, Renza Vento

Study Type : In Vitro Study

Additional Links

Substances : [Tabebuia](#) : CK(10) : AC(9)

Diseases : [Retinoblastoma](#) : CK(24) : AC(6)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agent](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

[Pterostilbene and 3'-hydroxypterostilbene are effective in multi-drug resistant leukemia cells.](#) - GMI Summary

Pubmed Data : Indian J Med Res. 2000 Sep;112:73-7. PMID: [15878840](#)

Article Published Date : Sep 01, 2000

Authors : Manlio Tolomeo, Stefania Grimaudo, Antonietta Di Cristina, Marinella Roberti, Daniela Pizzirani, Maria Meli, Luisa Dusonchet, Nicola Gebbia, Vincenzo Abbadessa, Lucia Crosta, Riccardo Barucchello, Giuseppina Grisolia, Francesco Invidiata, Daniele Simoni

Study Type : In Vitro Study

Additional Links

Substances : [Pterostilbene](#) : CK(999) : AC(29)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Leukemia](#) : CK(694) : AC(270)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Stilbenes](#) : CK(414) : AC(245)

Quercetin abrogates chemoresistance in melanoma cells. - GMI Summary

Pubmed Data : BMC Cancer. 2010;10:282. Epub 2010 Jun 11. PMID: [20540768](#)

Article Published Date : Jan 01, 2010

Authors : Thilakavathy Thangasamy, Sivanandane Sittadjody, Geoffrey C Mitchell, Erin E Mendoza, Vijayababu M Radhakrishnan, Kirsten H Limesand, Randy Burd

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin](#) : CK(312) : AC(140)

Diseases : [DNA damage](#) : CK(687) : AC(287), [Melanoma](#) : CK(169) : AC(87)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Quercetin acts as a chemosensitizing agent in daunorubicin multidrug resistant leukemia cell lines. - GMI Summary

Pubmed Data : Ai Zheng. 2004 Dec;23(12):1611-5. PMID: [15601547](#)

Article Published Date : Dec 01, 2004

Authors : Xun Cai, Fang-Yuan Chen, Jie-Ying Han, Chun-Hong Gu, Hua Zhong, Ren-Rong Ouyang

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin](#) : CK(312) : AC(140)

Diseases : [Leukemia](#) : CK(694) : AC(270)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Daunorubicin](#) : CK(1) : AC(1), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Quercetin may overcome chemotherapy-resistance in chronic lymphocytic leukemia patients. - GMI Summary

Pubmed Data : Br J Cancer. 2010 Aug 24;103(5):642-8. Epub 2010 Jul 20. PMID: [20648016](#)

Article Published Date : Aug 24, 2010

Authors : M Russo, C Spagnuolo, S Volpe, A Mupo, I Tedesco, G-L Russo

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin](#) : CK(312) : AC(140)

Diseases : [Leukemia: Chronic Lymphocytic Leukemia \(CLL\)](#) : CK(52) : AC(24)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Quercetin may reduce chemotherapy resistance in human pancreatic cancer cells. - GMI Summary

Pubmed Data : Molecules. 2010;15(2):857-70. Epub 2010 Feb 9. PMID: [20335952](#)

Article Published Date : Jan 01, 2010

Authors : Sylwia Borska, Mirosław Sopol, Magdalena Chmielewska, Maciej Zabel, Piotr Dziegiel

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin](#) : CK(312) : AC(140)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Quercetin pretreatment sensitizes human cervical cells to cisplatin-induced programmed cell death. - GMI Summary

Pubmed Data : Biochem Pharmacol. 2005 May 1;69(9):1343-50. PMID: [15826605](#)

Article Published Date : May 01, 2005

Authors : J Jakubowicz-Gil, R Paduch, T Piersiak, K Głowniak, A Gawron, M Kandefer-Szerszeń

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cervical Cancer : CK\(322\) : AC\(65\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Quercetin reverses multi-drug resistance of adriamycin resistant promyelocytic leukemia cells. - GMI Summary

Pubmed Data : Zhonghua Zhong Liu Za Zhi. 2005 Jun;27(6):326-9. PMID: [16117892](#)

Article Published Date : Jun 01, 2005

Authors : Xun Cai, Fang-yuan Chen, Jie-ying Han, Chun-hong Gu, Hua Zhong, Ye Teng, Ren-rong Ouyang

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Promyelocytic leukemia : CK\(137\) : AC\(75\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Adriamycin : CK\(2\) : AC\(2\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Resveratrol primes endometrial cancer cells for programmed cell death. - GMI Summary

Pubmed Data : Biochim Biophys Acta. 2010 Sep;1800(9):912-8. Epub 2010 May 7. PMID: [20457218](#)

Article Published Date : Sep 01, 2010

Authors : Xiuli Sun, Yi Zhang, Jianliu Wang, Lihui Wei, Hui Li, Gregory Hanley, Miaoqing Zhao, Yi Li, Deling Yin

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Endometrial Cancer : CK\(239\) : AC\(43\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Glycogen synthase kinase-3beta \(GSK-3beta\) Inhibitor : CK\(4\) : AC\(4\)](#)

Additional Keywords : [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol combines favorably with paclitaxel to induce cell death in lung cancer cells. - GMI Summary

Pubmed Data : Anticancer Res. 2003 Sep-Oct;23(5A):4039-46. PMID: [14666716](#)

Article Published Date : Sep 01, 2003

Authors : Tetsuya Kubota, Yoshiki Uemura, Makoto Kobayashi, Hirokuni Taguchi

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Paclitaxel : CK\(36\) : AC\(13\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol down-regulates survivin and induces programmed cell death in human multidrug-resistant cells. - GMI Summary

Pubmed Data : Oncol Rep. 2010 Jan;23(1):279-86. PMID: [19956893](#)

Article Published Date : Jan 01, 2010

Authors : Weiguo Zhao, Pengtao Bao, Haowen Qi, Houcheng You

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600), [Stilbenes](#) : CK(123) : AC(88)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [Survivin Down-Regulation](#) : CK(1) : AC(1)

Resveratrol enhances the anti-tumor activity of rapamycin in breast cancer cell lines. - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 28;301(2):168-76. Epub 2010 Dec 17. PMID: [21168265](#)

Article Published Date : Feb 28, 2011

Authors : Xin He, Yu Wang, Jinhong Zhu, Mohammed Orloff, Charis Eng

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Rapamycin](#) : CK(1) : AC(1), [Drug Synergy](#) : CK(309) : AC(137), [Stilbenes](#) : CK(414) : AC(245)

Resveratrol improves the efficacy of cyclophosphamide in breast cancer treatment and reduces toxicity. - GMI Summary

Pubmed Data : Cancer Sci. 2011 Jan 28. Epub 2011 Jan 28. PMID: [21276137](#)

Article Published Date : Jan 28, 2011

Authors : Neetu Singh, Manisha Nigam, Vishal Ranjan, Deeba Zaidi, Vivek Kumar Garg, Sharad Sharma, Rashmi Chaturvedi, Rishi Shankar, Sadan Kumar, Ramesh Sharma, Kalyan Mitra, Anil K Balapure, Srikanta K Rath

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Resveratrol increase the sensitivity of non-Hodgkin's lymphoma and multiple myeloma cell lines to paclitaxel-induced programmed cell death. - GMI Summary

Pubmed Data : Mol Cancer Ther. 2004 Jan;3(1):71-84. PMID: [14749477](#)

Article Published Date : Jan 01, 2004

Authors : Ali R Jazirehi, Benjamin Bonavida

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Multiple Myeloma](#) : CK(125) : AC(50), [Non-Hodgkin Lymphoma](#) : CK(445) : AC(63)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Stilbenes](#) : CK(414) : AC(245)

Resveratrol increases sensitivity of nasopharyngeal cancer cells to chemotherapeutic drugs under hypoxia. - GMI Summary

Pubmed Data : Zhong Xi Yi Jie He Xue Bao. 2009 Oct;7(10):952-7. PMID: [19828106](#)

Article Published Date : Oct 01, 2009

Authors : Fang Quan, Shao-Qiang Zhang, Yan-Xia Bai, Xiao-Bao Yao, Hong-Hui Li, Liang Yu, Cheng-

En Pan

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Nasopharyngeal Cancer](#) : CK(58) : AC(21)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Resveratrol induces cell-cycle disruption and programmed cell death in chemoresistant melanoma.](#) - GMI Summary

Pubmed Data : J Cell Biochem. 2010 Jul 1;110(4):893-902. PMID: [20564188](#)

Article Published Date : Jul 01, 2010

Authors : Grégory Gatouillat, Emilie Balasse, Débora Joseph-Pietras, Hamid Morjani, Claudie Madoulet

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Melanoma](#) : CK(169) : AC(87)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Stilbenes](#) : CK(414) : AC(245)

[Resveratrol may help overcome multi-drug resistance in human cancer cell lines.](#) - GMI Summary

Pubmed Data : Anticancer Res. 2010 Nov;30(11):4587-93. PMID: [21115910](#)

Article Published Date : Nov 01, 2010

Authors : Olga Wesolowska, Jerzy Wisniewski, Aleksandra Bielawska-Pohl, Maria Paprocka, Noelia Duarte, Maria-José U Ferreira, Danuta Dus, Krystyna Michalak

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Colorectal Cancer](#) : CK(768) : AC(299)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Stilbenes](#) : CK(414) : AC(245)

[Resveratrol reverses chemotherapy resistance in huma oral cancer cells.](#) - GMI Summary

Pubmed Data : Zhonghua Er Bi Yan Hou Tou Jing Wai Ke Za Zhi. 2009 Jan;44(1):63-8. PMID: [19484992](#)

Article Published Date : Jan 01, 2009

Authors : Fang Quan, Cheng-en Pan, Shao-qiang Zhang, Li-ying Yan, Liang Yu

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Oral Cancer](#) : CK(66) : AC(44)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

[Resveratrol reverses doxorubicin resistance in acute myeloid leukemia cells.](#) - GMI Summary

Pubmed Data : Environ Health. 2008;7:21. Epub 2008 May 30. PMID: [20350534](#)

Article Published Date : Jan 01, 2008

Authors : Sin Ho Kweon, Ju Han Song, Tae Sung Kim

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)
Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Stilbenes](#) : CK(414) : AC(245)

Resveratrol sensitizes resistant leukemia cells to the the effects of anticancer drugs. - GMI Summary

Pubmed Data : Neoplasma. 2006;53(5):384-92. PMID: [17013532](#)

Article Published Date : Jan 01, 2006

Authors : J Duraj, J Bodo, M Sulikova, P Rauko, J Sedlak

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Leukemia](#) : CK(694) : AC(270)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Stilbenes](#) : CK(414) : AC(245)

Sulforaphane reduces doxorubicin resistance. - GMI Summary

Pubmed Data : Mutat Res. 2006 Oct 10;601(1-2):92-101. Epub 2006 Jul 14. PMID: [16843502](#)

Article Published Date : Oct 10, 2006

Authors : Carmela Fimognari, Michael Nüsse, Monia Lenzi, Davide Sciuscio, Giorgio Cantelli-Forti, Patrizia Hrelia

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Sulforaphane potentiates oxaliplatin-induced cell growth inhibition in colorectal cancer cells. - GMI Summary

Pubmed Data : Cancer Chemother Pharmacol. 2010 Aug 6. Epub 2010 Aug 6. PMID: [20689952](#)

Article Published Date : Aug 06, 2010

Authors : Bettina M Kaminski, Andreas Weigert, Bernhard Brüne, Marco Schumacher, Uwe Wenzel, Dieter Steinhilber, Jürgen Stein, Sandra Ulrich

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Colon Cancer](#) : CK(375) : AC(230), [Colorectal Cancer](#) : CK(768) : AC(299), [Colorectal Tumors](#) : CK(15) : AC(4)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Oxaliplatin](#) : CK(6) : AC(5), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Sulforaphane works synergistically with 5-fluorouracil to inhibit high and low metastasis cell lines of salivary gland adenoid cystic carcinoma. - GMI Summary

Pubmed Data : Cancer Chemother Pharmacol. 2001 Jul;47 Suppl:S38-44. PMID: [18844240](#)

Article Published Date : Jul 01, 2001

Authors : Xiao-Feng Wang, Dong-Mei Wu, Bao-Xin Li, Yan-Jie Lu, Bao-Feng Yang

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Cancer Metastasis](#) : CK(283) : AC(132), [Salivary Gland Adenoid Cystic Carcinoma.](#) : CK(3) : AC(3), [Salivary Gland Diseases](#) : CK(34) : AC(6)

Pharmacological Actions : [Anti-metastatic : CK\(172\) : AC\(95\)](#), [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: 5-fluorouracil : CK\(88\) : AC\(23\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

The association of sulforaphane-doxorubicin may therefore allow doxorubicin to be administered at lower doses, thereby reducing its potential toxicity. - GMI Summary

Pubmed Data : Ann N Y Acad Sci. 2007 Jan;1095:62-9. PMID: [17404018](#)

Article Published Date : Jan 01, 2007

Authors : Carmela Fimognari, Monia Lenzi, Davide Sciuscio, Giorgio Cantelli-Forti, Patrizia Hrelia

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

The essential oil of thyme is cytotoxic to human ovarian cancer cells resistant to chemotherapy. - GMI Summary

Pubmed Data : Braz J Med Biol Res. 2007 Nov;40(11):1537-44. PMID: [17934650](#)

Article Published Date : Nov 01, 2007

Authors : L Ait M'barek, H Ait Mouse, A Jaâfari, R Aboufatima, A Benharref, M Kamal, J Bénard, N El Abbadi, M Bensalah, A Gamouh, A Chait, A Dalal, A Zyad

Study Type : In Vitro Study

Additional Links

Substances : [Thyme : CK\(37\) : AC\(25\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#)

The green tea polyphenol EGCG enhances the anti-cancer activity of bortezomib in multiple myeloma cells. - GMI Summary

Pubmed Data : Acta Biochim Biophys Sin (Shanghai). 2009 Dec;41(12):1018-26. PMID: [20011976](#)

Article Published Date : Dec 01, 2009

Authors : Qing Wang, Juan Li, Jingli Gu, Beihui Huang, Ying Zhao, Dong Zheng, Yan Ding, Lijin Zeng

Study Type : In Vitro Study

Additional Links

Substances : [Catechin : CK\(408\) : AC\(130\)](#), [Tea : CK\(951\) : AC\(226\)](#)

Diseases : [Multiple Myeloma : CK\(125\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Caspase-3 Activation : CK\(16\) : AC\(13\)](#), [Caspase-9 Activation : CK\(5\) : AC\(5\)](#), [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Bortezomib : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

The plant derived sesquiterpene coumarins, farnesiferol A and galbanic acid, may be promising candidates to be considered for further studies on the reversal of multidrug resistance phenotype in chemotherapy of cancer patients. - GMI Summary

Pubmed Data : Planta Med. 2011 Apr 11. Epub 2011 Apr 11. PMID: [21484672](#)

Article Published Date : Apr 11, 2011

Authors : Mohammad Yahya Hanafi-Bojd, Mehrdad Iranshahi, Fatemeh Mosaffa, Shahireh Omidvar Tehrani, Fatemeh Kalalinia, Javad Behravan

Study Type : In Vitro Study

Additional Links

Substances : [Farnesiferol A : CK\(1\) : AC\(1\)](#), [Ferula Persica : CK\(1\) : AC\(1\)](#), [Ferula Szowitsiana : CK\(1\) : AC\(1\)](#), [Galbanic Acid : CK\(1\) : AC\(1\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)
Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

[Triptolide inhibits transcription factor NF-kappa B, which translates into a therapeutic effect against various leukemias, multiple myeloma and myelodysplastic syndrome.](#) - GMI Summary

Pubmed Data : Curr Mol Pharmacol. 2010 Jul 2. Epub 2010 Jul 2. PMID: [20594187](#)

Article Published Date : Jul 02, 2010

Authors : Ota Fuchs

Study Type : In Vitro Study

Additional Links

Substances : [Tripterygium wilfordii : CK\(104\) : AC\(26\)](#), [Triptolide : CK\(11\) : AC\(9\)](#)

Diseases : [Leukemia : CK\(694\) : AC\(270\)](#), [Leukemia: Acute myelogenous leukemia \(AML\) : CK\(96\) : AC\(28\)](#), [Leukemia: Chronic Lymphocytic Leukemia \(CLL\) : CK\(52\) : AC\(24\)](#), [Leukemia: Chronic myelogenous leukemia \(CML\) : CK\(28\) : AC\(17\)](#), [Multiple Myeloma : CK\(125\) : AC\(50\)](#), [Myelodysplastic Syndrome : CK\(188\) : AC\(17\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

[Triptolide may reduce drug resistance in cancer cells.](#) - GMI Summary

Pubmed Data : Immunol Invest. 2010 Jan;39(2):159-70. PMID: [20932347](#)

Article Published Date : Jan 01, 2010

Authors : Zhao-Li Zhou, Zhi-Guo Luo, Bing Yu, Yi Jiang, Yi Chen, Jian-Ming Feng, Mei Dai, Lin-Jiang Tong, Zheng Li, Yuan-Chao Li, Jian Ding, Ze-Hong Miao

Study Type : In Vitro Study

Additional Links

Substances : [Triptolide : CK\(11\) : AC\(9\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

[Triptolide, a compound found within Tripterygium wilfordii, has therapeutic value in the treatment of multi-drug resistant cancer cells.](#) - GMI Summary

Pubmed Data : Anticancer Drugs. 2010 Feb 15. Epub 2010 Feb 15. PMID: [20154595](#)

Article Published Date : Feb 15, 2010

Authors : Yuan-Wu Chen, Gu-Jiun Lin, Yi-Ping Chuang, Wei-Tso Chia, Dueng-Yuan Hueng, Chih-Kung Lin, Shin Nieh, Huey-Kang Sytwu

Study Type : In Vitro Study

Additional Links

Substances : [Tripterygium wilfordii : CK\(104\) : AC\(26\)](#), [Triptolide : CK\(11\) : AC\(9\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

[Triptolide, a compound found within Tripterygium wilfordii, sensitizes cholangiocarcinoma cells to programmed cell death.](#) - GMI Summary

Pubmed Data : Anticancer Res. 2006 Jan-Feb;26(1A):259-65. PMID: [16475706](#)

Article Published Date : Jan 01, 2006

Authors : Tasanee Panichakul, Pakamas Intachote, Adisak Wongkajorsilp, Banchob Sriipa, Stitaya Sirisinha

Study Type : In Vitro Study

Additional Links

Substances : [Tripterygium wilfordii : CK\(104\) : AC\(26\)](#), [Triptolide : CK\(11\) : AC\(9\)](#)

Diseases : [Cholangiocarcinoma : CK\(23\) : AC\(11\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Ursolic acid induces doxorubicin-resistant liver cancer cell death. - GMI

Summary

Pubmed Data : Cancer Lett. 2010 Dec 1;298(1):128-38. Epub 2010 Jul 13. PMID: [20630652](#)

Article Published Date : Dec 01, 2010

Authors : Lu Yang, Xiaozhuo Liu, Zengbing Lu, Judy Yuet-Wa Chan, Linli Zhou, Kwok-Pui Fung, Ping Wu, Shihua Wu

Study Type : In Vitro Study

Additional Links

Substances : [Ursolic Acid](#) : CK(18) : AC(13)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Various carotenoids and flavonoids from plants may contribute to the reversal of multidrug resistance. - GMI Summary

Pubmed Data : Curr Top Med Chem. 2010;10(17):1757-68. PMID: [20645919](#)

Article Published Date : Jan 01, 2010

Authors : J Molnár, H Engi, J Hohmann, P Molnár, J Deli, O Wesolowska, K Michalak, Q Wang

Study Type : In Vitro Study

Additional Links

Substances : [Antheraxanthin](#) : CK(1) : AC(1), [Capsaicin](#) : CK(47) : AC(25), [Capsorubin](#) : CK(1) : AC(1), [Carotenoids](#) : CK(1041) : AC(114), [Chrysin](#) : CK(15) : AC(13), [Flavonoids](#) : CK(887) : AC(289), [Lutein](#) : CK(123) : AC(21), [Lycopene](#) : CK(175) : AC(32), [Paprika](#) : CK(8) : AC(6), [Phloretin](#) : CK(4) : AC(4), [Sakuranetin](#) : CK(1) : AC(1)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157), [P-glycoprotein Inhibitors](#) : CK(1) : AC(1)

Vitamin A and D have an anti-tumor effect against head and neck squamous cell carcinoma. - GMI Summary

Pubmed Data : Auris Nasus Larynx. 2003 Dec;30(4):403-12. PMID: [14656567](#)

Article Published Date : Dec 01, 2003

Authors : Kenichi Satake, Emi Takagi, Akiko Ishii, Yasumasa Kato, Yukari Imagawa, Yuu Kimura, Mamoru Tsukuda

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin A](#) : CK(358) : AC(53), [Vitamin D](#) : CK(1493) : AC(220)

Diseases : [Head and Neck Cancer](#) : CK(36) : AC(14), [Skin Cancer: Squamous Cell](#) : CK(52) : AC(16)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-fluorouracil](#) : CK(88) : AC(23)

Vitamin C (ascorbic acid) reverses chemoresistance of human non-small lung-cancer cells. - GMI Summary

Pubmed Data : Biochem J. 1994 Aug 1;301 (Pt 3):759-64. PMID: [7914401](#)

Article Published Date : Aug 01, 1994

Authors : C D Chiang, E J Song, V C Yang, C C Chao

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin C](#) : CK(1208) : AC(238)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Vitamin C (dehydroascorbic acid) and mixtures of vitamin E and beta-carotene possess antitumor properties upon radiation and increase the

chemotherapeutic activity of mitomycin C. - GMI Summary

Pubmed Data : In Vivo. 2004 Nov-Dec;18(6):795-8. PMID: [15646822](#)

Article Published Date : Nov 01, 2004

Authors : Cornelia Kammerer, Nikola Getoff

Study Type : In Vitro Study

Additional Links

Substances : [beta-Carotene](#) : CK(201) : AC(31), [Vitamin C](#) : CK(1208) : AC(238), [Vitamin E](#) : CK(1288) : AC(227)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Tumors](#) : CK(179) : AC(107)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Vitamin C augments chemotherapeutic response of cervical carcinoma cells. - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2001 Mar 30;282(2):409-15. PMID: [11401473](#)

Article Published Date : Mar 30, 2001

Authors : V G Reddy, N Khanna, N Singh

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin C](#) : CK(1208) : AC(238)

Diseases : [Cervical Cancer](#) : CK(322) : AC(65), [Human Papillomavirus \(HPV\)](#) : CK(490) : AC(23)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Vitamin D3 sensitizes breast cancer cells to chemotherapy-induced death. - GMI Summary

Pubmed Data : Immunopharmacol Immunotoxicol. 2010 Mar 17. Epub 2010 Mar 17. PMID: [10766196](#)

Article Published Date : Mar 17, 2010

Authors : Q Wang, W Yang, M S Uytingco, S Christakos, R Wieder

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin D](#) : CK(1493) : AC(220)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28)

Vitamin K2 augments 5-fluorouracil-induced growth inhibition of human hepatocellular carcinoma cells by inhibiting NF-κB activation. - GMI Summary

Pubmed Data : Oncol Rep. 2011 Jan;25(1):159-66. PMID: [21109972](#)

Article Published Date : Jan 01, 2011

Authors : Hao Zhang, Iwata Ozaki, Hiroshi Hamajima, Shinji Iwane, Hirokazu Takahashi, Yasunori Kawaguchi, Yuichiro Eguchi, Kyosuke Yamamoto, Toshihiko Mizuta

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin K](#) : CK(540) : AC(64), [Vitamin K2](#) : CK(254) : AC(27)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: 5-fluorouracil](#) : CK(88) : AC(23), [Drug Synergy](#) : CK(309) : AC(137)

A number of plant polyphenols have chemosensitizing and radiosensitizing activity. - GMI Summary

Pubmed Data : Antioxid Redox Signal. 2005 Nov-Dec;7(11-12):1630-47. PMID: [16356126](#)

Article Published Date : Nov 01, 2005

Authors : Amit K Garg, Thomas A Buchholz, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Betulinic acid](#) : CK(6) : AC(6), [Caffeic acid phenethyl ester](#) : CK(15) : AC(8), [Curcumin](#) : CK(2870) : AC(1475), [Emodin](#) : CK(30) : AC(19), [Flavonoids](#) : CK(887) : AC(289), [Genistein](#) : CK(457) : AC(176), [Green Tea](#) : CK(931) : AC(279), [Polyphenols](#) : CK(417) : AC(171), [Resveratrol](#) : CK(963) : AC(600), [Silymarin](#) : CK(36) : AC(6), [Ursolic Acid](#) : CK(18) : AC(13)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemotherapeutic Agents](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

[A variety of natural substances may function as novel anticancer agents, proteasome inhibitors and chemosensitizers.](#) - GMI Summary

Pubmed Data : Drug Resist Updat. 2006 Dec;9(6):263-73. Epub 2007 Jan 2. PMID: [17197231](#)

Article Published Date : Dec 01, 2006

Authors : Kristin R Landis-Piowar, Vesna Milacic, Di Chen, Huanjie Yang, Yunfeng Zhao, Tak Hang Chan, Bing Yan, Q Ping Dou

Study Type : Review

Additional Links

Substances : [Catechin](#) : CK(408) : AC(130), [Curcumin](#) : CK(2870) : AC(1475), [Genistein](#) : CK(457) : AC(176), [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157), [Proteasome Inhibitors](#) : CK(39) : AC(25), [Radiosensitizer](#) : CK(50) : AC(28)

Additional Keywords : [Stilbenes](#) : CK(414) : AC(245)

[Curcumin has radiosensitizing and chemosensitizing effects on tumors while protecting healthy tissue from damage.](#) - GMI Summary

Pubmed Data : Nutr Cancer. 2010 Oct;62(7):919-30. PMID: [20924967](#)

Article Published Date : Oct 01, 2010

Authors : Ajay Goel, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Radiation Induced Illness](#) : CK(994) : AC(245), [Tumors](#) : CK(179) : AC(107)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

[Curcumin may act as a chemosensitizing agent.](#) - GMI Summary

Pubmed Data : Adv Exp Med Biol. 2007;595:269-300. PMID: [17569216](#)

Article Published Date : Jan 01, 2007

Authors : Pornngarm Limtrakul

Study Type : Review

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

[Curcumin may work synergistically with taxane chemotherapy for hormone-refractory prostate cancer treatment.](#) - GMI Summary

Pubmed Data : Nutr Cancer. 2010;62(2):148-53. PMID: [20099188](#)

Article Published Date : Jan 01, 2010

Authors : Aurelie Cabrespine-Faugeras, Mathilde Bayet-Robert, Jacques-Olivier Bay, Philippe Chollet, Chantal Barthomeuf

Study Type : Review

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy](#) : CK(65) : AC(16), [Prostate](#)

[Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Taxane : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Ginger has therapeutic properties relevant to cancer treatment. - GMI Summary

Pubmed Data : J BUON. 2011 Jul-Sep;16(3):414-24. PMID: [22006742](#)

Article Published Date : Jul 01, 2011

Authors : M M Pereira, R Haniadka, P P Chacko, P L Palatty, M S Baliga

Study Type : Review

Additional Links

Substances : [Ginger : CK\(299\) : AC\(91\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [Radioprotective : CK\(453\) : AC\(180\)](#)

Resveratrol exhibits tumor chemosensitizing properties. - GMI Summary

Pubmed Data : Ann N Y Acad Sci. 2011 Jan;1215(1):150-60. PMID: [21261654](#)

Article Published Date : Jan 01, 2011

Authors : Subash C Gupta, Ramaswamy Kannappan, Simone Reuter, Ji Hye Kim, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Acute Myeloid Leukemia : CK\(51\) : AC\(21\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#), [Multiple Myeloma : CK\(125\) : AC\(50\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#), [Promyelocytic leukemia : CK\(137\) : AC\(75\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#), [Skin Cancer : CK\(438\) : AC\(174\)](#), [Tumors : CK\(179\) : AC\(107\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Resveratrol has chemosensitizing and/or anti-cancer activity. - GMI Summary

Pubmed Data : Crit Rev Food Sci Nutr. 2009 Oct;49(9):782-99. PMID: [20443159](#)

Article Published Date : Oct 01, 2009

Authors : Thomas E Kraft, Daniel Parisotto, Christina Schempp, Thomas Efferth

Study Type : Review

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Anti-Angiogenic : CK\(133\) : AC\(99\)](#), [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Selective Cytotoxicity : CK\(41\) : AC\(36\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Chemotherapy-Induced Toxicity: Cisplatin (AC 66)

Acetyl L-carnitine treatment improves symptoms of chemotherapy induced neuropathy. - GMI Summary

Pubmed Data : Eur J Cancer. 2005 Aug;41(12):1746-50. PMID: [16039110](#)

Article Published Date : Aug 01, 2005

Authors : Giulia Bianchi, Giordano Vitali, Augusto Caraceni, Sabrina Ravaglia, Giuseppe Capri, Sante Cundari, Claudio Zanna, Luca Gianni

Study Type : Human Study

Additional Links

Substances : [Acetyl-L-carnitine : CK\(213\) : AC\(37\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Neuropathic Pain : CK\(177\) : AC\(23\)](#)

Acetyl-L-carnitine appears to be an effective and well-tolerated agent for the

treatment of chemotherapy-induced peripheral neuropathy. - GMI Summary

Pubmed Data : Tumori. 2005 Mar-Apr;91(2):135-8. PMID: [15948540](#)

Article Published Date : Mar 01, 2005

Authors : Antonio Maestri, Adolfo De Pasquale Ceratti, Sante Cundari, Claudio Zanna, Enrico Cortesi, Lucio Crinò

Study Type : Human Study

Additional Links

Substances : [Acetyl-L-carnitine](#) : CK(213) : AC(37)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Neuropathic Pain](#) : CK(177) : AC(23)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11)

Alpha lipoic acid prevents mitochondrial damage and neurotoxicity in experimental chemotherapy neuropathy. - GMI Summary

Pubmed Data : Exp Neurol. 2008 Dec;214(2):276-84. Epub 2008 Sep 9. PMID: [18809400](#)

Article Published Date : Dec 01, 2008

Authors : Giorgia Melli, Michela Taiana, Francesca Camozzi, Daniela Triolo, Paola Podini, Angelo Quattrini, Franco Taroni, Giuseppe Lauria

Study Type : Human Study

Additional Links

Substances : [Alpha-Lipoic Acid](#) : CK(406) : AC(80)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Chemotherapy-Induced Toxicity: Paclitaxel](#) : CK(32) : AC(4), [Chemotherapy-Induced Toxicity: Peripheral Neuropathy](#) : CK(195) : AC(5)

Pharmacological Actions : [Neuroprotective Agents](#) : CK(927) : AC(468)

Bi-weekly administration of paclitaxel and cisplatin in patients with advanced esophageal cancer results in a median survival for all patients of 9 months. - GMI Summary

Pubmed Data : Br J Cancer. 2002 Mar 4;86(5):669-73. PMID: [11875723](#)

Article Published Date : Mar 04, 2002

Authors : M B Poole, F A L M Eskens, M E L van der Burg, T A W Splinter, P D Siersema, H W Tilanus, J Verweij, G Stoter, A van der Gaast

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Esophageal Cancer](#) : CK(293) : AC(54)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11), [Drug: Paclitaxel](#) : CK(36) : AC(13)

Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33)

Caffeine potentiates chemotherapy for metastatic osteosarcoma. - GMI Summary

Pubmed Data : J Orthop Sci. 2009 Sep;14(5):556-65. Epub 2009 Oct 3. PMID: [19802667](#)

Article Published Date : Sep 01, 2009

Authors : Hiroaki Kimura, Hiroyuki Tsuchiya, Toshiharu Shirai, Hideji Nishida, Katsuhiko Hayashi, Akihiko Takeuchi, Issei Ohnari, Katsuro Tomita

Study Type : Human Study

Additional Links

Substances : [Caffeine](#) : CK(99) : AC(17)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug Synergy](#) : CK(309) : AC(137)

Chemotherapy used in advanced gastric or gastroesophageal adenocarcinoma results in an overall median survival time of between 7-9

months. - GMI Summary

Pubmed Data : J Clin Oncol. 2010 Mar 20;28(9):1547-53. Epub 2010 Feb 16. PMID: [20159816](#)

Article Published Date : Mar 20, 2010

Authors : Jaffer A Ajani, Wuilbert Rodriguez, Gyorgy Bodoky, Vladimir Moiseyenko, Mikhail Lichinitser, Vera Gorbunova, Ihor Vynnychenko, August Garin, Istvan Lang, Silvia Falcon

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Esophageal Cancer : CK\(293\) : AC\(54\)](#), [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Additional Keywords : [Chemotherapy : CK\(20\) : AC\(2\)](#), [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#)

Oral glutamine supplementation protects lymphocytes and attenuates gut permeability in patients with esophageal cancer during radiochemotherapy. - GMI Summary

Pubmed Data : Ann Surg. 1998 Apr;227(4):485-91. PMID: [9563534](#)

Article Published Date : Apr 01, 1998

Authors : S Yoshida, M Matsui, Y Shirouzu, H Fujita, H Yamana, K Shirouzu

Study Type : Human Study

Additional Links

Substances : [Glutamine : CK\(120\) : AC\(22\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Esophageal Cancer : CK\(293\) : AC\(54\)](#), [Radiation Induced Illness : CK\(994\) : AC\(245\)](#)

Additional Keywords : [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

A combination of Bacopa, Amla (E. officinalis), Licorice (G. glabra), Indian mango (M. indica) and Clove (S. aromaticum) protect against experimentally-induced cardiac and renal damage. - GMI Summary

Pubmed Data : Phytother Res. 2005 Mar;19(3):216-21. PMID: [15934019](#)

Article Published Date : Mar 01, 2005

Authors : P A Bafna, R Balaraman

Study Type : Animal Study

Additional Links

Substances : [Amla Fruit : CK\(59\) : AC\(28\)](#), [Bacopa : CK\(47\) : AC\(18\)](#), [Clove : CK\(91\) : AC\(46\)](#), [Licorice : CK\(254\) : AC\(79\)](#), [Mango : CK\(60\) : AC\(11\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Myocardial Infarction : CK\(888\) : AC\(116\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

A compound in ginger known as 6-Gingerol prevents cisplatin-induced acute renal failure in rats. - GMI Summary

Pubmed Data : J Agric Food Chem. 2005 Apr 6;53(7):2446-50. PMID: [16971750](#)

Article Published Date : Apr 06, 2005

Authors : Anurag Kuhad, Naveen Tirkey, Sangeeta Pilkhwal, Kanwaljit Chopra

Study Type : Animal Study

Additional Links

Substances : [Catechols : CK\(15\) : AC\(11\)](#), [Ginger : CK\(299\) : AC\(91\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

A compound in mangosteen prevents cisplatin-induced toxicity to the kidneys of rats. - GMI Summary

Pubmed Data : Chem Biol Interact. 2010 Oct 6;188(1):144-50. PMID: [20603111](#)

Article Published Date : Oct 06, 2010

Authors : Yesennia Sánchez-Pérez, Rocío Morales-Bárceñas, Claudia M García-Cuellar, Rebeca López-Marure, Mariel Calderon-Oliver, José Pedraza-Chaverri, Yolanda I Chirino

Study Type : Animal Study

Additional Links

Substances : [Mangosteen](#) : CK(43) : AC(21)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

AHCC attenuates cisplatin (chemotherapy) induced side effects in tumor-bearing mice. - GMI Summary

Pubmed Data : Toxicol Appl Pharmacol. 2007 Jul 15;222(2):152-8. Epub 2007 Apr 20. PMID: [17555784](#)

Article Published Date : Jul 15, 2007

Authors : Aya Hirose, Eri Sato, Hajime Fujii, Buxiang Sun, Hiroshi Nishioka, Okezie I Aruoma

Study Type : Animal Study

Additional Links

Substances : [AHCC](#) : CK(48) : AC(17)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Tumors](#) : CK(179) : AC(107)

Alpha lipoic acid attenuates cisplatin-induced acute kidney injury in mice by suppressing renal inflammation. - GMI Summary

Pubmed Data : Nephrol Dial Transplant. 2009 Oct;24(10):3012-20. Epub 2009 May 27. PMID: [19474282](#)

Article Published Date : Oct 01, 2009

Authors : Kyung Pyo Kang, Duk Hoon Kim, Yu Jin Jung, Ae Sin Lee, Sik Lee, Sang Yong Lee, Kyu Yun Jang, Mi Jeong Sung, Sung Kwang Park, Won Kim

Study Type : Animal Study

Additional Links

Substances : [Alpha-Lipoic Acid](#) : CK(406) : AC(80)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Ascorbic acid and vitamin E protect against cisplatin induced kidney injury in mice. - GMI Summary

Pubmed Data : Clin Chim Acta. 2007 Jan;375(1-2):82-6. Epub 2006 Jun 14. PMID: [16889761](#)

Article Published Date : Jan 01, 2007

Authors : T A Ajith, S Usha, V Nivitha

Study Type : Animal Study

Additional Links

Substances : [Vitamin C](#) : CK(1208) : AC(238), [Vitamin E](#) : CK(1288) : AC(227)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Brassica rapa (Mustard Greens) have a protective effect on cisplatin-induced nephrotoxicity in cells and rats. - GMI Summary

Pubmed Data : Biol Pharm Bull. 2006 Dec;29(12):2436-41. PMID: [17142978](#)

Article Published Date : Dec 01, 2006

Authors : Yang-Hee Kim, Yong-Won Kim, Young-Jun Oh, Nam-In Back, Sun-A Chung, Hae-Gon Chung, Tae-Sook Jeong, Myung-Sook Choi, Kyung-Tae Lee

Study Type : Animal Study

Additional Links

Substances : [Mustard Greens](#) : CK(39) : AC(12)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Coenzyme Q10 treatment ameliorates acute cisplatin nephrotoxicity in mice. - GMI Summary

Pubmed Data : Toxicology. 2010 Jul-Aug;274(1-3):49-56. Epub 2010 May 25. PMID: [20510337](#)

Article Published Date : Jul 01, 2010

Authors : Amr A Fouad, Ali Ibrahim Al-Sultan, Shereen M Refaie, Mohamed T Yacoubi

Study Type : Animal Study

Additional Links

Substances : [Coenzyme Q10 : CK\(667\) : AC\(103\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Curcumin has a synergistic effect with cisplatin against fibrosarcoma. - GMI Summary

Pubmed Data : Pharmacol Res. 1999 Mar;39(3):175-9. PMID: [10094841](#)

Article Published Date : Mar 01, 1999

Authors : I Navis, P Sriganth, B Premalatha

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Fibrosarcoma : CK\(10\) : AC\(7\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin inhibits lung cancer cell metastasis. - GMI Summary

Pubmed Data : Clin Exp Metastasis. 2000;18(7):539-45. PMID: [11688958](#)

Article Published Date : Jan 01, 2000

Authors : K Ichiki, N Mitani, Y Doki, H Hara, T Misaki, I Saiki

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancer Metastasis : CK\(283\) : AC\(132\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Anti-metastatic : CK\(172\) : AC\(95\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#)

Curcumin oil has a protective effect against cisplatin-induced nephrotoxicity. - GMI Summary

Pubmed Data : J Agric Food Chem. 2007 Dec 12;55(25):10150-5. Epub 2007 Nov 15. PMID: [18001039](#)

Article Published Date : Dec 12, 2007

Authors : Anurag Kuhad, Sangeeta Pilkhwal, Sameer Sharma, Naveen Tirkey, Kanwaljit Chopra

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Inflammation : CK\(1001\) : AC\(341\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Anti-Inflammatory Agents : CK\(1159\) : AC\(412\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Curcumin prevents cisplatin-induced chromosomal aberrations in rat bone marrow cells. - GMI Summary

Pubmed Data : Mutat Res. 2000 Feb 16;465(1-2):131-7. PMID: [10708978](#)

Article Published Date : Feb 16, 2000

Authors : L M Antunes, M C Araújo, J D Darin, M L Bianchi

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Genoprotective](#) : CK(109) : AC(46)

Curcumin protects against cisplatin-induced oxidative injury in rat testis. - GMI Summary

Pubmed Data : Hum Reprod. 2009 Jul;24(7):1717-25. Epub 2009 Mar 11. PMID: [19279034](#)

Article Published Date : Jul 01, 2009

Authors : Yusuf Ozlem Ilbey, Emin Ozbek, Mustafa Cekmen, Abdulmuttalip Simsek, Alper Otuncemur, Adnan Somay

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11)

D-methionine provides excellent protection from cisplatin ototoxicity in the rat. - GMI Summary

Pubmed Data : Vasc Med. 2003 May;8(2):77-81. PMID: [8951454](#)

Article Published Date : May 01, 2003

Authors : K C Campbell, L P Rybak, R P Meech, L Hughes

Study Type : Animal Study

Additional Links

Substances : [Methionine](#) : CK(52) : AC(12)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Ellagic acid protects against cisplatin-induced kidney injury and oxidative stress in rats. - GMI Summary

Pubmed Data : Basic Clin Pharmacol Toxicol. 2007 Feb;100(2):121-6. PMID: [17244261](#)

Article Published Date : Feb 01, 2007

Authors : Ahmet Ateşşahin, Ali Osman Ceribaşı, Abdurrauf Yuce, Ozgür Bulmus, Gürkan Cikim

Study Type : Animal Study

Additional Links

Substances : [Ellagic Acid](#) : CK(77) : AC(52)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Ginsenoside-Rd, a compound found within Ginseing, has a protective effect in cisplatin-induced acute renal failure. - GMI Summary

Pubmed Data : Ren Fail. 2000 Mar;22(2):115-27. PMID: [10803758](#)

Article Published Date : Mar 01, 2000

Authors : T Yokozawa, Z W Liu

Study Type : Animal Study

Additional Links

Substances : [Ginsenosides](#) : CK(47) : AC(18)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Failure: Acute](#) : CK(39) : AC(9)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28)

Ginsenoside-Rd, a compound found within Ginseng, ameliorates cisplatin-induced renal injury. - GMI Summary

Pubmed Data : Nephron. 2001 Dec;89(4):433-8. PMID: [11721162](#)

Article Published Date : Dec 01, 2001

Authors : T Yokozawa, E Dong

Study Type : Animal Study

Additional Links

Substances : [Ginsenosides](#) : CK(47) : AC(18)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28)

Grape seed extract protects against cisplatin-induced oxidative stress in rats. - GMI Summary

Pubmed Data : Food Chem Toxicol. 2009 Jun;47(6):1176-1183. PMID: [19425235](#)

Article Published Date : Jun 01, 2009

Authors : M I Yousef, A A Saad, L K El-Shennawy

Study Type : Animal Study

Additional Links

Substances : [Grape Seed Extract](#) : CK(172) : AC(58)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Green tea tannin eliminates oxidative stress and is beneficial to renal function in cisplatin-induced nephropathy in rats. - GMI Summary

Pubmed Data : J Pharm Pharmacol. 1999 Nov;51(11):1325-31. PMID: [10632092](#)

Article Published Date : Nov 01, 1999

Authors : T Yokozawa, T Nakagawa, K I Lee, E J Cho, K Terasawa, S Takeuchi

Study Type : Animal Study

Additional Links

Substances : [Green Tea](#) : CK(931) : AC(279), [Tannic Acid](#) : CK(20) : AC(16)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28)

L-arginine has a protective effect against cisplatin-induced renal oxidative stress and toxicity. - GMI Summary

Pubmed Data : Basic Clin Pharmacol Toxicol. 2005 Aug;97(2):91-7. PMID: [15998355](#)

Article Published Date : Aug 01, 2005

Authors : Samira Saleh, Ebtehal El-Demerdash

Study Type : Animal Study

Additional Links

Substances : [Arginine](#) : CK(960) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Enzyme Inhibitors](#) : CK(385) : AC(210), [Nitric Oxide Enhancer](#) : CK(127) : AC(33)

Lycopene protects against cisplatin-induced kidney injury and oxidative stress in rats. - GMI Summary

Pubmed Data : Toxicology. 2005 Sep 1;212(2-3):116-23. PMID: [15946783](#)

Article Published Date : Sep 01, 2005

Authors : Ahmet Atessahin, Seval Yilmaz, Izzet Karahan, Ali Osman Ceribasi, Aziz Karaoglu

Study Type : Animal Study

Additional Links

Substances : [Lycopene](#) : CK(175) : AC(32)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Maitake beta-glucan enhances therapeutic effect and reduces myelosuppression and nephrotoxicity of cisplatin in mice. - GMI Summary

Pubmed Data : Int Immunopharmacol. 2009 May;9(5):620-6. Epub 2009 Feb 26. PMID: [19249389](#)

Article Published Date : May 01, 2009

Authors :

Yuki Masuda, Munechika Inoue, Ayu Miyata, Shigeto Mizuno, Hiroaki Nanba

Study Type : Animal Study

Additional Links

Substances : [Beta-glucan](#) : CK(223) : AC(41), [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Myelotoxicity](#) : CK(31) : AC(8)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Mangosteen protects against cisplatin-induced kidney toxicity. - GMI Summary

Pubmed Data : Free Radic Res. 2009;43(11):1122-32. PMID: [19863372](#)

Article Published Date : Jan 01, 2009

Authors : Jazmin M Pérez-Rojas, Cristino Cruz, Patricia García-López, Dolores J Sánchez-González, Claudia M Martínez-Martínez, Gisela Ceballos, Magali Espinosa, Jorge Meléndez-Zajgla, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Mangosteen](#) : CK(43) : AC(21)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage](#) : CK(118) : AC(41)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Melatonin, a pineal secretory product with antioxidant properties, protects against cisplatin-induced nephrotoxicity in rats. - GMI Summary

Pubmed Data : J Pineal Res. 2001 Apr;30(3):129-38. PMID: [11316323](#)

Article Published Date : Apr 01, 2001

Authors : M Hara, M Yoshida, H Nishijima, M Yokosuka, M Iigo, R Ohtani-Kaneko, A Shimada, T Hasegawa, Y Akama, K Hirata

Study Type : Animal Study

Additional Links

Substances : [Melatonin](#) : CK(454) : AC(115)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84)

Piperine protects against cisplatin-induced toxicity in auditory cells. - GMI Summary

Pubmed Data : J Nutr Biochem. 2007 Sep;18(9):615-22. Epub 2007 Apr 5. PMID: [17418561](#)

Article Published Date : Sep 01, 2007

Authors : Byung-Min Choi, Sung-Min Kim, Tae-Kwang Park, Guang Li, Sung-Jae Hong, Raekil Park, Hun-Taeg Chung, Bok-Ryang Kim

Study Type : Animal Study

Additional Links

Substances : [Piperidines](#) : CK(45) : AC(17)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#)

Resveratrol exhibits chemosensitizing and chemopreventive properties. - GMI Summary

Pubmed Data : Chemotherapy. 2010;56(1):60-5. Epub 2010 Mar 19. PMID: [20299793](#)

Article Published Date : Jan 01, 2010

Authors : A M El-Mowafy, M E El-Mesery, H A Salem, M M Al-Gayyar, M M Darweish

Study Type : Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#), [Stilbenes : CK\(123\) : AC\(88\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemopreventive : CK\(1254\) : AC\(342\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Malondialdehyde Down-regulation : CK\(68\) : AC\(18\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

Rhus verniciflua Stokes prevents cisplatin-induced cytotoxicity and reactive oxygen species production in renal cells and intact mice. - GMI Summary

Pubmed Data : Phytomedicine. 2009 Mar;16(2-3):188-97. Epub 2009 Jan 15. PMID: [19150236](#)

Article Published Date : Mar 01, 2009

Authors : Joo-Ho Lee, Hyo-Jung Lee, Hyo-Jeong Lee, Won-Cheol Choi, Seong-Woo Yoon, Seong-Gyu Ko, Kwang Seok Ahn, Seung-Hoon Choi, Kyoo-Seok Ahn, John C Lieske, Sung-Hoon Kim

Study Type : Animal Study

Additional Links

Substances : [Sumac : CK\(37\) : AC\(16\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Royal jelly and green tea have a protective effect against cisplatin-induced nephrotoxicity in mice. - GMI Summary

Pubmed Data : J Chromatogr B Analyt Technol Biomed Life Sci. 2004 Apr 25;803(2):225-31. PMID: [19857080](#)

Article Published Date : Apr 25, 2004

Authors : Kürşad Yapar, Kültiğın Cavuşoğlu, Ertan Oruç, Emine Yalçın

Study Type : Animal Study

Additional Links

Substances : [Green Tea : CK\(931\) : AC\(279\)](#), [Royal Jelly : CK\(59\) : AC\(32\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Kidney Damage: Drug-Induced : CK\(86\) : AC\(18\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Rubia cordifolia ameliorates cisplatin-induced nephrotoxicity in mice. - GMI Summary

Pubmed Data : J Cancer Res Ther. 2008 Jul-Sep;4(3):111-5. PMID: [18923202](#)

Article Published Date : Jul 01, 2008

Authors : Jisha Joy, Cherupally Krishnan Krishnan Nair

Study Type : Animal Study

Additional Links

Substances : [Rubia Cordifolia : CK\(8\) : AC\(4\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Saffron protects against chromosomal damage induced by cisplatin, mitomycin-C and urethane. - GMI Summary

Pubmed Data : Asia Pac J Clin Nutr. 2003;12(4):474-6. PMID: [14672873](#)

Article Published Date : Jan 01, 2003

Authors : Kumpati Premkumar, Suresh K Abraham, Sathiyavedu T Santhiya, Arabandi Ramesh

Study Type : Animal Study

Additional Links

Substances : [Saffron](#) : CK(123) : AC(32)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Chemopreventive](#) : CK(1254) : AC(342)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Sulforaphane prevents cell death and inflammation in nephropathy. - GMI Summary

Pubmed Data : J Nutr Biochem. 2011 Jun 16. Epub 2011 Jun 16. PMID: [21684138](#)

Article Published Date : Jun 16, 2011

Authors : Carlos Enrique Guerrero-Beltrán, Partha Mukhopadhyay, Béla Horváth, Mohanraj Rajesh, Edilia Tapia, Itzhel García-Torres, José Pedraza-Chaverri, Pál Pacher

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Nephropathy](#) : CK(161) : AC(29)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Problem Substances : [Cisplatin](#) : CK(15) : AC(2)

Adverse Pharmacological Actions : [Nephrotoxic](#) : CK(143) : AC(33)

Sulforaphane protects against cisplatin-induced liver and mitochondrial damage. - GMI Summary

Pubmed Data : Toxicology. 2011 Aug 15 ;286(1-3):20-7. Epub 2011 May 6. PMID: [21575670](#)

Article Published Date : Aug 15, 2011

Authors : Leobardo Gaona-Gaona, Eduardo Molina-Jijón, Edilia Tapia, Cecilia Zazueta, Rogelio Hernández-Pando, Mariel Calderón-Oliver, Guillermo Zarco-Márquez, Enrique Pinzón, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemically-Induced Liver Damage](#) : CK(451) : AC(174), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293)

Problem Substances : [Cisplatin](#) : CK(15) : AC(2)

Adverse Pharmacological Actions : [Hepatotoxic](#) : CK(262) : AC(69)

Sulforaphane protects against cisplatin-induced nephrotoxicity. - GMI Summary

Pubmed Data : Int J Sport Nutr Exerc Metab. 2007 Aug;17(4):352-63. PMID: [19913604](#)

Article Published Date : Aug 01, 2007

Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Edilia Tapia, Omar N Medina-Campos, Dolores Javier Sánchez-González, Claudia María Martínez-Martínez, Karla Mariana Ortiz-Vega, Martha Franco, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) :

Taurine has a protective effect against cisplatin-induced nephrotoxicity in rats. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2007 May;32(9):835-9. PMID: [11901256](#)

Article Published Date : May 01, 2007

Authors : Sherif Y Saad, Ammar C Al-Rikabi

Study Type : Animal Study

Additional Links

Substances : [Taurine : CK\(145\) : AC\(33\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Kidney Damage: Drug-Induced : CK\(86\) : AC\(18\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

Testosterone has a preventive role on cisplatin-induced gonadal toxicity. - GMI Summary

Pubmed Data : Fertil Steril. 2010 Mar 15;93(5):1388-93. Epub 2009 Apr 10. PMID: [19362306](#)

Article Published Date : Mar 15, 2010

Authors : Alireza Aminsharifi, Saeed Shakeri, Ali Ariafar, Behnam Moeinjahromi, Prikala V Kumar, Saeed Karbalaee doost

Study Type : Animal Study

Additional Links

Substances : [Testosterone : CK\(133\) : AC\(25\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Zingiber officinale (Ginger) alone and in combination with vitamin E partially ameliorated cisplatin-induced nephrotoxicity. - GMI Summary

Pubmed Data : Food Chem Toxicol. 2007 Jun;45(6):921-7. Epub 2006 Nov 29. PMID: [17210214](#)

Article Published Date : Jun 01, 2007

Authors : T A Ajith, V Nivitha, S Usha

Study Type : Animal Study

Additional Links

Substances : [Ginger : CK\(299\) : AC\(91\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

A cannabinoid receptor 2 agonist attenuates cisplatin-induced apoptosis in auditory cells. - GMI Summary

Pubmed Data : J Neurosci Res. 2007 Mar;85(4):896-905. PMID: [17183590](#)

Article Published Date : Mar 01, 2007

Authors : Hyun-Ja Jeong, Su-Jin Kim, Phil-Dong Moon, Na-Hyun Kim, Jung-Sun Kim, Rae-Kil Park, Min-Sun Kim, Byung-Rim Park, Sejin Jeong, Jae-Young Um, Hyung-Min Kim, Seung-Heon Hong

Study Type : In Vitro Study

Additional Links

Substances : [Cannabis : CK\(702\) : AC\(133\)](#)

Diseases : [Auditory Diseases : CK\(3\) : AC\(2\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Anti-Apoptotic : CK\(59\) : AC\(37\)](#)

A tocotrienol-rich fraction from rice bran enhances cisplatin-induced cytotoxicity in human mesothelioma cells. - GMI Summary

Pubmed Data : Phytother Res. 2010 Feb 1. Epub 2010 Feb 1. PMID: [20127663](#)

Article Published Date : Feb 01, 2010

Authors : Keisuke Nakashima, Nantiga Virgona, Mio Miyazawa, Takashi Watanabe, Tomohiro Yano

Study Type : In Vitro Study

Additional Links

Substances : [Rice Bran](#) : CK(29) : AC(14), [Tocotrienols](#) : CK(21) : AC(16)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Mesothelioma](#) : CK(30) : AC(9)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Aloe emodin may decrease the anticancer activity of the chemo-agent cisplatin.](#) - GMI Summary

Pubmed Data : Cell Mol Life Sci. 2005 Jun ;62(11):1275-82. PMID: [15905960](#)

Article Published Date : Jun 01, 2005

Authors : S Mijatovic, D Maksimovic-Ivanic, J Radovic, D Miljkovic, G N Kaludjerovic, T J Sabo, V Trajkovic

Study Type : In Vitro Study

Additional Links

Substances : [Aloe Vera](#) : CK(191) : AC(44), [Emodin](#) : CK(30) : AC(19)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Enzyme Inhibitors](#) : CK(385) : AC(210)

Problem Substances : [Cisplatin](#) : CK(15) : AC(2)

[Curcumin induces cell cycle arrest and programmed cell death in cisplatin-resistant human ovarian cancer cells.](#) - GMI Summary

Pubmed Data : Cancer Biol Ther. 2007 Feb;6(2):178-84. Epub 2007 Feb 5. PMID: [17218783](#)

Article Published Date : Feb 01, 2007

Authors : Nathan M Weir, Karuppaiyah Selvendiran, Vijay Kumar Kutala, Liyue Tong, Shilpa Vishwanath, Murugesan Rajaram, Susheela Tridandapani, Shrikant Anant, Periannan Kuppusamy

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

[Curcumin inhibits growth and sensitizes ovarian cancer cells to cisplatin-mediated killing.](#) - GMI Summary

Pubmed Data : Carcinogenesis. 1982;3(11):1331-8. PMID: [12447990](#)

Article Published Date : Jan 01, 1982

Authors : Marion M Chan, Dunne Fong, Kenneth J Soprano, William F Holmes, Harry Heverling

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475), [Flavonoids](#) : CK(887) : AC(289), [Quercetin](#) : CK(312) : AC(140)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Interleukin-6 Downregulation](#) : CK(497) : AC(133)

[Curcumin may have chemosensitizing properties in the treatment of human ovarian cancer.](#) - GMI Summary

Pubmed Data : Cell Prolif. 2009 Apr;42(2):195-206. Epub 2009 Feb 18. PMID: [19236381](#)

Article Published Date : Apr 01, 2009

Authors : M Montopoli, E Ragazzi, G Foldi, L Caparrotta

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug: Oxaliplatin : CK\(6\) : AC\(5\)](#)

[Curcumin may sensitize cancer cells to chemotherapy. - GMI Summary](#)

Pubmed Data : Mol Cancer Ther. 2006 Apr;5(4):952-61. PMID: [16648566](#)

Article Published Date : Apr 01, 2006

Authors : Deborah Chirnomas, Toshiyasu Taniguchi, Michelle de la Vega, Ami P Vaidya, Maria Vasserman, Anne-Renee Hartman, Richard Kennedy, Rosemary Foster, Jennifer Mahoney, Michael V Seiden, Alan D D'Andrea

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [DNA damage : CK\(687\) : AC\(287\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

[Curcumin promotes programmed cell death of cisplatin-resistant human lung carcinoma cells. - GMI Summary](#)

Pubmed Data : Zhongguo Fei Ai Za Zhi. 2010 Apr;13(4):301-6. PMID: [20677554](#)

Article Published Date : Apr 01, 2010

Authors : Ni Tang, Jian Zhang, Yongping Du

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin : CK\(4\) : AC\(3\)](#), [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

[Curcumin sensitizes lung cancer cells to cisplatin-induced programmed cell death. - GMI Summary](#)

Pubmed Data : Phytother Res. 1999 Jun;13(4):318-22. PMID: [19283527](#)

Article Published Date : Jun 01, 1999

Authors : Pithi Chanvorachote, Varisa Pongrakhananon, Sumalee Wannachaiyasit, Sudjit Luanpitpong, Yon Rojanasakul, Ubonthip Nimmannit

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

[Emodin enhances sensitivity of gallbladder cancer cells to chemotherapy. - GMI Summary](#)

Pubmed Data : Biochem Pharmacol. 2010 Apr 15;79(8):1134-40. Epub 2009 Dec 11. PMID: [20005210](#)

Article Published Date : Apr 15, 2010

Authors : Wei Wang, Yue-ping Sun, Xin-zhi Huang, Min He, Yu-ying Chen, Gui-ying Shi, Hui Li, Jing

Yi, Jian Wang

Study Type : In Vitro Study

Additional Links

Substances : [Emodin](#) : CK(30) : AC(19)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Gallbladder Cancer](#) : CK(56) : AC(10)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Genistein acts as a chemosensitizer, augmenting the efficacy of cisplatin in pancreatic cancer. - GMI Summary

Pubmed Data : Int J Cancer. 2007 Feb 15;120(4):906-17. PMID: [17131310](#)

Article Published Date : Feb 15, 2007

Authors : Sanjeev Banerjee, Yuxiang Zhang, Zhiwei Wang, Mingxin Che, Paul J Chiao, James L Abbruzzese, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor](#) : CK(141) : AC(68), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin](#) : CK(4) : AC(3), [Drug: Cisplatin](#) : CK(31) : AC(11), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Genistein acts as a chemosensitizer, contributing to overcoming drug-resistance in prostate, breast, lung and pancreatic cancers. - GMI Summary

Pubmed Data : Cancer Res. 2005 Aug 1;65(15):6934-42. PMID: [16061678](#)

Article Published Date : Aug 01, 2005

Authors : Yiwei Li, Fakhara Ahmed, Shadan Ali, Philip A Philip, Omer Kucuk, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185), [Pancreatic Cancer](#) : CK(524) : AC(160), [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Gold exhibits antitumor effects by growth suppression of cultured cancer cells. Gold is less toxic than cisplatin. - GMI Summary

Pubmed Data : Cancer Biother Radiopharm. 1998 Jun;13(3):189-92. PMID: [10850355](#)

Article Published Date : Jun 01, 1998

Authors : T Koide, T Kojima, H Kamei

Study Type : In Vitro Study

Additional Links

Substances : [Gold](#) : CK(3) : AC(2)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Colon Cancer](#) : CK(375) : AC(230), [Lymphoma](#) : CK(211) : AC(68)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Cell cycle arrest](#) : CK(371) : AC(311)

Additional Keywords : [Natural Substances Versus Drugs](#) : CK(1003) : AC(167)

Luteolin has anti-proliferative and chemosensitizing effects on human gastric cancer cells. - GMI Summary

Pubmed Data : Mol Cell Biochem. 2008 Jun;313(1-2):125-32. Epub 2008 Apr 9. PMID: [18398671](#)

Article Published Date : Jun 01, 2008

Authors : Bin Wu, Qiang Zhang, Weiming Shen, Jun Zhu

Study Type : In Vitro Study

Additional Links

Substances : [Luteolin : CK\(61\) : AC\(51\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

[Luteolin suppresses cisplatin-induced cell death in auditory cells.](#) - GMI Summary

Pubmed Data : J Med Food. 2008 Jun;11(2):230-6. PMID: [18598163](#)

Article Published Date : Jun 01, 2008

Authors : Byung-Min Choi, Dai-Won Lim, Ju-A Lee, Shang Shang Gao, Dae Young Kwon, Bok-Ryang Kim

Study Type : In Vitro Study

Additional Links

Substances : [Luteolin : CK\(61\) : AC\(51\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Anti-Apoptotic : CK\(59\) : AC\(37\)](#)

[Nicotine induces resistance to chemotherapy by modulating mitochondrial signaling in lung cancer.](#) - GMI Summary

Pubmed Data : Am J Respir Cell Mol Biol. 2009 Feb;40(2):135-46. Epub 2008 Aug 1. PMID: [18676776](#)

Article Published Date : Feb 01, 2009

Authors : Jingmei Zhang, Opal Kamdar, Wei Le, Glenn D Rosen, Daya Upadhyay

Study Type : In Vitro Study

Additional Links

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#), [Smoking : CK\(508\) : AC\(68\)](#)

Problem Substances : [Nicotine : CK\(52\) : AC\(6\)](#)

[Nicotine induces resistance to chemotherapy in nasal epithelial cancer.](#) - GMI Summary

Pubmed Data : Am J Rhinol Allergy. 2010 Mar;24(2):e73-7. PMID: [20338106](#)

Article Published Date : Mar 01, 2010

Authors : Tianjie Shen, Wei Le, Allison Yee, Opal Kamdar, Peter H Hwang, Daya Upadhyay

Study Type : In Vitro Study

Additional Links

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Skin Cancer: Squamous Cell : CK\(52\) : AC\(16\)](#), [Smoking : CK\(508\) : AC\(68\)](#)

Problem Substances : [Nicotine : CK\(52\) : AC\(6\)](#)

Adverse Pharmacological Actions : [Carcinogen : CK\(59\) : AC\(11\)](#)

[Quercetin pretreatment sensitizes human cervical cells to cisplatin-induced programmed cell death.](#) - GMI Summary

Pubmed Data : Biochem Pharmacol. 2005 May 1;69(9):1343-50. PMID: [15826605](#)

Article Published Date : May 01, 2005

Authors : J Jakubowicz-Gil, R Paduch, T Piersiak, K Głowniak, A Gawron, M Kandefer-Szerszeń

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cervical Cancer : CK\(322\) : AC\(65\)](#),

[Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)
Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)
Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Rehmannia protects against cisplatin-induced toxicity to auditory cells in a dose dependent fashion. - GMI Summary

Pubmed Data : J Ethnopharmacol. 2006 Oct 11;107(3):383-8. Epub 2006 Apr 6. PMID: [16698207](#)
Article Published Date : Oct 11, 2006
Authors : Hyeon-Hee Yu, Se-Jeong Seo, Yeon-Hwa Kim, Hae-Youn Lee, Rae-Kil Park, Hong-Seob So, Seon Li Jang, Yong-Ouk You
Study Type : In Vitro Study
Additional Links
Substances : [Rehmannia : CK\(145\) : AC\(36\)](#)
Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Reishi extract protects against radiation and chemotherapy associated toxicity. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2006 Oct;31(19):1618-22. PMID: [17165589](#)
Article Published Date : Oct 01, 2006
Authors : Dan-Hua Wang, Xin-Chu Weng
Study Type : In Vitro Study
Additional Links
Substances : [Reishi Mushroom : CK\(109\) : AC\(43\)](#)
Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Liver Cancer : CK\(758\) : AC\(265\)](#), [Radiation Disaster Associated Toxicity : CK\(942\) : AC\(268\)](#)
Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Radioprotective : CK\(453\) : AC\(180\)](#)

Resveratrol protects against Cisplatin-induced cardiotoxicity by alleviating oxidative damage. - GMI Summary

Pubmed Data : Cancer Biother Radiopharm. 2009 Dec;24(6):675-80. PMID: [20025547](#)
Article Published Date : Dec 01, 2009
Authors : Jingxuan Wang, Dongning He, Qingyuan Zhang, Ying Han, Shi Jin, Feng Qi
Study Type : In Vitro Study
Additional Links
Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)
Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)
Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#)
Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Sulforaphane protects against cisplatin-induced mitochondrial alterations associated with renal damage. - GMI Summary

Pubmed Data : Toxicol Lett. 2010 Nov 10;199(1):80-92. Epub 2010 Aug 21. PMID: [20732396](#)
Article Published Date : Nov 10, 2010
Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Eduardo Martínez-Abundis, Edilia Tapia, Guillermo Zarco-Márquez, Cecilia Zazueta, José Pedraza-Chaverri
Study Type : In Vitro Study
Additional Links
Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)
Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Mitochondrial Diseases : CK\(145\) : AC\(50\)](#)
Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)
Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

Maitake enhances granulopoiesis and mobilization of granulocytes by increasing granulocyte colony-stimulating factor. - GMI Summary

Pubmed Data : Int Immunopharmacol. 2009 Jun 30. PMID: [19573626](#)

Article Published Date : Jun 30, 2009

Authors : Koichi Ito, Yuki Masuda, Yoshihiko Yamasaki, Yoshinobu Yokota, Hiroaki Nanba

Study Type : Commentary

Additional Links

Substances : [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Leukopenia: Chemotherapy Induced](#) : CK(25) : AC(5), [Neutropenia](#) : CK(90) : AC(22), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17), [Neutropenia: Cyclic](#) : CK(48) : AC(16)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\)](#) : CK(33) : AC(10)

Cancers: All (AC 17)

There is evidence to support the use of topical calendula for prophylaxis of acute dermatitis during radiotherapy and Traumeel S mouthwash in the treatment of chemotherapy-induced stomatitis. - GMI Summary

Pubmed Data : Cochrane Database Syst Rev. 2009(2):CD004845. Epub 2009 Apr 15. PMID: [19370613](#)

Article Published Date : Jan 01, 2009

Authors : Sosie Kassab, Mike Cummings, Saul Berkovitz, Robbert van Haselen, Peter Fisher

Study Type : Meta Analysis

Additional Links

Substances : [Calendula](#) : CK(41) : AC(4), [Homeopathic Medicine: All](#) : CK(501) : AC(48), [Homeopathic Medicine: Traumeel](#) : CK(40) : AC(3)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Dermatitis](#) : CK(1129) : AC(101), [Radiation Induced Illness](#) : CK(994) : AC(245), [Radiation Induced Illness: Dermatitis](#) : CK(30) : AC(2), [Stomatitis: Aphthous](#) : CK(30) : AC(3)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

A combination of geranium extract, Ganoderma lucidum, Codonopsis pilosula and Angelicae sinensis, improve the condition of cancer patients receiving chemotherapy/radiotherapy. - GMI Summary

Pubmed Data : Phytother Res. 2009 Jun;23(6):785-90. PMID: [19145638](#)

Article Published Date : Jun 01, 2009

Authors : Shu-Ru Zhuang, Su-Lin Chen, Jih-Hsin Tsai, Chi-Chou Huang, Tzu-Chin Wu, Wen-Shan Liu, Hsien-Chun Tseng, Hong-Sen Lee, Min-Chang Huang, Guang-Tzuu Shane, Cheng-Hua Yang, You-Cheng Shen, Yeong-Yu Yan, Chin-Kun Wang

Study Type : Human Study

Additional Links

Substances : [Angelica](#) : CK(73) : AC(28), [Codonopsis pilosula](#) : CK(23) : AC(4), [Geranium](#) : CK(16) : AC(8), [Reishi Mushroom](#) : CK(109) : AC(43)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Radiation Induced Illness](#) : CK(994) : AC(245)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

A proprietary honey-based herbal formula reduces chemotherapy-induced neutropenia and the need for colony-stimulating factors. - GMI Summary

Pubmed Data : Med Oncol. 2006;23(4):549-52. PMID: [17303914](#)

Article Published Date : Jan 01, 2006

Authors : Jamal Zidan, Lika Shetver, Anthony Gershuny, Amira Abzah, Sigalit Tamam, Moshe Stein, Eitan Friedman

Study Type : Human Study

Additional Links

Substances : [Honey: Life Mel Proprietary Formula](#) : CK(205) : AC(31)
Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186),
[Neutropenia](#) : CK(90) : AC(22), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17)
Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)
Additional Keywords : [Colony-Stimulating Factors \(CSFs\)](#) : CK(33) : AC(10)

Carnitine improves fatigue, quality of life, lean body mass and appetite in advanced cancer patients undergoing anticancer therapy. - GMI Summary

Pubmed Data : Nutrition. 2006 Feb;22(2):136-45. PMID: [16459226](#)

Article Published Date : Feb 01, 2006

Authors : Giulia Gramignano, Maria Rita Lusso, Clelia Madeddu, Elena Massa, Roberto Serpe, Laura Deiana, Giovanna Lamonica, Mariele Dessì, Carla Spiga, Giorgio Astara, Antonio Macciò, Giovanni Mantovani

Study Type : Human Study

Additional Links

Substances : [Carnitine](#) : CK(650) : AC(67)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy](#) : CK(65) : AC(16), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Fatigue](#) : CK(218) : AC(29), [Quality of Life: Poor](#) : CK(170) : AC(16)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Pre-treatment with curcumin enhances oral bioavailability of docetaxel in rats. - GMI Summary

Pubmed Data : Int J Pharm. 2010 Oct 31;399(1-2):116-20. Epub 2010 Aug 18. PMID: [20727390](#)

Article Published Date : Oct 31, 2010

Authors : Yi-Dong Yan, Dae Hwan Kim, Jun Ho Sung, Chul Soon Yong, Han Gon Choi

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy](#) : CK(65) : AC(16)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157), [Enzyme Inhibitors](#) : CK(385) : AC(210)

Additional Keywords : [Chemotherapeutic Synergy: Docetaxel](#) : CK(3) : AC(2), [Drug: Docetaxel](#) : CK(2) : AC(1)

A cannabinoid quinone has cancer-destroying activity superior to doxorubicin without cardiotoxicity, in vitro. - GMI Summary

Pubmed Data : Expert Opin Investig Drugs. 2007 Sep;16(9):1405-13. PMID: [17714026](#)

Article Published Date : Sep 01, 2007

Authors : Maximilian Peters, Natalya M Kogan

Study Type : In Vitro Study

Additional Links

Substances : [Marihuana](#) : CK(702) : AC(133)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Additional Keywords : [Superiority of Natural Substances versus Drugs](#) : CK(897) : AC(173)

Acerola demonstrates cytotoxic potential against tumor cell lines. - GMI Summary

Pubmed Data : Phytother Res. 2004 Mar;18(3):212-23. PMID: [15103668](#)

Article Published Date : Mar 01, 2004

Authors :

Noboru Motohashi, Hidetsugu Wakabayashi, Teruo Kurihara, Hidetaka Fukushima, Tomoko Yamada, Masami Kawase, Yoshitaka Sohara, Satoru Tani, Yoshiaki Shirataki, Hiroshi Sakagami, Kazue Satoh, Hideki Nakashima, Annamária Molnár, Gabriella Spengler, Nóra Gyémánt, Katalin Ugocsai, Joseph Molnár

Study Type : In Vitro Study

Additional Links

Substances : [Acerola : CK\(10\) : AC\(7\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Antitumor : CK\(1\) : AC\(1\)](#)

[Andrographis contains a compound which enhances chemosensitivity of cancer cells to doxorubicin. - GMI Summary](#)

Pubmed Data : Biochem Pharmacol. 2010 May 1;79(9):1242-50. Epub 2009 Dec 21. PMID: [20026083](#)

Article Published Date : May 01, 2010

Authors : Jing Zhou, Choon-Nam Ong, Gang-Min Hur, Han-Ming Shen

Study Type : In Vitro Study

Additional Links

Substances : [Andrographis : CK\(80\) : AC\(34\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

[Carotenoids extracted from red paprika, Valencia orange and Golden delicious apple exhibit anti-H. pylori and anti-multidrug resistance activity. - GMI Summary](#)

Pubmed Data : Phytother Res. 2005 Aug;19(8):700-7. PMID: [16177974](#)

Article Published Date : Aug 01, 2005

Authors : Péter Molnár, Masami Kawase, Kazue Satoh, Yoshitaka Sohara, Toru Tanaka, Satoru Tani, Hiroshi Sakagami, Hideki Nakashima, Noboru Motohashi, Nóra Gyémánt, Joseph Molnár

Study Type : In Vitro Study

Additional Links

Substances : [Apple: Golden Delicious : CK\(2\) : AC\(2\)](#), [Carotenoids : CK\(1041\) : AC\(114\)](#), [Orange : CK\(127\) : AC\(28\)](#), [Paprika : CK\(8\) : AC\(6\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Helicobacter Pylori Infection : CK\(294\) : AC\(61\)](#)

Pharmacological Actions : [Anti-Bacterial Agents : CK\(901\) : AC\(280\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

[Crocetin exhibits anti-cancer and chemosensitizing properties. - GMI Summary](#)

Pubmed Data : Acta Pharmacol Sin. 2011 Oct 10. Epub 2011 Oct 10. PMID: [21986580](#)

Article Published Date : Oct 10, 2011

Authors : Ying-Jia Zhong, Fang Shi, Xue-Lian Zheng, Qiong Wang, Lan Yang, Hong Sun, Fan He, Lin Zhang, Yong Lin, Yong Qin, Lin-Chuan Liao, Xia Wang

Study Type : In Vitro Study

Additional Links

Substances : [Crocetin : CK\(5\) : AC\(2\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

[Curcumin displays chemosensitizing activity in combination with paclitaxel. - GMI Summary](#)

Pubmed Data : Int J Biochem Cell Biol. 2010 Sep 29. Epub 2010 Sep 29. PMID: [20883815](#)

Article Published Date : Sep 29, 2010

Authors : Smitha V Bava, Chanickal N Sreekanth, Arun Kumar T Thulasidasan, Nikhil P Anto, Vino T Cherian, Vineshkumar T Puliyappadamba, Sajna G Menon, Santhosh D Ravichandran, Ruby John Anto

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cervical Cancer : CK\(322\) : AC\(65\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Delta-tocotrienol acts as a chemosensitizing agent. - GMI Summary

Pubmed Data : Br J Pharmacol. 2010 Dec 30. Epub 2010 Dec 30. PMID: [21198544](#)

Article Published Date : Dec 30, 2010

Authors : [No authors listed]

Study Type : In Vitro Study

Additional Links

Substances : [Tocotrienol: Delta : CK\(7\) : AC\(7\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Gamma tocotrienol has a chemosensitizing property. - GMI Summary

Pubmed Data : J Biol Chem. 2010 Oct 22;285(43):33520-8. Epub 2010 Aug 18. PMID: [20720018](#)

Article Published Date : Oct 22, 2010

Authors : Ramaswamy Kannappan, Vivek R Yadav, Bharat B Aggarwal

Study Type : In Vitro Study

Additional Links

Substances : [Tocotrienol: Gamma : CK\(12\) : AC\(12\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#), [Vitamin E: Gamma-tocotrienol : CK\(42\) : AC\(11\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#)

Pharmacological Actions : [Anti-Angiogenic : CK\(133\) : AC\(99\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Vitamin C (dehydroascorbic acid) and mixtures of vitamin E and beta-carotene possess antitumor properties upon radiation and increase the chemotherapeutic activity of mitomycin C. - GMI Summary

Pubmed Data : In Vivo. 2004 Nov-Dec;18(6):795-8. PMID: [15646822](#)

Article Published Date : Nov 01, 2004

Authors : Cornelia Kammerer, Nikola Getoff

Study Type : In Vitro Study

Additional Links

Substances : [beta-Carotene : CK\(201\) : AC\(31\)](#), [Vitamin C : CK\(1208\) : AC\(238\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Tumors : CK\(179\) : AC\(107\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Curcumin has radiosensitizing and chemosensitizing effects on tumors while protecting healthy tissue from damage. - GMI Summary

Pubmed Data : Nutr Cancer. 2010 Oct;62(7):919-30. PMID: [20924967](#)

Article Published Date : Oct 01, 2010

Authors : Ajay Goel, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Radiation Induced Illness : CK\(994\) : AC\(245\)](#), [Tumors : CK\(179\) : AC\(107\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

Ginger has therapeutic properties relevant to cancer treatment. - GMI Summary

Pubmed Data : J BUON. 2011 Jul-Sep;16(3):414-24. PMID: [22006742](#)

Article Published Date : Jul 01, 2011

Authors : M M Pereira, R Haniadka, P P Chacko, P L Palatty, M S Baliga

Study Type : Review

Additional Links

Substances : [Ginger : CK\(299\) : AC\(91\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radioprotective : CK\(453\) : AC\(180\)](#)

[Resveratrol has chemosensitizing and/or anti-cancer activity.](#) - GMI Summary

Pubmed Data : Crit Rev Food Sci Nutr. 2009 Oct;49(9):782-99. PMID: [20443159](#)

Article Published Date : Oct 01, 2009

Authors : Thomas E Kraft, Daniel Parisotto, Christina Schempp, Thomas Efferth

Study Type : Review

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Anti-Angiogenic : CK\(133\) : AC\(99\)](#), [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Selective Cytotoxicity : CK\(41\) : AC\(36\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Chemotherapy-Induced Toxicity: Doxorubicin (AC 25)

[Acute exercise protects against doxorubicin cardiotoxicity.](#) - GMI Summary

Pubmed Data : Integr Cancer Ther. 2008 Sep;7(3):147-54. PMID: [18815146](#)

Article Published Date : Sep 01, 2008

Authors : Karen Y Wonders, David S Hydock, Carole M Schneider, Reid Hayward

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [Hypertension : CK\(2610\) : AC\(260\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Therapeutic Actions : [Exercise : CK\(451\) : AC\(61\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

[Exercise preconditioning protects against doxorubicin-induced cardiac dysfunction.](#) - GMI Summary

Pubmed Data : Vet Microbiol. 2006 Oct 5;117(1):59-65. PMID: [18408619](#)

Article Published Date : Oct 05, 2006

Authors : David S Hydock, Chia-Ying Lien, Carole M Schneider, Reid Hayward

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

["Impaired cognitive function and hippocampal neurogenesis following cancer chemotherapy." - GMI Summary](#)

Pubmed Data : Clin Cancer Res. 2012 Feb 14. Epub 2012 Feb 14. PMID: [22338017](#)

Article Published Date : Feb 14, 2012

Authors : Lori-Ann Christie, Munjal M Acharya, Vipin K Parihar, Anna Nguyen, Vahan Martirosian, Charles L Limoli

Study Type : Animal Study

Additional Links

Diseases : [Brain Injury: Hippocampal Damage : CK\(35\) : AC\(12\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [Cognitive Decline/Dysfunction : CK\(500\) : AC\(80\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#)

Problem Substances : [Cyclophosphamide : CK\(2\) : AC\(1\)](#), [Doxorubicin : CK\(2\) : AC\(1\)](#)
Adverse Pharmacological Actions : [Neurotoxic : CK\(976\) : AC\(155\)](#)

[Aged garlic extract and grape seed proanthocyanidin protect against doxorubicin-induced cardiotoxicity. - GMI Summary](#)

Pubmed Data : Can J Physiol Pharmacol. 2009 Aug;87(8):633-40. PMID: [19767888](#)

Article Published Date : Aug 01, 2009

Authors : Erkan Demirkaya, Aslihan Avci, Vural Kesik, Yildirim Karslioglu, Emin Oztas, Erol Kismet, Erdal Gokcay, Ilker Durak, Vedat Koseoglu

Study Type : Animal Study

Additional Links

Substances : [Garlic : CK\(488\) : AC\(156\)](#), [Grape Seed Extract : CK\(172\) : AC\(58\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#), [Proanthocyanidins : CK\(167\) : AC\(45\)](#)

[Aged garlic extract protects against doxorubicin-induced cardiotoxicity in rats. - GMI Summary](#)

Pubmed Data : Nutrition. 2006 Feb;22(2):136-45. PMID: [20060872](#)

Article Published Date : Feb 01, 2006

Authors : Huda Alkreathy, Zoheir A Damanhoury, Nessar Ahmed, Mark Slevin, Soad S Ali, Abdel-Moneim M Osman

Study Type : Animal Study

Additional Links

Substances : [Garlic : CK\(488\) : AC\(156\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Cardioprotective : CK\(627\) : AC\(185\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

[Caffeic acid phenetyl ester, a compound found within bee propolis, protects against doxorubicin-induced cardiotoxicity in rats. - GMI Summary](#)

Pubmed Data : Am J Ind Med. 2010 Sep 30. Epub 2010 Sep 30. PMID: [14745846](#)

Article Published Date : Sep 30, 2010

Authors : Ersin Fadillioglu, Emin Oztas, Hasan Erdogan, Murat Yagmurca, Sadik Sogut, Muharrem Ucar, M Kemal Irmak

Study Type : Animal Study

Additional Links

Substances : [Bee Propolis : CK\(222\) : AC\(88\)](#), [Caffeic acid phenethyl ester : CK\(15\) : AC\(8\)](#)

Diseases : [Cardiotoxicity: Chemotherapy-Induced : CK\(12\) : AC\(6\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

[Celery has a protective effect against doxorubicin toxicity. - GMI Summary](#)

Pubmed Data : Molecules. 2009 ;14(4):1627-38. Epub 2009 Apr 24. PMID: [19396021](#)

Article Published Date : Jan 01, 2009

Authors : Jovanka Kolarovic, Mira Popovic, Momir Mikov, Radoslav Mitic, Ljiljana Gvozdenovic

Study Type : Animal Study

Additional Links

Substances : [Celery : CK\(28\) : AC\(12\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [Lipid Peroxidation : CK\(333\) : AC\(125\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

[Curcumin protects against doxorubicin \(adriamycin\)-induced toxicity in rats.](#)

- GMI Summary

Pubmed Data : J Med Food. 2009 Apr;12(2):394-402. PMID: [19459743](#)

Article Published Date : Apr 01, 2009

Authors : Ragaa Hosny Mohamad, Amal Mohamad El-Bastawesy, Zekry Khalid Zekry, Hussain A Al-Mehdar, Mohamad Gamil Abdel Monaam Al-Said, Soaad Shaker Aly, Sabry Mohamed Sharawy, Mahmud M El-Merzabani

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemically-Induced Liver Damage](#) : CK(451) : AC(174), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug Side Effect Attenuation](#) : CK(252) : AC(50), [Plant Extracts](#) : CK(3297) : AC(1135)

Ginger protects against doxorubicin-induced acute kidney injury. - GMI Summary

Pubmed Data : Food Chem Toxicol. 2008 Sep;46(9):3178-81. Epub 2008 Jul 17. PMID: [18680783](#)

Article Published Date : Sep 01, 2008

Authors : T A Ajith, M S Aswathy, U Hema

Study Type : Animal Study

Additional Links

Substances : [Ginger](#) : CK(299) : AC(91)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Grape seed extract has a protective role against doxorubicin-induced cardiotoxicity and genotoxicity in albino mice. - GMI Summary

Pubmed Data : J Med Food. 2010 Aug;13(4):917-25. PMID: [20553142](#)

Article Published Date : Aug 01, 2010

Authors : Emine Yalçın, Ertan Oruç, Kültiğın Cavuşoğlu, Kürşad Yapar

Study Type : Animal Study

Additional Links

Substances : [Grape Seed Extract](#) : CK(172) : AC(58)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185), [Genoprotective](#) : CK(109) : AC(46)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Hazelnut prevented doxorubicin-induced cataract in low doses. - GMI Summary

Pubmed Data : Med Sci Monit. 2005 Aug;11(8):BR300-4. Epub 2005 Jul 25. PMID: [16049376](#)

Article Published Date : Aug 01, 2005

Authors : Atilla Bayer, Cem Evreklioglu, Erkan Demirkaya, Salih Altun, Yildirim Karslioglu, Gungor Sobaci

Study Type : Animal Study

Additional Links

Substances : [Hazelnut](#) : CK(12) : AC(2)

Diseases : [Cataract](#) : CK(175) : AC(58), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Oleuropein confers protection against doxorubicin-induced cardiotoxicity. - GMI Summary

Pubmed Data : NMR Biomed. 2009 Jul;22(6):585-92. PMID: [19308947](#)

Article Published Date : Jul 01, 2009

Authors : Ioanna Andreadou, Maria Papaefthimiou, Athina Zira, Maria Constantinou, Fragiska

Sigala, Alexios-Leandros Skaltsounis, Anna Tsantili-Kakoulidou, Efstathios K Iliodromitis, Dimitrios T Kremastinos, Emmanuel Mikros

Study Type : Animal Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antihypertensive Agents](#) : CK(194) : AC(38), [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

[Oleuropein prevents doxorubicin-induced cardiotoxicity and improves therapeutic outcome.](#) - GMI Summary

Pubmed Data : J Mol Cell Cardiol. 2007 Mar;42(3):549-58. Epub 2007 Jan 16. PMID: [17223128](#)

Article Published Date : Mar 01, 2007

Authors : Ioanna Andreadou, Fragiska Sigala, Efstathios K Iliodromitis, Maria Papaefthimiou, Constantinos Sigalas, Nektarios Aligiannis, Paraskevi Savvari, Vassilis Gorgoulis, Efstathios Papalabros, Dimitrios Th Kremastinos

Study Type : Animal Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Oxidative Stress](#) : CK(1858) : AC(703)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Panax Notoginseng has a protective effect against doxorubicin-induced cardiotoxicity in mice.](#) - GMI Summary

Pubmed Data : Planta Med. 2008 Feb;74(3):203-9. Epub 2008 Feb 8. PMID: [18260050](#)

Article Published Date : Feb 01, 2008

Authors : Li Liu, Run Shi, Qiang Shi, Yiyu Cheng, Yang Huo

Study Type : Animal Study

Additional Links

Substances : [Panax Notoginseng](#) : CK(42) : AC(9)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Resveratrol adds to the growth inhibitory/anticancer activity of cisplatin and doxorubicin in vitro and protects against doxorubicin-induced cardiac toxicity both in vitro and in mice.](#) - GMI Summary

Pubmed Data : Am J Obstet Gynecol. 2006 May;194(5):e23-6. Epub 2006 Apr 21. PMID: [16647892](#)

Article Published Date : May 01, 2006

Authors : Youssef A Rezk, Sujata S Balulad, Rebecca S Keller, James A Bennett

Study Type : Animal Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Ovarian Cancer](#) : CK(117) : AC(50), [Uterine Cancer](#) : CK(24) : AC(10)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Resveratrol attenuates doxorubicin-induced cardiomyocyte \(heart cell\) death in mice.](#) - GMI Summary

Pubmed Data : Cardiovasc Res. 2011 Feb 16. Epub 2011 Feb 16. PMID: [21278141](#)

Article Published Date : Feb 16, 2011

Authors : Chi Zhang, Yansheng Feng, Shunlin Qu, Xing Wei, Honglin Zhu, Qi Luo, Meidong Liu, Guangwen Chen, Xianzhong Xiao

Study Type : Animal Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)

[Silymarin, a compound found within milk thistle, has a protective effect against Doxorubicin-induced oxidative stress and liver damage.](#) - GMI Summary

Pubmed Data : Toxicol Appl Pharmacol. 2010 Feb 5. Epub 2010 Feb 5. PMID: [20144634](#)

Article Published Date : Feb 05, 2010

Authors : Nirav Patel, Cecil Joseph, George B Corcoran, Sidhartha D Ray

Study Type : Animal Study

Additional Links

Substances : [Milk Thistle](#) : CK(226) : AC(55)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Anti-Apoptotic](#) : CK(59) : AC(37), [Antioxidants](#) : CK(3530) : AC(1293), [Hepatoprotective](#) : CK(528) : AC(257)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

[Spirulina has a protective effect against doxorubicin-induced cardiotoxicity in mice.](#) - GMI Summary

Pubmed Data : Phytother Res. 2005 Dec;19(12):1030-7. PMID: [16372368](#)

Article Published Date : Dec 01, 2005

Authors : Mahmood Khan, Jagdish Chandra Shobha, Iyyapu Krishna Mohan, Madireddi Umamaheswara Rao Naidu, Challa Sundaram, Shashi Singh, Periannan Kuppusamy, Vijay Kumar Kutala

Study Type : Animal Study

Additional Links

Substances : [Spirulina](#) : CK(77) : AC(23)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[A cannabinoid quinone has cancer-destroying activity superior to doxorubicin without cardiotoxicity, in vitro.](#) - GMI Summary

Pubmed Data : Expert Opin Investig Drugs. 2007 Sep;16(9):1405-13. PMID: [17714026](#)

Article Published Date : Sep 01, 2007

Authors : Maximilian Peters, Natalya M Kogan

Study Type : In Vitro Study

Additional Links

Substances : [Marihuana](#) : CK(702) : AC(133)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Additional Keywords : [Superiority of Natural Substances versus Drugs](#) : CK(897) : AC(173)

[Licorice alleviates Doxorubicin induced-toxicity.](#) - GMI Summary

Pubmed Data : J Food Prot. 2002 Oct;65(10):1610-3. PMID: [18849542](#)

Article Published Date : Oct 01, 2002

Authors : Hyun Ju Choi, Mi Ra Seon, Soon Sung Lim, Jong-Sang Kim, Hyang Sook Chun, Jung Han Yoon Park

Study Type : In Vitro Study

Additional Links

Substances : [Licorice : CK\(254\) : AC\(79\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

[Maitake beta-glucan MD-fraction enhances bone marrow colony formation and reduces doxorubicin toxicity in vitro.](#) - GMI Summary

Pubmed Data : Int Immunopharmacol. 2004 Jan;4(1):91-9. PMID: [14975363](#)

Article Published Date : Jan 01, 2004

Authors : Hong Lin, Yu-Hong She, Barrie R Cassileth, Frank Sirotnak, Susanna Cunningham Rundles

Study Type : In Vitro Study

Additional Links

Substances : [Maitake Mushroom : CK\(61\) : AC\(34\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Hematopoietic : CK\(20\) : AC\(9\)](#)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\) : CK\(33\) : AC\(10\)](#)

[Phyllanthus urinaria has a cytoprotective effect against chemotherapy-induced \(doxorubicin\) cardiotoxicity.](#) - GMI Summary

Pubmed Data : Am J Clin Nutr. 2009 Aug;90(2):263-8. Epub 2009 Jun 10. PMID: [19705546](#)

Article Published Date : Aug 01, 2009

Authors : Linda Chularojmontri, Yoshito Ihara, Eiji Muroi, Shinji Goto, Takahito Kondo, Suvara K Wattanapitayakul

Study Type : In Vitro Study

Additional Links

Substances : [Phyllanthus urinaria : CK\(37\) : AC\(21\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

[Resveratrol attenuates doxorubicin-induced cellular damage by modulating nitric oxide and apoptosis.](#) - GMI Summary

Pubmed Data : Exp Toxicol Pathol. 2010 Dec 6. Epub 2010 Dec 6. PMID: [21144718](#)

Article Published Date : Dec 06, 2010

Authors : Gulperi Oktem, Aysegul Uysal, Onur Oral, Ebru Demirel Sezer, Murat Olukman, Ayşe Erol, Serap A Akgur, Ayhan Bilir

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

[Schisandra ameloriates doxorubicin-induced cytotoxicity to cardiomyocytes.](#) - GMI Summary

Pubmed Data : Genes Nutr. 2008 Feb;2(4):337-45. PMID: [18850228](#)

Article Published Date : Feb 01, 2008

Authors : Eun Hye Choi, Nari Lee, Hyun Jung Kim, Mi Kyung Kim, Sung-Gil Chi, Dae Young Kwon, Hyang Sook Chun

Study Type : In Vitro Study

Additional Links

Substances : [Schisandra : CK\(129\) : AC\(44\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

[The association of sulforaphane-doxorubicin may therefore allow doxorubicin to be administered at lower doses, thereby reducing its potential toxicity.](#) - GMI Summary

Pubmed Data : Ann N Y Acad Sci. 2007 Jan;1095:62-9. PMID: [17404018](#)

Article Published Date : Jan 01, 2007

Authors : Carmela Fimognari, Monia Lenzi, Davide Sciuscio, Giorgio Cantelli-Forti, Patrizia Hrelia

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Cancers: Multi-Drug Resistant (AC 39)

[Sulforaphane increases the effectiveness of various cytotoxic drugs against pancreatic cancer stem cells without inducing additional toxicity in mice.](#) - GMI Summary

Pubmed Data : J Med Food. 2004 Summer;7(2):157-61. PMID: [20940707](#)

Article Published Date : Jun 01, 2004

Authors : Georgios Kallifatidis, Sabrina Labsch, Vanessa Rausch, Juergen Mattern, Jury Gladkich, Gerhard Moldenhauer, Markus W Büchler, Alexei V Salnikov, Ingrid Herr

Study Type : Transgenic Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[A variety of carotenoids induce reduce resistance to chemotherapy in multidrug resistant lymphoma and human breast cancer cell lines.](#) - GMI Summary

Pubmed Data : In Vivo. 2004 Mar-Apr;18(2):237-44. PMID: [15113052](#)

Article Published Date : Mar 01, 2004

Authors : Joseph Molnár, Nóra Gyémánt, Ilona Mucsi, Annamária Molnár, Margaret Szabó, Tamás Körtvélyesi, András Varga, Péter Molnár, Gyula Tóth

Study Type : Animal Study

Additional Links

Substances : [Carotenoids](#) : CK(1041) : AC(114), [Lycopene](#) : CK(175) : AC(32), [Paprika](#) : CK(8) : AC(6), [Zeaxanthin](#) : CK(67) : AC(10)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Lymphoma](#) : CK(211) : AC(68)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[AHCC improves treatment outcome and reduces side effects in anticancer drug treated mice.](#) - GMI Summary

Pubmed Data : J Exp Ther Oncol. 2009;8(1):43-51. PMID: [19827270](#)

Article Published Date : Jan 01, 2009

Authors : Kota Shigama, Akihiro Nakaya, Koji Wakame, Hiroshi Nishioka, Hajime Fujii

Study Type : Animal Study

Additional Links

Substances : [AHCC](#) : CK(48) : AC(17)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Myelotoxicity](#) : CK(31) : AC(8)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Cholesterol derived from LDL acts as a chemosensitizer in multidrug](#)

resistant lymphoblastic leukemia cells. - GMI Summary

Pubmed Data : Biochem Cell Biol. 2007 Oct;85(5):638-46. PMID: [17901905](#)

Article Published Date : Oct 01, 2007

Authors : Yu Shu, Hu Liu

Study Type : Animal Study

Additional Links

Substances : [Cholesterol : CK\(392\) : AC\(43\)](#)

Diseases : [Acute lymphoblastic leukemia \(ALL\) : CK\(95\) : AC\(28\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Leukemia: T-cell acute Lymphoblastic : CK\(35\) : AC\(14\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Acerola demonstrates cytotoxic potential against tumor cell lines. - GMI Summary

Pubmed Data : Phytother Res. 2004 Mar;18(3):212-23. PMID: [15103668](#)

Article Published Date : Mar 01, 2004

Authors :

Noboru Motohashi, Hidetsugu Wakabayashi, Teruo Kurihara, Hidetaka Fukushima, Tomoko Yamada, Masami Kawase, Yoshitaka Sohara, Satoru Tani, Yoshiaki Shirataki, Hiroshi Sakagami, Kazuo Satoh, Hideki Nakashima, Annamária Molnár, Gabriella Spengler, Nóra Gyémánt, Katalin Ugocsai, Joseph Molnár

Study Type : In Vitro Study

Additional Links

Substances : [Acerola : CK\(10\) : AC\(7\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Antitumor : CK\(1\) : AC\(1\)](#)

Ampelopsin, a compound found within the Japanese Raisin Tree, reverses multidrug resistance in cancer cells. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2009 Mar;34(6):761-5. PMID: [19624024](#)

Article Published Date : Mar 01, 2009

Authors : Jiantao Ye, Yilei Zheng, Deyu Liu

Study Type : In Vitro Study

Additional Links

Substances : [Japanese Raisin Tree : CK\(1\) : AC\(1\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Artesunate and bufalin may have value in treating multi-drug resistant human leukemia cells. - GMI Summary

Pubmed Data : Blood Cells Mol Dis. 2002 Mar-Apr;28(2):160-8. PMID: [12064912](#)

Article Published Date : Mar 01, 2002

Authors : Thomas Efferth, Mary Davey, Armin Olbrich, Gerhard Rücker, Erich Gebhart, Ross Davey

Study Type : In Vitro Study

Additional Links

Substances : [Artesunate : CK\(1\) : AC\(1\)](#), [Bufalin : CK\(1\) : AC\(1\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Leukemia : CK\(694\) : AC\(270\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Caffeic acid sensitizes multidrug-resistant human breast cancer cells to chemotherapy. - GMI Summary

Pubmed Data : Chem Biol Interact. 2011 Feb 21. Epub 2011 Feb 21. PMID: [9216644](#)

Article Published Date : Feb 21, 2011

Authors : C H Ahn, W C Choi, J Y Kong

Study Type : In Vitro Study

Additional Links

Substances : [Caffeic Acid : CK\(15\) : AC\(11\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

[Carotenoids extracted from red paprika, Valencia orange and Golden delicious apple exhibit anti-H. pylori and anti-multidrug resistance activity. - GMI Summary](#)

Pubmed Data : Phytother Res. 2005 Aug;19(8):700-7. PMID: [16177974](#)

Article Published Date : Aug 01, 2005

Authors : Péter Molnár, Masami Kawase, Kazue Satoh, Yoshitaka Sohara, Toru Tanaka, Satoru Tani, Hiroshi Sakagami, Hideki Nakashima, Noboru Motohashi, Nóra Gyémánt, Joseph Molnár

Study Type : In Vitro Study

Additional Links

Substances : [Apple: Golden Delicious : CK\(2\) : AC\(2\)](#), [Carotenoids : CK\(1041\) : AC\(114\)](#), [Orange : CK\(127\) : AC\(28\)](#), [Paprika : CK\(8\) : AC\(6\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Helicobacter Pylori Infection : CK\(294\) : AC\(61\)](#)

Pharmacological Actions : [Anti-Bacterial Agents : CK\(901\) : AC\(280\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

[Cleistocalyx operculatus contains a compound which reverses multi-drug resistance in human liver cancer cells. - GMI Summary](#)

Pubmed Data : Phytomedicine. 2011 May 17. Epub 2011 May 17. PMID: [21596545](#)

Article Published Date : May 17, 2011

Authors : Hai-Ya Huang, Jiang-Long Niu, Li-Ming Zhao, Yan-Hua Lu

Study Type : In Vitro Study

Additional Links

Substances : [Cleistocalyx Operculatus : CK\(1\) : AC\(1\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

[Curcumin appears to have value in multi-drug chemoresistance. - GMI Summary](#)

Pubmed Data : J Clin Rheumatol. 2010 Feb 2. Epub 2010 Feb 2. PMID: [14680379](#)

Article Published Date : Feb 02, 2010

Authors : Heleen M Wortelboer, Mustafa Usta, Astrid E van der Velde, Marelle G Boersma, Bert Spenkelink, Jelmer J van Zanden, Ivonne M C M Rietjens, Peter J van Bladeren, Nicole H P Cnubben

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

[Curcumin exhibits chemosensitizing properties against multidrug resistance in rat liver cells. - GMI Summary](#)

Pubmed Data : Life Sci. 1998;62(25):2349-58. PMID: [9651124](#)

Article Published Date : Jan 01, 1998

Authors : N Romiti, R Tongiani, F Cervelli, E Chieli

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin has chemosensitizing activity in multidrug resistant tumor cell lines. - GMI Summary

Pubmed Data : Zhong Yao Cai. 2001 Sep;24(9):655-7. PMID: [11799777](#)

Article Published Date : Sep 01, 2001

Authors : H Zhang, L Yang, S Liu, L Ren

Study Type : In Vitro Study

Additional Links

Substances : [Berberine](#) : CK(142) : AC(67), [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin inhibits multi drug resistance associated protein (MRP1) in retinoblastoma cells. - GMI Summary

Pubmed Data : Bioinformation. 2012 ;8(1):13-9. Epub 2012 Jan 6. PMID: [22359429](#)

Article Published Date : Jan 01, 2012

Authors : Seethalakshmi Sreenivasan, Sathyabaarathi Ravichandran, Umashankar Vetrivel, Subramanian Krishnakumar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Retinoblastoma](#) : CK(24) : AC(6)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin inhibits multi-drug resistance gene expression in human leukemic cells. - GMI Summary

Pubmed Data : Arch Pharm Res. 2006 Oct;29(10):866-73. PMID: [17121181](#)

Article Published Date : Oct 01, 2006

Authors : Songyot Anuchapreeda, Pattri Thanarattanakorn, Somjai Sittipreechacharn, Singkome Tima, Prasit Chanarat, Pornngarm Limtrakul

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin inhibits multi-drug resistant pancreatic cancer. - GMI Summary

Pubmed Data : Cancer Chemother Pharmacol. 2010 Nov 30. Epub 2010 Nov 30. PMID: [21116627](#)

Article Published Date : Nov 30, 2010

Authors : Yan Li, Jezrael L Revalde, Glen Reid, James W Paxton

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin may act as a chemosensitizer in multi-drug resistant cancer. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2010 Sep;35(18):2460-3. PMID: [21141501](#)

Article Published Date : Sep 01, 2010

Authors : Yanfen Huang, Gaixia Dong, Xingqiu Hong, Hui Chai, Xiaofeng Yuan

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#)

Curcumin may act as a chemosensitizing agent in multidrug resistant cancer cells. - GMI Summary

Pubmed Data : Biochem Pharmacol. 2002 Aug 15;64(4):573-82. PMID: [12167476](#)

Article Published Date : Aug 15, 2002

Authors : Songyot Anuchapreeda, Pranee Leechanachai, Melissa M Smith, Suresh V Ambudkar, Porn-ngarm Limtrakul

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#)

Curcumin may be used as a chemosensitizer to make the retinoblastoma cells more sensitive to the effects of chemotherapy. - GMI Summary

Pubmed Data : Curr Eye Res. 2009 Oct;34(10):845-51. PMID: [19895312](#)

Article Published Date : Oct 01, 2009

Authors : Seethalakshmi Thiyagarajan, Karthiyayini Thirumalai, Sudarshan Nirmala, Jyotirmay Biswas, Subramanian Krishnakumar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Retinoblastoma : CK\(24\) : AC\(6\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#)

Curcumin promotes programmed cell death in multidrug-resistant human lung cancer cells. - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2010 Aug 13;399(1):1-6. Epub 2010 Jul 11. PMID: [20627087](#)

Article Published Date : Aug 13, 2010

Authors : Jian Zhang, Tao Zhang, Xinyu Ti, Jieran Shi, Changgui Wu, Xinling Ren, Hong Yin

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#)

Curcumin reduces multi-drug resistance in uterine cancer cells. - GMI Summary

Pubmed Data : Oncol Rep. 2008 Oct;20(4):731-5. PMID: [18813811](#)

Article Published Date : Oct 01, 2008

Authors : Antonio Angelini, Manuela Iezzi, Concetta Di Febbo, Carmine Di Ilio, Franco Cuccurullo, Ettore Porreca

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Uterine Cancer : CK\(24\) : AC\(10\)](#)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)
Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Curcumin reverse multi-drug resistance in multiple myeloma cells. - GMI Summary

Pubmed Data : Ann Hematol. 2010 Apr;89(4):399-404. Epub 2009 Sep 15. PMID: [19756599](#)

Article Published Date : Apr 01, 2010

Authors : Hui Xiao, Qi Xiao, Kejian Zhang, Xuelan Zuo, Umid Kumar Shrestha

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Multiple Myeloma](#) : CK(125) : AC(50)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin reverse multidrug resistance of osteosarcoma cells. - GMI Summary

Pubmed Data : Wei Sheng Yan Jiu. 2011 Jan;40(1):103-6. PMID: [21434326](#)

Article Published Date : Jan 01, 2011

Authors : Yang Xiao, Wanchun Wang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Osteosarcoma](#) : CK(65) : AC(40)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Adriamycin](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

Curcumin works synergistically with cyclophosphide to reverse multi-drug resistance of a human lymphoma cell line. - GMI Summary

Pubmed Data : Zhongguo Shi Yan Xue Ye Xue Za Zhi. 2008 Aug;16(4):804-8. PMID: [18718065](#)

Article Published Date : Aug 01, 2008

Authors : Hui Xiao, Ke-Jian Zhang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Lymphoma](#) : CK(211) : AC(68)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Derivatives of a compound found in birch have activity against multidrug resistance cancer cells. - GMI Summary

Pubmed Data : Bioorg Med Chem. 2010 Apr 15;18(8):2964-75. Epub 2010 Mar 6. PMID: [20363142](#)

Article Published Date : Apr 15, 2010

Authors : Juan Xiong, Masatoshi Taniguchi, Yoshiki Kashiwada, Michiko Sekiya, Takashi Yamagishi, Yoshihisa Takaishi

Study Type : In Vitro Study

Additional Links

Substances : [Birch](#) : CK(5) : AC(3)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157)

Flavanoid rich honey may act as chemosensitizers in multidrug resistant cancers. - GMI Summary

Pubmed Data : Med Hypotheses. 2011 Jan 17. Epub 2011 Jan 17. PMID: [21247706](#)

Article Published Date : Jan 17, 2011

Authors : Saravana Kumar Jaganathan

Study Type : In Vitro Study

Additional Links

Substances : [Biochanin A : CK\(9\) : AC\(7\)](#), [Chrysin : CK\(15\) : AC\(13\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Genistein : CK\(457\) : AC\(176\)](#), [Honey : CK\(205\) : AC\(42\)](#), [Kaempferol : CK\(27\) : AC\(22\)](#), [Naringenin : CK\(17\) : AC\(12\)](#), [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

[Hedyotiscone A, a compound isolated from Hedyotis corymbosa, reverses multidrug resistance in human hepatoma cells.](#) - GMI Summary

Pubmed Data : Xenobiotica. 2012 Feb 21. Epub 2012 Feb 21. PMID: [22352391](#)

Article Published Date : Feb 21, 2012

Authors : Grace Gar-Lee Yue, Julia Kin-Ming Lee, Ling Cheng, Ben Chung-Lap Chan, Lei Jiang, Kwok-Pui Fung, Ping-Chung Leung, Clara Bik-San Lau

Study Type : In Vitro Study

Additional Links

Substances : [Hedyotis corymbosa : CK\(3\) : AC\(1\)](#), [Hedyotiscone A : CK\(1\) : AC\(1\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Hepatoma: Multidrug Resistant : CK\(1\) : AC\(1\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

[Lobelia can reverse multidrug resistance in tumor cells.](#) - GMI Summary

Pubmed Data : Toxicol Pathol. 2010;38(3):366-71. Epub 2010 Mar 9. PMID: [18222670](#)

Article Published Date : Jan 01, 2010

Authors : Yonggang Ma, Michael Wink

Study Type : In Vitro Study

Additional Links

Substances : [Lobelia : CK\(8\) : AC\(5\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Tumors : CK\(179\) : AC\(107\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

[Macelignan, a phytoestrogen extracted from mace, increases drug sensitivity in multidrug resistance cancer cells.](#) - GMI Summary

Pubmed Data : Nutr Cancer. 2009;61(4):538-43. PMID: [19838926](#)

Article Published Date : Jan 01, 2009

Authors : Young Bin Im, Ilho Ha, Keon Wook Kang, Moo-Yeol Lee, Hyo-Kyung Han

Study Type : In Vitro Study

Additional Links

Substances : [Maca : CK\(80\) : AC\(21\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

[Pterostilbene and 3'-hydroxypterostilbene are effective in multi-drug resistant leukemia cells.](#) - GMI Summary

Pubmed Data : Indian J Med Res. 2000 Sep;112:73-7. PMID: [15878840](#)

Article Published Date : Sep 01, 2000

Authors : Manlio Tolomeo, Stefania Grimaudo, Antonietta Di Cristina, Marinella Roberti, Daniela Pizzirani, Maria Meli, Luisa Dusonchet, Nicola Gebbia, Vincenzo Abbadessa, Lucia Crosta, Riccardo Barucchello, Giuseppina Grisolia, Francesco Invidiata, Daniele Simoni

Study Type : In Vitro Study

Additional Links

Substances : [Pterostilbene : CK\(999\) : AC\(29\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Leukemia : CK\(694\) : AC\(270\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)
Additional Keywords : [Stilbenes : CK\(414\) : AC\(245\)](#)

Quercetin reverses multi-drug resistance of adriamycin resistant promyelocytic leukemia cells. - GMI Summary

Pubmed Data : Zhonghua Zhong Liu Za Zhi. 2005 Jun;27(6):326-9. PMID: [16117892](#)

Article Published Date : Jun 01, 2005

Authors : Xun Cai, Fang-yuan Chen, Jie-ying Han, Chun-hong Gu, Hua Zhong, Ye Teng, Ren-rong Ouyang

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Promyelocytic leukemia : CK\(137\) : AC\(75\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Adriamycin : CK\(2\) : AC\(2\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Resveratrol down-regulates survivin and induces programmed cell death in human multidrug-resistant cells. - GMI Summary

Pubmed Data : Oncol Rep. 2010 Jan;23(1):279-86. PMID: [19956893](#)

Article Published Date : Jan 01, 2010

Authors : Weiguo Zhao, Pengtao Bao, Haowen Qi, Houcheng You

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#), [Stilbenes : CK\(123\) : AC\(88\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [Survivin Down-Regulation : CK\(1\) : AC\(1\)](#)

Resveratrol may help overcome multi-drug resistance in human cancer cell lines. - GMI Summary

Pubmed Data : Anticancer Res. 2010 Nov;30(11):4587-93. PMID: [21115910](#)

Article Published Date : Nov 01, 2010

Authors : Olga Wesolowska, Jerzy Wisniewski, Aleksandra Bielawska-Pohl, Maria Paprocka, Noelia Duarte, Maria-José U Ferreira, Danuta Dus, Krystyna Michalak

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Colorectal Cancer : CK\(768\) : AC\(299\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Stilbenes : CK\(414\) : AC\(245\)](#)

The essential oil of thyme is cytotoxic to human ovarian cancer cells resistant to chemotherapy. - GMI Summary

Pubmed Data : Braz J Med Biol Res. 2007 Nov;40(11):1537-44. PMID: [17934650](#)

Article Published Date : Nov 01, 2007

Authors : L Ait M'barek, H Ait Mouse, A Jaâfari, R Aboufatima, A Benharref, M Kamal, J Bénard, N El Abbadi, M Bensalah, A Gamouh, A Chait, A Dalal, A Zyad

Study Type : In Vitro Study

Additional Links

Substances : [Thyme : CK\(37\) : AC\(25\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

The plant derived sesquiterpene coumarins, farnesiferol A and galbanic acid, may be promising candidates to be considered for further studies on the reversal of multidrug resistance phenotype in chemotherapy of cancer patients. - GMI Summary

Pubmed Data : Planta Med. 2011 Apr 11. Epub 2011 Apr 11. PMID: [21484672](#)

Article Published Date : Apr 11, 2011

Authors : Mohammad Yahya Hanafi-Bojd, Mehrdad Iranshahi, Fatemeh Mosaffa, Shahireh Omidvar Tehrani, Fatemeh Kalalinia, Javad Behravan

Study Type : In Vitro Study

Additional Links

Substances : [Farnesiferol A : CK\(1\) : AC\(1\)](#), [Ferula Persica : CK\(1\) : AC\(1\)](#), [Ferula Szowitsiana : CK\(1\) : AC\(1\)](#), [Galbanic Acid : CK\(1\) : AC\(1\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Triptolide, a compound found within Tripterygium wilfordii, has therapeutic value in the treatment of multi-drug resistant cancer cells. - GMI Summary

Pubmed Data : Anticancer Drugs. 2010 Feb 15. Epub 2010 Feb 15. PMID: [20154595](#)

Article Published Date : Feb 15, 2010

Authors : Yuan-Wu Chen, Gu-Jiun Lin, Yi-Ping Chuang, Wei-Tso Chia, Dueng-Yuan Hueng, Chih-Kung Lin, Shin Nieh, Huey-Kang Sytwu

Study Type : In Vitro Study

Additional Links

Substances : [Tripterygium wilfordii : CK\(104\) : AC\(26\)](#), [Triptolide : CK\(11\) : AC\(9\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: 5-fluorouracil : CK\(88\) : AC\(23\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Various carotenoids and flavonoids from plants may contribute to the reversal of multidrug resistance. - GMI Summary

Pubmed Data : Curr Top Med Chem. 2010;10(17):1757-68. PMID: [20645919](#)

Article Published Date : Jan 01, 2010

Authors : J Molnár, H Engi, J Hohmann, P Molnár, J Deli, O Wesolowska, K Michalak, Q Wang

Study Type : In Vitro Study

Additional Links

Substances : [Antheraxanthin : CK\(1\) : AC\(1\)](#), [Capsaicin : CK\(47\) : AC\(25\)](#), [Capsorubin : CK\(1\) : AC\(1\)](#), [Carotenoids : CK\(1041\) : AC\(114\)](#), [Chrysin : CK\(15\) : AC\(13\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Lutein : CK\(123\) : AC\(21\)](#), [Lycopene : CK\(175\) : AC\(32\)](#), [Paprika : CK\(8\) : AC\(6\)](#), [Phloretin : CK\(4\) : AC\(4\)](#), [Sakuranetin : CK\(1\) : AC\(1\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [P-glycoprotein Inhibitors : CK\(1\) : AC\(1\)](#)

Vitamin C (ascorbic acid) reverses chemoresistance of human non-small lung-cancer cells. - GMI Summary

Pubmed Data : Biochem J. 1994 Aug 1;301 (Pt 3):759-64. PMID: [7914401](#)

Article Published Date : Aug 01, 1994

Authors : C D Chiang, E J Song, V C Yang, C C Chao

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin C : CK\(1208\) : AC\(238\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Curcumin may act as a chemosensitizing agent. - GMI Summary

Pubmed Data : Adv Exp Med Biol. 2007;595:269-300. PMID: [17569216](#)

Article Published Date : Jan 01, 2007

Authors : Pornngarm Limtrakul

Study Type : Review

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Drug: 5-flourouracil (AC 9)

[Chemotherapy used in advanced gastric or gastroesophageal adenocarcinoma results in an overall median survival time of between 7-9 months.](#) - GMI Summary

Pubmed Data : J Clin Oncol. 2010 Mar 20;28(9):1547-53. Epub 2010 Feb 16. PMID: [20159816](#)

Article Published Date : Mar 20, 2010

Authors : Jaffer A Ajani, Wuilbert Rodriguez, Gyorgy Bodoky, Vladimir Moiseyenko, Mikhail Lichinitser, Vera Gorbunova, Ihor Vynnychenko, August Garin, Istvan Lang, Silvia Falcon

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Esophageal Cancer](#) : CK(293) : AC(54), [Gastric Cancer](#) : CK(360) : AC(108)

Additional Keywords : [Chemotherapy](#) : CK(20) : AC(2), [Drug: 5-flourouracil](#) : CK(88) : AC(23)

Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33)

[Oral glutamine supplementation protects lymphocytes and attenuates gut permeability in patients with esophageal cancer during radiochemotherapy.](#) - GMI Summary

Pubmed Data : Ann Surg. 1998 Apr;227(4):485-91. PMID: [9563534](#)

Article Published Date : Apr 01, 1998

Authors : S Yoshida, M Matsui, Y Shirouzu, H Fujita, H Yamana, K Shirouzu

Study Type : Human Study

Additional Links

Substances : [Glutamine](#) : CK(120) : AC(22)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Esophageal Cancer](#) : CK(293) : AC(54), [Radiation Induced Illness](#) : CK(994) : AC(245)

Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Polysaccharides isolated from Echinacea purpurea herba cell cultures to counteract undesired effects of chemotherapy.](#) - GMI Summary

Pubmed Data : Phytother Res. 2002 Mar;16(2):138-42. PMID: [11933115](#)

Article Published Date : Mar 01, 2002

Authors : Dieter Melchart, Christof Clemm, Bernhard Weber, Thorsten Draczynski, Felege Worku, Klaus Linde, Wolfgang Weidenhammer, Hildebert Wagner, Reinhard Saller

Study Type : Human Study

Additional Links

Substances : [Echinacea](#) : CK(469) : AC(90)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Gastric Cancer](#) : CK(360) : AC(108), [Leukopenia](#) : CK(43) : AC(7), [Leukopenia: Chemotherapy Induced](#) : CK(25) : AC(5)

Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23), [Plant Extracts](#) : CK(3297) : AC(1135)

[Curcumin may contribute to overcoming chemoresistance of FOLFOX.- surviving colon cancer cells.](#) - GMI Summary

Pubmed Data : Vet Med (Praha). 1989 Aug;34(8):467-74. PMID: [20332435](#)

Article Published Date : Aug 01, 1989

Authors : Bhaumik B Patel, Deepshika Gupta, Althea A Elliott, Vivek Sengupta, Yingjie Yu, Adhip P N Majumdar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Colon Cancer](#) : CK(375) : AC(230)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23), [Drug: Oxaliplatin](#) : CK(6) : AC(5)

EGCG sensitizes human cholangiocarcinoma cells to chemotherapy-induced programmed cell death. - GMI Summary

Pubmed Data : Liver Int. 2009 May;29(5):670-7. Epub 2009 Feb 17. PMID: [19226332](#)

Article Published Date : May 01, 2009

Authors : Molly Lang, Roger Henson, Chiara Braconi, Tushar Patel

Study Type : In Vitro Study

Additional Links

Substances : [Catechin](#) : CK(408) : AC(130), [EGCG \(Epigallocatechin gallate\)](#) : CK(176) : AC(115)

Diseases : [Cholangiocarcinoma](#) : CK(23) : AC(11)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23), [Drug: Mitomycin](#) : CK(4) : AC(3), [Plant Extracts](#) : CK(3297) : AC(1135)

Sulforaphane works synergistically with 5-flourouracil to inhibit high and low metastasis cell lines of salivary gland adenoid cystic carcinoma. - GMI Summary

Pubmed Data : Cancer Chemother Pharmacol. 2001 Jul;47 Suppl:S38-44. PMID: [18844240](#)

Article Published Date : Jul 01, 2001

Authors : Xiao-Feng Wang, Dong-Mei Wu, Bao-Xin Li, Yan-Jie Lu, Bao-Feng Yang

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Cancer Metastasis](#) : CK(283) : AC(132), [Salivary Gland Adenoid Cystic Carcinoma.](#) : CK(3) : AC(3), [Salivary Gland Diseases](#) : CK(34) : AC(6)

Pharmacological Actions : [Anti-metastatic](#) : CK(172) : AC(95), [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Triptolide, a compound found within Tripterygium wilfordii, has therapeutic value in the treatment of multi-drug resistant cancer cells. - GMI Summary

Pubmed Data : Anticancer Drugs. 2010 Feb 15. Epub 2010 Feb 15. PMID: [20154595](#)

Article Published Date : Feb 15, 2010

Authors : Yuan-Wu Chen, Gu-Jiun Lin, Yi-Ping Chuang, Wei-Tso Chia, Dueng-Yuan Hueng, Chih-Kung Lin, Shin Nieh, Huey-Kang Sytwu

Study Type : In Vitro Study

Additional Links

Substances : [Tripterygium wilfordii](#) : CK(104) : AC(26), [Triptolide](#) : CK(11) : AC(9)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Vitamin A and D have an anti-tumor effect against head and neck squamous cell carcinoma. - GMI Summary

Pubmed Data : Auris Nasus Larynx. 2003 Dec;30(4):403-12. PMID: [14656567](#)

Article Published Date : Dec 01, 2003

Authors : Kenichi Satake, Emi Takagi, Akiko Ishii, Yasumasa Kato, Yukari Imagawa, Yuu Kimura, Mamoru Tsukuda

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin A : CK\(358\) : AC\(53\)](#), [Vitamin D : CK\(1493\) : AC\(220\)](#)

Diseases : [Head and Neck Cancer : CK\(36\) : AC\(14\)](#), [Skin Cancer: Squamous Cell : CK\(52\) : AC\(16\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#)

[Vitamin K2 augments 5-flourouracil-induced growth inhibition of human hepatocellular carcinoma cells by inhibiting NF-κB activation.](#) - GMI

Summary

Pubmed Data : Oncol Rep. 2011 Jan;25(1):159-66. PMID: [21109972](#)

Article Published Date : Jan 01, 2011

Authors : Hao Zhang, Iwata Ozaki, Hiroshi Hamajima, Shinji Iwane, Hirokazu Takahashi, Yasunori Kawaguchi, Yuichiro Eguchi, Kyosuke Yamamoto, Toshihiko Mizuta

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin K : CK\(540\) : AC\(64\)](#), [Vitamin K2 : CK\(254\) : AC\(27\)](#)

Diseases : [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Pulmonary Fibrosis (AC 17)

[Alpha lipoic acid attenuates bleomycin-induced pulmonary fibrosis in mice.](#) - GMI Summary

Pubmed Data : Int J Mol Med. 2007 Jun;19(6):865-73. PMID: [17487418](#)

Article Published Date : Jun 01, 2007

Authors : Rui Liu, Kazi Mokim Ahmed, Danupon Nantajit, Frank S Rosenthal, Chun-Xun Hai, Jian Jian Li

Study Type : Animal Study

Additional Links

Substances : [Alpha-Lipoic Acid : CK\(406\) : AC\(80\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

[An extract of Mandarin Orange demonstrates anti-pulmonary fibrosis effects.](#) - GMI Summary

Pubmed Data : J Ethnopharmacol. 2009 Oct 29;126(1):143-8. Epub 2009 Jul 28. PMID: [19643175](#)

Article Published Date : Oct 29, 2009

Authors : Xian-Mei Zhou, Min-Min Huang, Cui-Cui He, Jian-Xin Li

Study Type : Animal Study

Additional Links

Substances : [Orange: Mandarin : CK\(4\) : AC\(2\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

[Cordyceps alleviates bleomycin-induced alveolitis and fibrosis.](#) - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2007 Dec;32(24):2623-7. PMID: [18338602](#)

Article Published Date : Dec 01, 2007

Authors : Shao-Jie Wang, Wen Bai, Chun-Ling Wang, Zhong Dai

Study Type : Animal Study

Additional Links

Substances : [Cordyceps sinensis](#) : CK(110) : AC(41)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

[Curcumin can alleviate alveolitis and pulmonary fibrosis induced by bleomycin in rats.](#) - GMI Summary

Pubmed Data : Zhonghua Jie He He Hu Xi Za Zhi. 2007 Mar;30(3):197-201. PMID: [17572999](#)

Article Published Date : Mar 01, 2007

Authors : De-ping Zhang, Hui Qiu, Yi Zhuang, Fan-qing Meng

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Alveolitis: Fibrosing](#) : CK(151) : AC(1), [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

[Curcumin has a similar effect to hydrocortisone in preventing bleomycin-induced pulmonary fibrosis.](#) - GMI Summary

Pubmed Data : J Ethnopharmacol. 2007 Jun 13;112(2):292-9. Epub 2007 Mar 13. PMID: [17434272](#)

Article Published Date : Jun 13, 2007

Authors : Min Xu, Bin Deng, Yeuk-Lung Chow, Zhong-Zhen Zhao, Bin Hu

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Additional Keywords : [Superiority of Natural Substances versus Drugs](#) : CK(897) : AC(173)

[Curcumin inhibits bleomycin-induced pulmonary fibrosis in rats.](#) - GMI Summary

Pubmed Data : Br J Pharmacol. 2000 Sep;131(2):169-72. PMID: [10991907](#)

Article Published Date : Sep 01, 2000

Authors : D Punithavathi, N Venkatesan, M Babu

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [Anti-Bacterial Agents](#) : CK(901) : AC(280)

[Curcumin inhibits fibrosis-related effects in IPF fibroblasts and in mice following bleomycin-induced lung injury.](#) - GMI Summary

Pubmed Data : Am J Physiol Lung Cell Mol Physiol. 2010 Jan 8. Epub 2010 Jan 8. PMID: [20061443](#)

Article Published Date : Jan 08, 2010

Authors : Monica R Smith, Srinivasa R Gangireddy, Venkata R Narala, Cory M Hogaboam, Theodore J Standiford, Paul J Christensen, Anand K Kondapi, Raju C Reddy

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [Transforming growth factor beta \(TGF- \$\beta\$ \) inhibitor](#) : CK(32) : AC(9)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Curcumin is more effective than prednisone at suppressing bleomycin-induced pulmonary fibrosis in rats.](#) - GMI Summary

Pubmed Data : Zhonghua Lao Dong Wei Sheng Zhi Ye Bing Za Zhi. 2008 May;26(5):257-61. PMID: [18727865](#)

Article Published Date : May 01, 2008

Authors : Bi Chen, De-Ping Zhang, Wei Gao

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [Transforming growth factor beta \(TGF-β\) inhibitor](#) : CK(32) : AC(9)

Additional Keywords : [Superiority of Natural Substances versus Drugs](#) : CK(897) : AC(173)

Curcumin may play its therapeutuc role by leveling down the content of extracellular matrix in rats with pulmonary fibrosis induced by bleomycin. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2006 Apr;31(7):570-3. PMID: [16780161](#)

Article Published Date : Apr 01, 2006

Authors : Gang Zhou, Ji-Feng Wang, Jian-Zhao Niu, Yin-Sheng Lu, Wei-Tao Chen, Ze-Hua Li, Tong-Xiang Lin

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Curcumin protects against bleomycin-induced damages in pulmonary functions in rats - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2008 Jun;33(12):1434-8. PMID: [18837350](#)

Article Published Date : Jun 01, 2008

Authors : Cheng-jiang Zhao, Jian-zhao Niu, Ji-feng Wang, Gang Zhou, Bing-hua Tang

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

EGCG exhibits anti-fibrotic effects in a rat model of pulmonary fibrosis. - GMI Summary

Pubmed Data : Chem Biol Interact. 2009 Jul 15;180(2):271-80. Epub 2009 Mar 20. PMID: [19497426](#)

Article Published Date : Jul 15, 2009

Authors : Narayanan Sriram, Srinivasan Kalayarasan, Ganapasam Sudhandiran

Study Type : Animal Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\)](#) : CK(176) : AC(115)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Ginkgo biloba has a positive effect on pulmonary interstitial fibrosis in rats - GMI Summary

Pubmed Data : Zhongguo Zhong Xi Yi Jie He Za Zhi. 2000 Jun;20(6):441-3. PMID: [11789230](#)

Article Published Date : Jun 01, 2000

Authors : J Chen, B He, X Liu

Study Type : Animal Study

Additional Links

Substances : [Ginkgo biloba](#) : CK(505) : AC(101)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [NF-kappaB Inhibitor](#) : CK(596) : AC(403), [Transforming growth factor beta \(TGF-β\) inhibitor](#) : CK(32) : AC(9)

Hu Zhang (Polygonum cuspidatum), a rich source of resveratrol, inhibits the expression of inflammation in lung fibroblasts and reduces alveolitis and pulmonary fibrosis. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2009 Jun;34(12):1574-7. PMID: [19777850](#)

Article Published Date : Jun 01, 2009

Authors : Xiaoying Jin, Xianfang Luo, Kong Song, Yongliang Xia, Jianzhen Dan, Yongmei Sun

Study Type : Animal Study

Additional Links

Substances : [Hu Zhang \(Polygonum cuspidatum\)](#) : CK(964) : AC(9), [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [Anti-Inflammatory Agents](#) : CK(1159) : AC(412), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor](#) : CK(141) : AC(68)

Hyperforin, a compound found within St. John's wort, has powerful anti-inflammatory therapeutic potential in reducing lung fibrosis. - GMI Summary

Pubmed Data : J Pharmacol Exp Ther. 2007 May;321(2):492-500. Epub 2007 Feb 8. PMID: [17289834](#)

Article Published Date : May 01, 2007

Authors : Isabella Dell'Aica, Raffaele Niero, Francesco Piazza, Anna Cabrelle, Luigi Sartor, Cristiano Colalto, Enrico Brunetta, Gireca Lorusso, Roberto Benelli, Adriana Albini, Fiorella Calabrese, Carlo Agostini, Spiridione Garbisa

Study Type : Animal Study

Additional Links

Substances : [St. Johns Wort](#) : CK(186) : AC(48)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Cystic Fibrosis](#) : CK(703) : AC(82), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [Anti-Inflammatory Agents](#) : CK(1159) : AC(412), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor](#) : CK(141) : AC(68)

L-carnitine and ginkgo biloba extract exhibits a protective agent in an animal model of bleomycin-induced lung fibrosis - GMI Summary

Pubmed Data : Pharmacol Res. 2002 Jun;45(6):461-7. PMID: [12162946](#)

Article Published Date : Jun 01, 2002

Authors : Mohamed H Daba, Abdel-Aziz H Abdel-Aziz, Adel M Moustafa, Abdulhakeem A Al-Majed, Othman A Al-Shabanah, Hassan A El-Kashef

Study Type : Animal Study

Additional Links

Substances : [Carnitine](#) : CK(650) : AC(67), [Ginkgo biloba](#) : CK(505) : AC(101)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Lecithinized superoxide dismutase has protective activity against bleomycin-induced pulmonary fibrosis. - GMI Summary

Pubmed Data : Am J Physiol Lung Cell Mol Physiol. 2009 Dec 24. Epub 2009 Dec 24. PMID: [20034962](#)

Article Published Date : Dec 24, 2009

Authors : Ken-Ichiro Tanaka, Tomoaki Ishihara, Arata Azuma, Shoji Kudoh, Masahito Ebina, Toshihiro Nukiwa, Yukihiro Sugiyama, Yuichi Tasaka, Takushi Namba, Tsutomu Ishihara, Keizo Sato, Yutaka Mizushima, Tohru Mizushima

Study Type : Animal Study

Additional Links

Substances : [Lecithin](#) : CK(28) : AC(10), [Superoxide dismutase](#) : CK(16) : AC(5)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) :

[CK\(149\) : AC\(49\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Resveratrol alleviates chemotherapy-induced (bleomycin) lung injury in rats. **- GMI Summary**

Pubmed Data : Pulm Pharmacol Ther. 2007;20(6):642-9. Epub 2006 Sep 3. PMID: [17035056](#)

Article Published Date : Jan 01, 2007

Authors : Göksel Sener, Nurhayat Topaloğlu, A Ozer Sehirli, Feriha Ercan, Nursal Gedik

Study Type : Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Adriamycin : CK\(17\) : AC\(10\)](#), [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Neutropenia: Chemotherapy Induced (AC 5)

A proprietary honey-based herbal formula reduces chemotherapy-induced neutropenia and the need for colony-stimulating factors. **- GMI Summary**

Pubmed Data : Med Oncol. 2006;23(4):549-52. PMID: [17303914](#)

Article Published Date : Jan 01, 2006

Authors : Jamal Zidan, Lika Shetver, Anthony Gershuny, Amira Abzah, Sigalit Tamam, Moshe Stein, Eitan Friedman

Study Type : Human Study

Additional Links

Substances : [Honey: Life Mel Proprietary Formula : CK\(205\) : AC\(31\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Neutropenia : CK\(90\) : AC\(22\)](#), [Neutropenia: Chemotherapy Induced : CK\(82\) : AC\(17\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\) : CK\(33\) : AC\(10\)](#)

Fermented wheat germ extract reduces chemotherapy-induced febrile neutropenia in pediatric patients. **- GMI Summary**

Pubmed Data : J Pediatr Hematol Oncol. 2004 Oct;26(10):631-5. PMID: [15454833](#)

Article Published Date : Oct 01, 2004

Authors : Miklós Garami, Dezso Schuler, Mária Babosa, Gábor Borgulya, Péter Hauser, Judit Müller, András Paksy, Eniko Szabó, Máté Hidvégi, György Fekete

Study Type : Human Study

Additional Links

Substances : [Wheat Germ : CK\(65\) : AC\(10\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Neutropenia: Chemotherapy Induced : CK\(82\) : AC\(17\)](#)

The decrease in neutrophil count caused by breast carcinoma chemotherapy was ameliorated by dietary supplementation with a multivitamin or vitamin E. **- GMI Summary**

Pubmed Data : Cancer. 2004 Sep 1;101(5):1058-64. PMID: [15329916](#)

Article Published Date : Sep 01, 2004

Authors : Richard F Branda, Shelly J Naud, Elice M Brooks, Zhuan Chen, Hyman Muss

Study Type : Human Study

Additional Links

Substances : [Folic Acid : CK\(572\) : AC\(79\)](#), [Vitamin B-12 : CK\(752\) : AC\(98\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Mucositis : CK\(49\) : AC\(10\)](#), [Neutropenia: Chemotherapy Induced : CK\(82\) : AC\(17\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#)

[Astragalus stimulates hematopoiesis and may attenuate the myelosuppressive effects of anti-cancer chemotherapy.](#) - GMI Summary

Pubmed Data : Zhong Yao Cai. 2005 Sep;28(9):791-3. PMID: [16447871](#)

Article Published Date : Sep 01, 2005

Authors : Yan Lv, Xuemei Feng, Bide Zhu

Study Type : In Vitro Study

Additional Links

Substances : [Astragalus : CK\(284\) : AC\(57\)](#)

Diseases : [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Myelodysplastic Syndromes : CK\(189\) : AC\(17\)](#), [Myelotoxicity : CK\(31\) : AC\(8\)](#), [Neutropenia: Chemotherapy Induced : CK\(82\) : AC\(17\)](#)

Pharmacological Actions : [Hematopoietic : CK\(20\) : AC\(9\)](#)

[Maitake enhances granulopoiesis and mobilization of granulocytes by increasing granulocyte colony-stimulating factor.](#) - GMI Summary

Pubmed Data : Int Immunopharmacol. 2009 Jun 30. PMID: [19573626](#)

Article Published Date : Jun 30, 2009

Authors : Koichi Ito, Yuki Masuda, Yoshihiko Yamasaki, Yoshinobu Yokota, Hiroaki Nanba

Study Type : Commentary

Additional Links

Substances : [Maitake Mushroom : CK\(61\) : AC\(34\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Leukopenia: Chemotherapy Induced : CK\(25\) : AC\(5\)](#), [Neutropenia : CK\(90\) : AC\(22\)](#), [Neutropenia: Chemotherapy Induced : CK\(82\) : AC\(17\)](#), [Neutropenia: Cyclic : CK\(48\) : AC\(16\)](#)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\) : CK\(33\) : AC\(10\)](#)

Drug: Cisplatin (AC 10)

[Acetyl-L-carnitine appears to be an effective and well-tolerated agent for the treatment of chemotherapy-induced peripheral neuropathy.](#) - GMI Summary

Pubmed Data : Tumori. 2005 Mar-Apr;91(2):135-8. PMID: [15948540](#)

Article Published Date : Mar 01, 2005

Authors : Antonio Maestri, Adolfo De Pasquale Ceratti, Sante Cundari, Claudio Zanna, Enrico Cortesi, Lucio Crinò

Study Type : Human Study

Additional Links

Substances : [Acetyl-L-carnitine : CK\(213\) : AC\(37\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Neuropathic Pain : CK\(177\) : AC\(23\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

[Bi-weekly administration of paclitaxel and cisplatin in patients with advanced esophageal cancer results in a median survival for all patients of 9 months.](#) - GMI Summary

Pubmed Data : Br J Cancer. 2002 Mar 4;86(5):669-73. PMID: [11875723](#)

Article Published Date : Mar 04, 2002

Authors : M B Poole, F A L M Eskens, M E L van der Burg, T A W Splinter, P D Siersema, H W Tilanus, J Verweij, G Stoter, A van der Gaast

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Esophageal Cancer : CK\(293\) : AC\(54\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug: Paclitaxel : CK\(36\) : AC\(13\)](#)

[Curcumin protects against cisplatin-induced oxidative injury in rat testis.](#) - GMI Summary

Pubmed Data : Hum Reprod. 2009 Jul;24(7):1717-25. Epub 2009 Mar 11. PMID: [19279034](#)

Article Published Date : Jul 01, 2009

Authors : Yusuf Ozlem Ilbey, Emin Ozbek, Mustafa Cekmen, Abdulmuttalip Simsek, Alper Otuncemur, Adnan Somay

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

[Resveratrol exhibits chemosensitizing and chemopreventive properties.](#) - GMI Summary

Pubmed Data : Chemotherapy. 2010;56(1):60-5. Epub 2010 Mar 19. PMID: [20299793](#)

Article Published Date : Jan 01, 2010

Authors : A M El-Mowafy, M E El-Mesery, H A Salem, M M Al-Gayyar, M M Darweish

Study Type : Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#), [Stilbenes : CK\(123\) : AC\(88\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemopreventive : CK\(1254\) : AC\(342\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Malondialdehyde Down-regulation : CK\(68\) : AC\(18\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

[Curcumin may have chemosensitizing properties in the treatment of human ovarian cancer.](#) - GMI Summary

Pubmed Data : Cell Prolif. 2009 Apr;42(2):195-206. Epub 2009 Feb 18. PMID: [19236381](#)

Article Published Date : Apr 01, 2009

Authors : M Montopoli, E Ragazzi, G Froldi, L Caparrotta

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug: Oxaliplatin : CK\(6\) : AC\(5\)](#)

[Curcumin may sensitize cancer cells to chemotherapy.](#) - GMI Summary

Pubmed Data : Mol Cancer Ther. 2006 Apr;5(4):952-61. PMID: [16648566](#)

Article Published Date : Apr 01, 2006

Authors : Deborah Chirnomas, Toshiyasu Taniguchi, Michelle de la Vega, Ami P Vaidya, Maria Vasserman, Anne-Renee Hartman, Richard Kennedy, Rosemary Foster, Jennifer Mahoney, Michael V Seiden, Alan D D'Andrea

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [DNA damage : CK\(687\) : AC\(287\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

Curcumin promotes programmed cell death of cisplatin-resistant human lung carcinoma cells. - GMI Summary

Pubmed Data : Zhongguo Fei Ai Za Zhi. 2010 Apr;13(4):301-6. PMID: [20677554](#)

Article Published Date : Apr 01, 2010

Authors : Ni Tang, Jian Zhang, Yongping Du

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin : CK\(4\) : AC\(3\)](#), [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

Genistein acts as a chemosensitizer, augmenting the efficacy of cisplatin in pancreatic cancer. - GMI Summary

Pubmed Data : Int J Cancer. 2007 Feb 15;120(4):906-17. PMID: [17131310](#)

Article Published Date : Feb 15, 2007

Authors : Sanjeev Banerjee, Yuxiang Zhang, Zhiwei Wang, Mingxin Che, Paul J Chiao, James L Abbruzzese, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor : CK\(141\) : AC\(68\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin : CK\(4\) : AC\(3\)](#), [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Luteolin has anti-proliferative and chemosensitizing effects on human gastric cancer cells. - GMI Summary

Pubmed Data : Mol Cell Biochem. 2008 Jun;313(1-2):125-32. Epub 2008 Apr 9. PMID: [18398671](#)

Article Published Date : Jun 01, 2008

Authors : Bin Wu, Qiang Zhang, Weiming Shen, Jun Zhu

Study Type : In Vitro Study

Additional Links

Substances : [Luteolin : CK\(61\) : AC\(51\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Sulforaphane protects against cisplatin-induced mitochondrial alterations associated with renal damage. - GMI Summary

Pubmed Data : Toxicol Lett. 2010 Nov 10;199(1):80-92. Epub 2010 Aug 21. PMID: [20732396](#)

Article Published Date : Nov 10, 2010

Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Eduardo Martínez-Abundis, Edilia Tapia, Guillermo Zarco-Márquez, Cecilia Zazueta, José Pedraza-Chaverri

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Mitochondrial Diseases : CK\(145\) : AC\(50\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

Antiproliferative (AC 24)

[Curcumin inhibits lung cancer cell metastasis.](#) - GMI Summary

Pubmed Data : Clin Exp Metastasis. 2000;18(7):539-45. PMID: [11688958](#)

Article Published Date : Jan 01, 2000

Authors : K Ichiki, N Mitani, Y Doki, H Hara, T Misaki, I Saiki

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancer Metastasis : CK\(283\) : AC\(132\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Anti-metastatic : CK\(172\) : AC\(95\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#)

[Resveratrol adds to the growth inhibitory/anticancer activity of cisplatin and doxorubicin in vitro and protects against doxorubicin-induced cardiac toxicity both in vitro and in mice.](#) - GMI Summary

Pubmed Data : Am J Obstet Gynecol. 2006 May;194(5):e23-6. Epub 2006 Apr 21. PMID: [16647892](#)

Article Published Date : May 01, 2006

Authors : Youssef A Rezk, Sujata S Balulad, Rebecca S Keller, James A Bennett

Study Type : Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#), [Uterine Cancer : CK\(24\) : AC\(10\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

[Soy phytochemicals synergistically enhance the preventive effect of tamoxifen on the growth of estrogen-dependent human breast carcinoma in mice.](#) - GMI Summary

Pubmed Data : Carcinogenesis. 2007 Jun;28(6):1217-23. Epub 2007 Jan 18. PMID: [17234721](#)

Article Published Date : Jun 01, 2007

Authors : Zhiming Mai, George L Blackburn, Jin-Rong Zhou

Study Type : Animal Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#), [Soy : CK\(1697\) : AC\(340\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Tamoxifen : CK\(367\) : AC\(53\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

[Artesunate and bufalin may have value in treating multi-drug resistant human leukemia cells.](#) - GMI Summary

Pubmed Data : Blood Cells Mol Dis. 2002 Mar-Apr;28(2):160-8. PMID: [12064912](#)

Article Published Date : Mar 01, 2002

Authors : Thomas Efferth, Mary Davey, Armin Olbrich, Gerhard Rücker, Erich Gebhart, Ross Davey

Study Type : In Vitro Study

Additional Links

Substances : [Artesunate : CK\(1\) : AC\(1\)](#), [Bufalin : CK\(1\) : AC\(1\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) :](#)

[AC\(72\)](#), [Leukemia](#) : [CK\(694\)](#) : [AC\(270\)](#)

Pharmacological Actions : [Antiproliferative](#) : [CK\(957\)](#) : [AC\(711\)](#), [Chemosensitizer](#) : [CK\(188\)](#) : [AC\(157\)](#)

Cannabinoids work synergistically with paclitaxel in gastric cancer cell lines. - GMI Summary

Pubmed Data : J Surg Res. 2009 Jul;155(1):40-7. Epub 2008 Aug 9. PMID: [19394652](#)

Article Published Date : Jul 01, 2009

Authors : Hideyo Miyato, Joji Kitayama, Hiroharu Yamashita, Daisuke Souma, Masahiro Asakage, Jun Yamada, Hirokazu Nagawa

Study Type : In Vitro Study

Additional Links

Substances : [Cannabinoids](#) : [CK\(183\)](#) : [AC\(53\)](#)

Diseases : [Gastric Cancer](#) : [CK\(360\)](#) : [AC\(108\)](#)

Pharmacological Actions : [Antiproliferative](#) : [CK\(957\)](#) : [AC\(711\)](#), [Apoptotic](#) : [CK\(1419\)](#) : [AC\(1087\)](#), [Cell cycle arrest](#) : [CK\(371\)](#) : [AC\(311\)](#), [Chemosensitizer](#) : [CK\(188\)](#) : [AC\(157\)](#)

Additional Keywords : [Drug: Paclitaxel](#) : [CK\(36\)](#) : [AC\(13\)](#), [Drug Synergy](#) : [CK\(309\)](#) : [AC\(137\)](#)

Curcumin induces cell cycle arrest and programmed cell death in cisplatin-resistant human ovarian cancer cells. - GMI Summary

Pubmed Data : Cancer Biol Ther. 2007 Feb;6(2):178-84. Epub 2007 Feb 5. PMID: [17218783](#)

Article Published Date : Feb 01, 2007

Authors : Nathan M Weir, Karuppaiyah Selvendiran, Vijay Kumar Kutala, Liyue Tong, Shilpa Vishwanath, Murugesan Rajaram, Susheela Tridandapani, Shrikant Anant, Periannan Kuppusamy

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : [CK\(2870\)](#) : [AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant](#) : [CK\(210\)](#) : [AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin](#) : [CK\(165\)](#) : [AC\(64\)](#), [Ovarian Cancer](#) : [CK\(117\)](#) : [AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents](#) : [CK\(750\)](#) : [AC\(434\)](#), [Antiproliferative](#) : [CK\(957\)](#) : [AC\(711\)](#), [Apoptotic](#) : [CK\(1419\)](#) : [AC\(1087\)](#), [Cell cycle arrest](#) : [CK\(371\)](#) : [AC\(311\)](#), [Chemosensitizer](#) : [CK\(188\)](#) : [AC\(157\)](#)

Curcumin inhibits growth and sensitizes ovarian cancer cells to cisplatin-mediated killing. - GMI Summary

Pubmed Data : Carcinogenesis. 1982;3(11):1331-8. PMID: [12447990](#)

Article Published Date : Jan 01, 1982

Authors : Marion M Chan, Dunne Fong, Kenneth J Soprano, William F Holmes, Harry Heverling

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : [CK\(2870\)](#) : [AC\(1475\)](#), [Flavonoids](#) : [CK\(887\)](#) : [AC\(289\)](#), [Quercetin](#) : [CK\(312\)](#) : [AC\(140\)](#)

Diseases : [Cancers: Drug Resistant](#) : [CK\(210\)](#) : [AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin](#) : [CK\(165\)](#) : [AC\(64\)](#), [Ovarian Cancer](#) : [CK\(117\)](#) : [AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents](#) : [CK\(750\)](#) : [AC\(434\)](#), [Antiproliferative](#) : [CK\(957\)](#) : [AC\(711\)](#), [Apoptotic](#) : [CK\(1419\)](#) : [AC\(1087\)](#), [Chemosensitizer](#) : [CK\(188\)](#) : [AC\(157\)](#), [Interleukin-6 Downregulation](#) : [CK\(497\)](#) : [AC\(133\)](#)

Curcumin inhibits pancreatic cancer cell growth and acts as a chemosensitizing agent. - GMI Summary

Pubmed Data : Mol Pharmacol. 2009 Jul;76(1):81-90. Epub 2009 Apr 24. PMID: [19395473](#)

Article Published Date : Jul 01, 2009

Authors : Jun Li, Yun Wang, Chaozhe Yang, Pengfei Wang, Denise K Oelschlager, Yong Zheng, De-An Tian, William E Grizzle, Donald J Buchsbaum, Mei Wan

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : [CK\(2870\)](#) : [AC\(1475\)](#)

Diseases : [Pancreatic Cancer](#) : [CK\(524\)](#) : [AC\(160\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)
Additional Keywords : [Chemotherapeutic Synergy: Gemcitabine : CK\(10\) : AC\(8\)](#), [Drug: Gemcitabine : CK\(36\) : AC\(13\)](#)

Curcumin may contribute to overcoming chemoresistance of FOLFOX.- surviving colon cancer cells. - GMI Summary

Pubmed Data : Vet Med (Praha). 1989 Aug;34(8):467-74. PMID: [20332435](#)

Article Published Date : Aug 01, 1989

Authors : Bhaumik B Patel, Deepshika Gupta, Althea A Elliott, Vivek Sengupta, Yingjie Yu, Adhip P N Majumdar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Colon Cancer : CK\(375\) : AC\(230\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#), [Drug: Oxaliplatin : CK\(6\) : AC\(5\)](#)

Curcumin reverse multi-drug resistance in multiple myeloma cells. - GMI Summary

Pubmed Data : Ann Hematol. 2010 Apr;89(4):399-404. Epub 2009 Sep 15. PMID: [19756599](#)

Article Published Date : Apr 01, 2010

Authors : Hui Xiao, Qi Xiao, Kejian Zhang, Xuelan Zuo, Umid Kumar Shrestha

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Multiple Myeloma : CK\(125\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin synergistically augments bcr/abl phosphorothioate antisense oligonucleotides to inhibit growth of chronic myelogenous leukemia cells. - GMI Summary

Pubmed Data : Acta Pharmacol Sin. 2007 Jan;28(1):105-10. PMID: [17184589](#)

Article Published Date : Jan 01, 2007

Authors : Kun-Zhong Zhang, Jian-Hua Xu, Xiu-Wang Huang, Li-Xian Wu, Yu Su, Yuan-Zhong Chen

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Leukemia: Chronic myelogenous leukemia \(CML\) : CK\(28\) : AC\(17\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin works synergistically with bortezomib in multiple myeloma. - GMI Summary

Pubmed Data : Zhongguo Shi Yan Xue Ye Xue Za Zhi. 2011 Jun ;19(3):684-8. PMID: [21729550](#)

Article Published Date : Jun 01, 2011

Authors : Xiao-Yan Zhang, Qing-Xian Bai, Gao-Sheng Huang, Hui Zhao, Juan-Juan Chen, Li-Jie Yang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Multiple Myeloma : CK\(125\) : AC\(50\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Bcl-2 protein down-regulation : CK\(40\) : AC\(27\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB](#)

[Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Bortezomib : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin works synergistically with cyclophosphide to reverse multi-drug resistance of a human lymphoma cell line. - GMI Summary

Pubmed Data : Zhongguo Shi Yan Xue Ye Xue Za Zhi. 2008 Aug;16(4):804-8. PMID: [18718065](#)

Article Published Date : Aug 01, 2008

Authors : Hui Xiao, Ke-Jian Zhang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Lymphoma : CK\(211\) : AC\(68\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Genistein potentiates the effect of arsenic trioxide against human hepatocellular carcinoma. - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 1 ;301(1):75-84. PMID: [21078540](#)

Article Published Date : Feb 01, 2011

Authors : Yong Ma, Jizhou Wang, Lianxin Liu, Huaqiang Zhu, Xiaoning Chen, Shangha Pan, Xueying Sun, Hongchi Jiang

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Arsenic Trioxide : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Genistein sensitizes inhibitory effect of tamoxifen on the growth of estrogen receptor-positive and HER2-overexpressing human breast cancer cells. - GMI Summary

Pubmed Data : Mol Carcinog. 2007 Jul;46(7):534-42. PMID: [17295235](#)

Article Published Date : Jul 01, 2007

Authors : Zhiming Mai, George L Blackburn, Jin-Rong Zhou

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Drug synergy : CK\(51\) : AC\(14\)](#)

Additional Keywords : [Drug: Tamoxifen : CK\(367\) : AC\(53\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Gold exhibits antitumor effects by growth suppression of cultured cancer cells. Gold is less toxic than cisplatin. - GMI Summary

Pubmed Data : Cancer Biother Radiopharm. 1998 Jun;13(3):189-92. PMID: [10850355](#)

Article Published Date : Jun 01, 1998

Authors : T Koide, T Kojima, H Kamei

Study Type : In Vitro Study

Additional Links

Substances : [Gold : CK\(3\) : AC\(2\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Colon Cancer : CK\(375\) : AC\(230\)](#), [Lymphoma : CK\(211\) : AC\(68\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#)

Additional Keywords : [Natural Substances Versus Drugs : CK\(1003\) : AC\(167\)](#)

Luteolin has anti-proliferative and chemosensitizing effects on human gastric cancer cells. - GMI Summary

Pubmed Data : Mol Cell Biochem. 2008 Jun;313(1-2):125-32. Epub 2008 Apr 9. PMID: [18398671](#)

Article Published Date : Jun 01, 2008

Authors : Bin Wu, Qiang Zhang, Weiming Shen, Jun Zhu

Study Type : In Vitro Study

Additional Links

Substances : [Luteolin : CK\(61\) : AC\(51\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Reishi extract protects against radiation and chemotherapy associated toxicity. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2006 Oct;31(19):1618-22. PMID: [17165589](#)

Article Published Date : Oct 01, 2006

Authors : Dan-Hua Wang, Xin-Chu Weng

Study Type : In Vitro Study

Additional Links

Substances : [Reishi Mushroom : CK\(109\) : AC\(43\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Liver Cancer : CK\(758\) : AC\(265\)](#), [Radiation Disaster Associated Toxicity : CK\(942\) : AC\(268\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Radioprotective : CK\(453\) : AC\(180\)](#)

Resveratrol combines favorably with paclitaxel to induce cell death in lung cancer cells. - GMI Summary

Pubmed Data : Anticancer Res. 2003 Sep-Oct;23(5A):4039-46. PMID: [14666716](#)

Article Published Date : Sep 01, 2003

Authors : Tetsuya Kubota, Yoshiaki Uemura, Makoto Kobayashi, Hirokuni Taguchi

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Paclitaxel : CK\(36\) : AC\(13\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol enhances the anti-tumor activity of rapamycin in breast cancer cell lines. - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 28;301(2):168-76. Epub 2010 Dec 17. PMID: [21168265](#)

Article Published Date : Feb 28, 2011

Authors : Xin He, Yu Wang, Jinhong Zhu, Mohammed Orloff, Charis Eng

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Rapamycin : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Resveratrol induces cell-cycle disruption and programmed cell death in chemoresistant melanoma. - GMI Summary

Pubmed Data : J Cell Biochem. 2010 Jul 1;110(4):893-902. PMID: [20564188](#)

Article Published Date : Jul 01, 2010

Authors : Grégory Gatouillat, Emilie Balasse, Débora Joseph-Pietras, Hamid Morjani, Claudie Madoulet

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Melanoma](#) : CK(169) : AC(87)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Stilbenes](#) : CK(414) : AC(245)

Resveratrol reverses doxorubicin resistance in acute myeloid leukemia cells. - GMI Summary

Pubmed Data : Environ Health. 2008;7:21. Epub 2008 May 30. PMID: [20350534](#)

Article Published Date : Jan 01, 2008

Authors : Sin Ho Kweon, Ju Han Song, Tae Sung Kim

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Stilbenes](#) : CK(414) : AC(245)

Vitamin A and D have an anti-tumor effect against head and neck squamous cell carcinoma. - GMI Summary

Pubmed Data : Auris Nasus Larynx. 2003 Dec;30(4):403-12. PMID: [14656567](#)

Article Published Date : Dec 01, 2003

Authors : Kenichi Satake, Emi Takagi, Akiko Ishii, Yasumasa Kato, Yukari Imagawa, Yuu Kimura, Mamoru Tsukuda

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin A](#) : CK(358) : AC(53), [Vitamin D](#) : CK(1493) : AC(220)

Diseases : [Head and Neck Cancer](#) : CK(36) : AC(14), [Skin Cancer: Squamous Cell](#) : CK(52) : AC(16)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23)

Vitamin K2 augments 5-flourouracil-induced growth inhibition of human hepatocellular carcinoma cells by inhibiting NF-κB activation. - GMI Summary

Pubmed Data : Oncol Rep. 2011 Jan;25(1):159-66. PMID: [21109972](#)

Article Published Date : Jan 01, 2011

Authors : Hao Zhang, Iwata Ozaki, Hiroshi Hamajima, Shinji Iwane, Hirokazu Takahashi, Yasunori Kawaguchi, Yuichiro Eguchi, Kyosuke Yamamoto, Toshihiko Mizuta

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin K](#) : CK(540) : AC(64), [Vitamin K2](#) : CK(254) : AC(27)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23), [Drug Synergy](#) : CK(309) : AC(137)

Genistein (AC 14)

[Soy isoflavones ameliorate the adverse effects of chemotherapy in children. - GMI Summary](#)

Pubmed Data : J Infect Dis. 1996 Oct;174(4):747-51. PMID: [20924976](#)

Article Published Date : Oct 01, 1996

Authors : Nurdan Tacyildiz, Derya Ozyoruk, Gulsan Yavuz, Emel Unal, Handan Dincaslan, Figen Dogu, Kazim Sahin, Omer Kucuk

Study Type : Human Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#), [Isoflavones : CK\(621\) : AC\(122\)](#)

Diseases : [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#)

[Genistein increases the efficacy of fludarabine in inducing cell death in blood cells from CLL and PLL patients. - GMI Summary](#)

Pubmed Data : Cancer Immunol Immunother. 2007 Apr;56(4):501-14. Epub 2006 Oct 19. PMID: [17051411](#)

Article Published Date : Apr 01, 2007

Authors : Amal Mansour, Victor T Chang, Shanti Srinivas, Jonathan Harrison, Elizabeth Raveche

Study Type : Animal Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [B-cell prolymphocytic leukemia \(B-PLL\) : CK\(2\) : AC\(1\)](#), [Leukemia: B-Cell : CK\(8\) : AC\(7\)](#), [Leukemia: Chronic Lymphocytic Leukemia \(CLL\) : CK\(52\) : AC\(24\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

[Soy phytochemicals synergistically enhance the preventive effect of tamoxifen on the growth of estrogen-dependent human breast carcinoma in mice. - GMI Summary](#)

Pubmed Data : Carcinogenesis. 2007 Jun;28(6):1217-23. Epub 2007 Jan 18. PMID: [17234721](#)

Article Published Date : Jun 01, 2007

Authors : Zhiming Mai, George L Blackburn, Jin-Rong Zhou

Study Type : Animal Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#), [Soy : CK\(1697\) : AC\(340\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Tamoxifen : CK\(367\) : AC\(53\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

[Flavanoid rich honey may act as chemosensitizers in multidrug resistant cancers. - GMI Summary](#)

Pubmed Data : Med Hypotheses. 2011 Jan 17. Epub 2011 Jan 17. PMID: [21247706](#)

Article Published Date : Jan 17, 2011

Authors : Saravana Kumar Jaganathan

Study Type : In Vitro Study

Additional Links

Substances : [Biochanin A : CK\(9\) : AC\(7\)](#), [Chrysin : CK\(15\) : AC\(13\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Genistein : CK\(457\) : AC\(176\)](#), [Honey : CK\(205\) : AC\(42\)](#), [Kaempferol : CK\(27\) : AC\(22\)](#), [Naringenin : CK\(17\) : AC\(12\)](#), [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

[Genistein acts as a chemosensitizer, augmenting the efficacy of cisplatin in pancreatic cancer. - GMI Summary](#)

Pubmed Data : Int J Cancer. 2007 Feb 15;120(4):906-17. PMID: [17131310](#)

Article Published Date : Feb 15, 2007

Authors : Sanjeev Banerjee, Yuxiang Zhang, Zhiwei Wang, Mingxin Che, Paul J Chiao, James L Abbruzzese, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor : CK\(141\) : AC\(68\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin : CK\(4\) : AC\(3\)](#), [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Genistein acts as a chemosensitizer, contributing to overcoming drug-resistance in prostate, breast, lung and pancreatic cancers. - GMI Summary

Pubmed Data : Cancer Res. 2005 Aug 1;65(15):6934-42. PMID: [16061678](#)

Article Published Date : Aug 01, 2005

Authors : Yiwei Li, Fakhara Ahmed, Shadan Ali, Philip A Philip, Omer Kucuk, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Genistein acts as a radiosensitizing and chemosensitizing agent against the breast cancer cell line MCF-7. - GMI Summary

Pubmed Data : Anticancer Res. 2009 Aug;29(8):3179-83. PMID: [19661332](#)

Article Published Date : Aug 01, 2009

Authors : Johannes Hartmann, Nikola Getoff

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Genistein enhances the anti-cancer activity of gemcitabine in osteosarcoma cells. - GMI Summary

Pubmed Data : Anticancer Drugs. 2010 Mar;21(3):288-96. PMID: [20038829](#)

Article Published Date : Mar 01, 2010

Authors : Bo Zhang, Zhong-Li Shi, Bing Liu, Xiao-Bo Yan, Jie Feng, Hui-Min Tao

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Osteosarcoma : CK\(65\) : AC\(40\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Genistein potentiates the effect of arsenic trioxide against human hepatocellular carcinoma. - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 1 ;301(1):75-84. PMID: [21078540](#)

Article Published Date : Feb 01, 2011

Authors : Yong Ma, Jizhou Wang, Lianxin Liu, Huaqiang Zhu, Xiaoning Chen, Shangha Pan, Xueying Sun, Hongchi Jiang

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Arsenic Trioxide : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Genistein sensitizes human breast cancer cells to the chemotoxic effects of trastuzumab. - GMI Summary

Pubmed Data : Anticancer Drugs. 2010 Dec 14. Epub 2010 Dec 14. PMID: [21160418](#)

Article Published Date : Dec 14, 2010

Authors : Claus Lattrich, Julia Lubig, Anette Springwald, Regina Goerse, Olaf Ortmann, Oliver Treeck

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Trastuzumab : CK\(1\) : AC\(1\)](#)

Genistein sensitizes inhibitory effect of tamoxifen on the growth of estrogen receptor-positive and HER2-overexpressing human breast cancer cells. - GMI Summary

Pubmed Data : Mol Carcinog. 2007 Jul;46(7):534-42. PMID: [17295235](#)

Article Published Date : Jul 01, 2007

Authors : Zhiming Mai, George L Blackburn, Jin-Rong Zhou

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Drug synergy : CK\(51\) : AC\(14\)](#)

Additional Keywords : [Drug: Tamoxifen : CK\(367\) : AC\(53\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Genistein synergizes with arsenic trioxide to suppress human hepatocellular carcinoma. - GMI Summary

Pubmed Data : Cancer Sci. 2010 Apr ;101(4):975-83. Epub 2009 Dec 9. PMID: [20219070](#)

Article Published Date : Apr 01, 2010

Authors : Hongchi Jiang, Yong Ma, Xiaoning Chen, Shangha Pan, Bei Sun, Geoffrey W Krissansen, Xueying Sun

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Arsenic Trioxide : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

A number of plant polyphenols have chemosensitizing and radiosensitizing activity. - GMI Summary

Pubmed Data : Antioxid Redox Signal. 2005 Nov-Dec;7(11-12):1630-47. PMID: [16356126](#)

Article Published Date : Nov 01, 2005

Authors : Amit K Garg, Thomas A Buchholz, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Betulinic acid](#) : CK(6) : AC(6), [Caffeic acid phenethyl ester](#) : CK(15) : AC(8), [Curcumin](#) : CK(2870) : AC(1475), [Emodin](#) : CK(30) : AC(19), [Flavonoids](#) : CK(887) : AC(289), [Genistein](#) : CK(457) : AC(176), [Green Tea](#) : CK(931) : AC(279), [Polyphenols](#) : CK(417) : AC(171), [Resveratrol](#) : CK(963) : AC(600), [Silymarin](#) : CK(36) : AC(6), [Ursolic Acid](#) : CK(18) : AC(13)
Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)
Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

A variety of natural substances may function as novel anticancer agents, proteasome inhibitors and chemosensitizers. - GMI Summary

Pubmed Data : Drug Resist Updat. 2006 Dec;9(6):263-73. Epub 2007 Jan 2. PMID: [17197231](#)

Article Published Date : Dec 01, 2006

Authors : Kristin R Landis-Piwowar, Vesna Milacic, Di Chen, Huanjie Yang, Yunfeng Zhao, Tak Hang Chan, Bing Yan, Q Ping Dou

Study Type : Review

Additional Links

Substances : [Catechin](#) : CK(408) : AC(130), [Curcumin](#) : CK(2870) : AC(1475), [Genistein](#) : CK(457) : AC(176), [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157), [Proteasome Inhibitors](#) : CK(39) : AC(25), [Radiosensitizer](#) : CK(50) : AC(28)

Additional Keywords : [Stilbenes](#) : CK(414) : AC(245)

Gastric Cancer (AC 5)

Chemotherapy used in advanced gastric or gastroesophageal adenocarcinoma results in an overall median survival time of between 7-9 months. - GMI Summary

Pubmed Data : J Clin Oncol. 2010 Mar 20;28(9):1547-53. Epub 2010 Feb 16. PMID: [20159816](#)

Article Published Date : Mar 20, 2010

Authors : Jaffer A Ajani, Wuilbert Rodriguez, Gyorgy Bodoky, Vladimir Moiseyenko, Mikhail Lichinitser, Vera Gorbunova, Ihor Vynnychenko, August Garin, Istvan Lang, Silvia Falcon

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Esophageal Cancer](#) : CK(293) : AC(54), [Gastric Cancer](#) : CK(360) : AC(108)

Additional Keywords : [Chemotherapy](#) : CK(20) : AC(2), [Drug: 5-flourouracil](#) : CK(88) : AC(23)

Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33)

Polysaccharides isolated from Echinacea purpurea herba cell cultures to counteract undesired effects of chemotherapy. - GMI Summary

Pubmed Data : Phytother Res. 2002 Mar;16(2):138-42. PMID: [11933115](#)

Article Published Date : Mar 01, 2002

Authors : Dieter Melchart, Christof Clemm, Bernhard Weber, Thorsten Draczynski, Felege Worku, Klaus Linde, Wolfgang Weidenhammer, Hildebert Wagner, Reinhard Saller

Study Type : Human Study

Additional Links

Substances : [Echinacea](#) : CK(469) : AC(90)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Gastric Cancer](#) : CK(360) : AC(108), [Leukopenia](#) : CK(43) : AC(7), [Leukopenia: Chemotherapy Induced](#) : CK(25) : AC(5)

Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23), [Plant Extracts](#) : CK(3297) : AC(1135)

Cannabinoids work synergistically with paclitaxel in gastric cancer cell lines. - GMI Summary

Pubmed Data : J Surg Res. 2009 Jul;155(1):40-7. Epub 2008 Aug 9. PMID: [19394652](#)

Article Published Date : Jul 01, 2009

Authors : Hideyo Miyato, Joji Kitayama, Hiroharu Yamashita, Daisuke Souma, Masahiro Asakage, Jun Yamada, Hirokazu Nagawa

Study Type : In Vitro Study

Additional Links

Substances : [Cannabinoids : CK\(183\) : AC\(53\)](#)

Diseases : [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Paclitaxel : CK\(36\) : AC\(13\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin reverses chemoresistance of human gastric cancer cells. - GMI Summary

Pubmed Data : Oncol Rep. 2011 Aug 2. Epub 2011 Aug 2. PMID: [21811763](#)

Article Published Date : Aug 02, 2011

Authors : Liang-Liang Yu, Jia-Guo Wu, Ning Dai, Hong-Gang Yu, Jian-Min Si

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [Inhibitor of Nuclear Factor Kappa-B Kinase \(IKK\) : CK\(2\) : AC\(2\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Luteolin has anti-proliferative and chemosensitizing effects on human gastric cancer cells. - GMI Summary

Pubmed Data : Mol Cell Biochem. 2008 Jun;313(1-2):125-32. Epub 2008 Apr 9. PMID: [18398671](#)

Article Published Date : Jun 01, 2008

Authors : Bin Wu, Qiang Zhang, Weiming Shen, Jun Zhu

Study Type : In Vitro Study

Additional Links

Substances : [Luteolin : CK\(61\) : AC\(51\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Myelotoxicity (AC 6)

Wheat grass juice may reduce myelotoxicity and need for granulocyte colony-stimulating factors in breast cancer patients receiving chemotherapy. - GMI Summary

Pubmed Data : Nutr Cancer. 2007;58(1):43-8. PMID: [17571966](#)

Article Published Date : Jan 01, 2007

Authors : Gil Bar-Sela, Medy Tsalic, Getta Fried, Hadassah Goldberg

Study Type : Human Study

Additional Links

Substances : [Wheat Grass : CK\(182\) : AC\(11\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Myelotoxicity : CK\(31\) : AC\(8\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

AHCC improves treatment outcome and reduces side effects in anticancer drug treated mice. - GMI Summary

Pubmed Data : J Exp Ther Oncol. 2009;8(1):43-51. PMID: [19827270](#)

Article Published Date : Jan 01, 2009

Authors : Kota Shigama, Akihiro Nakaya, Koji Wakame, Hiroshi Nishioka, Hajime Fujii

Study Type : Animal Study

Additional Links

Substances : [AHCC](#) : CK(48) : AC(17)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Myelotoxicity](#) : CK(31) : AC(8)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Bilberry enhances the effects and reduces the side effects of the chemotoxic agent 5-flouroucil.](#) - GMI Summary

Pubmed Data : Biofactors. 2007;29(1):55-65. PMID: [17611294](#)

Article Published Date : Jan 01, 2007

Authors : Eun Hye Choi, Hyun Ee Ok, Yoosik Yoon, Bernadene A Magnuson, Mi Kyung Kim, Hyang Sook Chun

Study Type : Animal Study

Additional Links

Substances : [Bilberry](#) : CK(787) : AC(22)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Myelotoxicity](#) : CK(31) : AC(8)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Maitake beta-glucan enhances therapeutic effect and reduces myelosupression and nephrotoxicity of cisplatin in mice.](#) - GMI Summary

Pubmed Data : Int Immunopharmacol. 2009 May;9(5):620-6. Epub 2009 Feb 26. PMID: [19249389](#)

Article Published Date : May 01, 2009

Authors :

Yuki Masuda, Munechika Inoue, Ayu Miyata, Shigeto Mizuno, Hiroaki Nanba

Study Type : Animal Study

Additional Links

Substances : [Beta-glucan](#) : CK(223) : AC(41), [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Myelotoxicity](#) : CK(31) : AC(8)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Maitake beta-glucan promotes recovery of leukocytes and myeloid cell function in peripheral blood from paclitaxel hematotoxicity.](#) - GMI Summary

Pubmed Data : Cancer Immunol Immunother. 2010 Feb 6. Epub 2010 Feb 6. PMID: [20140432](#)

Article Published Date : Feb 06, 2010

Authors : Hong Lin, Elisa de Stanchina, Xi Kathy Zhou, Feng Hong, Andrew Seidman, Monica Fornier, Wei-Lie Xiao, Edward J Kennelly, Kathleen Wesa, Barrie R Cassileth, Susanna Cunningham-Rundles

Study Type : Animal Study

Additional Links

Substances : [Beta-glucan](#) : CK(223) : AC(41), [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Paclitaxel](#) : CK(32) : AC(4), [Myelotoxicity](#) : CK(31) : AC(8)

Pharmacological Actions : [Chemopreventive](#) : CK(1254) : AC(342)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Astragalus stimulates hematopoiesis and may attenuate the myelosuppressive effects of anti-cancer chemotherapy.](#) - GMI Summary

Pubmed Data : Zhong Yao Cai. 2005 Sep;28(9):791-3. PMID: [16447871](#)

Article Published Date : Sep 01, 2005

Authors : Yan Lv, Xuemei Feng, Bide Zhu

Study Type : In Vitro Study

Additional Links

Substances : [Astragalus](#) : CK(284) : AC(57)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Myelodysplastic Syndromes](#) : CK(189) : AC(17), [Myelotoxicity](#) : CK(31) : AC(8), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17)

Pharmacological Actions : [Hematopoietic](#) : CK(20) : AC(9)

Anti-Inflammatory Agents (AC 5)

[TRAUMEEL S may reduce significantly the severity and duration of chemotherapy-induced stomatitis in children undergoing bone marrow transplantation.](#) - GMI Summary

Pubmed Data : Cancer. 2001 Aug 1;92(3):684-90. PMID: [11505416](#)

Article Published Date : Aug 01, 2001

Authors : M Oberbaum, I Yaniv, Y Ben-Gal, J Stein, N Ben-Zvi, L S Freedman, D Branski

Study Type : Human Study

Additional Links

Substances : [Homeopathic Medicine: Traumeel](#) : CK(40) : AC(3)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Stomatitis: Chemotherapy-Induced](#) : CK(10) : AC(1)

Therapeutic Actions : [Homeopathic Treatment](#) : CK(642) : AC(68)

Pharmacological Actions : [Anti-Inflammatory Agents](#) : CK(1159) : AC(412)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

[Curcumin oil has a protective effect against cisplatin-induced nephrotoxicity.](#) - GMI Summary

Pubmed Data : J Agric Food Chem. 2007 Dec 12;55(25):10150-5. Epub 2007 Nov 15. PMID: [18001039](#)

Article Published Date : Dec 12, 2007

Authors : Anurag Kuhad, Sangeeta Pilkhwal, Sameer Sharma, Naveen Tirkey, Kanwaljit Chopra

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Inflammation](#) : CK(1001) : AC(341), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Anti-Inflammatory Agents](#) : CK(1159) : AC(412), [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

[Hu Zhang \(Polygonum cuspidatum\), a rich source of resveratrol, inhibits the expression of inflammation in lung fibroblasts and reduces alveolitis and pulmonary fibrosis.](#) - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2009 Jun;34(12):1574-7. PMID: [19777850](#)

Article Published Date : Jun 01, 2009

Authors : Xiaoying Jin, Xianfang Luo, Kong Song, Yongliang Xia, Jianzhen Dan, Yongmei Sun

Study Type : Animal Study

Additional Links

Substances : [Hu Zhang \(Polygonum cuspidatum\)](#) : CK(964) : AC(9), [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [Anti-Inflammatory Agents](#) : CK(1159) : AC(412), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor](#) : CK(141) : AC(68)

[Hyperforin, a compound found within St. John's wort, has powerful anti-inflammatory therapeutic potential in reducing lung fibrosis.](#) - GMI Summary

Pubmed Data : J Pharmacol Exp Ther. 2007 May;321(2):492-500. Epub 2007 Feb 8. PMID: [17289834](#)

Article Published Date : May 01, 2007

Authors : Isabella Dell'Aica, Raffaele Niero, Francesco Piazza, Anna Cabrelle, Luigi Sartor, Cristiano Colalto, Enrico Brunetta, Gireca Lorusso, Roberto Benelli, Adriana Albini, Fiorella

Calabrese, Carlo Agostini, Spiridione Garbisa

Study Type : Animal Study

Additional Links

Substances : [St. Johns Wort](#) : CK(186) : AC(48)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Cystic Fibrosis](#) : CK(703) : AC(82), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [Anti-Inflammatory Agents](#) : CK(1159) : AC(412), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor](#) : CK(141) : AC(68)

Topical curcumin can inhibit deleterious effects of upper respiratory tract bacteria on human oropharyngeal cells. - GMI Summary

Pubmed Data : Support Care Cancer. 2010 May 14. Epub 2010 May 14. PMID: [20467756](#)

Article Published Date : May 14, 2010

Authors : Sonja Lürer, Rolf Troller, Marion Jetter, Violeta Spaniol, Christoph Aebi

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Mucositis](#) : CK(49) : AC(10), [Upper Respiratory Infections](#) : CK(849) : AC(92)

Pharmacological Actions : [Anti-Bacterial Agents](#) : CK(901) : AC(280), [Anti-Inflammatory Agents](#) : CK(1159) : AC(412)

Lymphoma (AC 5)

Therapy-related acute myeloid leukemia and myelodysplastic syndrome has been reported. - GMI Summary

Pubmed Data : J Med Food. 2005 Fall;8(3):382-5. PMID: [3857944](#)

Article Published Date : Sep 01, 2005

Authors : S D Michels, R W McKenna, D C Arthur, R D Brunning

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28), [Lymphoma](#) : CK(211) : AC(68), [Myelodysplastic Syndrome](#) : CK(188) : AC(17), [Radiation Induced Illness](#) : CK(994) : AC(245)

Additional Keywords : [Iatrogenic Disease](#) : CK(218) : AC(22)

Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33), [Radiotherapy](#) : CK(287) : AC(41)

A variety of carotenoids induce reduce resistance to chemotherapy in multidrug resistant lymphoma and human breast cancer cell lines. - GMI Summary

Pubmed Data : In Vivo. 2004 Mar-Apr;18(2):237-44. PMID: [15113052](#)

Article Published Date : Mar 01, 2004

Authors : Joseph Molnár, Nóra Gyémánt, Ilona Mucsi, Annamária Molnár, Margaret Szabó, Tamás Körtvélyesi, András Varga, Péter Molnár, Gyula Tóth

Study Type : Animal Study

Additional Links

Substances : [Carotenoids](#) : CK(1041) : AC(114), [Lycopene](#) : CK(175) : AC(32), [Paprika](#) : CK(8) : AC(6), [Zeaxanthin](#) : CK(67) : AC(10)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Lymphoma](#) : CK(211) : AC(68)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Curcumin may improve outcome in chemotherapy-refractory Natural killer/T-cell lymphoma (NKTL). - GMI Summary

Pubmed Data : Br J Haematol. 2005 Oct;131(1):59-66. PMID: [16173963](#)

Article Published Date : Oct 01, 2005

Authors : Kihyun Kim, Kyoungju Ryu, Younghyeh Ko, Chaehwa Park

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Lymphoma : CK\(211\) : AC\(68\)](#), [Natural killer/T-cell lymphoma \(NKTL\) : CK\(1\) : AC\(1\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Curcumin works synergistically with cyclophosmide to reverse multi-drug resistance of a human lymphoma cell line. - GMI Summary

Pubmed Data : Zhongguo Shi Yan Xue Ye Xue Za Zhi. 2008 Aug;16(4):804-8. PMID: [18718065](#)

Article Published Date : Aug 01, 2008

Authors : Hui Xiao, Ke-Jian Zhang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Lymphoma : CK\(211\) : AC\(68\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Gold exhibits antitumor effects by growth suppression of cultured cancer cells. Gold is less toxic than cisplatin. - GMI Summary

Pubmed Data : Cancer Biother Radiopharm. 1998 Jun;13(3):189-92. PMID: [10850355](#)

Article Published Date : Jun 01, 1998

Authors : T Koide, T Kojima, H Kamei

Study Type : In Vitro Study

Additional Links

Substances : [Gold : CK\(3\) : AC\(2\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Colon Cancer : CK\(375\) : AC\(230\)](#), [Lymphoma : CK\(211\) : AC\(68\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#)

Additional Keywords : [Natural Substances Versus Drugs : CK\(1003\) : AC\(167\)](#)

Carnitine (AC 3)

Carnitine improves fatigue, quality of life, lean body mass and appetite in advanced cancer patients undergoing anticancer therapy. - GMI Summary

Pubmed Data : Nutrition. 2006 Feb;22(2):136-45. PMID: [16459226](#)

Article Published Date : Feb 01, 2006

Authors : Giulia Gramignano, Maria Rita Lusso, Clelia Madeddu, Elena Massa, Roberto Serpe, Laura Deiana, Giovanna Lamonica, Mariele Dessì, Carla Spiga, Giorgio Astara, Antonio Macciò, Giovanni Mantovani

Study Type : Human Study

Additional Links

Substances : [Carnitine : CK\(650\) : AC\(67\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Chemotherapy : CK\(65\) : AC\(16\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Fatigue : CK\(218\) : AC\(29\)](#), [Quality of Life: Poor : CK\(170\) : AC\(16\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

L-carnitine and ginkgo biloba extract exhibits a protective agent in an animal model of bleomycin-induced lung fibrosis - GMI Summary

Pubmed Data : Pharmacol Res. 2002 Jun;45(6):461-7. PMID: [12162946](#)

Article Published Date : Jun 01, 2002

Authors : Mohamed H Daba, Abdel-Aziz H Abdel-Aziz, Adel M Moustafa, Abdulhakeem A Al-Majed, Othman A Al-Shabanah, Hassan A El-Kashef

Study Type : Animal Study

Additional Links

Substances : [Carnitine : CK\(650\) : AC\(67\)](#), [Ginkgo biloba : CK\(505\) : AC\(101\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

Pharmacological Actions : [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

[L-carnitine may reduce cardiotoxicities associated with epirubicin toxicity.](#) - GMI Summary

Pubmed Data : Cancer Lett. 2007 Jul 18;252(2):195-207. Epub 2007 Feb 2. PMID: [17275999](#)

Article Published Date : Jul 18, 2007

Authors : Christie E Delaney, Sean P Hopkins, Christina L Addison

Study Type : Animal Study

Additional Links

Substances : [Carnitine : CK\(650\) : AC\(67\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Epirubicin : CK\(2\) : AC\(1\)](#)

Additional Keywords : [Drug: Epirubicin : CK\(2\) : AC\(1\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Stilbenes (AC 13)

[Resveratrol protects against arsenic trioxide-induced cardiotoxicity in vitro and in vivo.](#) - GMI Summary

Pubmed Data : Br J Pharmacol. 2008 May;154(1):105-13. Epub 2008 Mar 10. PMID: [18332854](#)

Article Published Date : May 01, 2008

Authors : X-Y Zhao, G-Y Li, Y Liu, L-M Chai, J-X Chen, Y Zhang, Z-M Du, Y-J Lu, B-F Yang

Study Type : Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Arsenic Poisoning : CK\(85\) : AC\(26\)](#), [Chemotherapy-Induced Toxicity: Arsenic Trioxide : CK\(3\) : AC\(2\)](#)

Pharmacological Actions : [Cardioprotective : CK\(627\) : AC\(185\)](#)

Additional Keywords : [Stilbenes : CK\(414\) : AC\(245\)](#)

[Pterostilbene and 3'-hydroxypterostilbene are effective in multi-drug resistant leukemia cells.](#) - GMI Summary

Pubmed Data : Indian J Med Res. 2000 Sep;112:73-7. PMID: [15878840](#)

Article Published Date : Sep 01, 2000

Authors : Manlio Tolomeo, Stefania Grimaudo, Antonietta Di Cristina, Marinella Roberti, Daniela Pizzirani, Maria Meli, Luisa Dusonchet, Nicola Gebbia, Vincenzo Abbadessa, Lucia Crosta, Riccardo Barucchello, Giuseppina Grisolia, Francesco Invidiata, Daniele Simoni

Study Type : In Vitro Study

Additional Links

Substances : [Pterostilbene : CK\(999\) : AC\(29\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Leukemia : CK\(694\) : AC\(270\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Stilbenes : CK\(414\) : AC\(245\)](#)

[Resveratrol primes endometrial cancer cells for programmed cell death.](#) - GMI Summary

Pubmed Data : Biochim Biophys Acta. 2010 Sep;1800(9):912-8. Epub 2010 May 7. PMID: [20457218](#)

Article Published Date : Sep 01, 2010

Authors : Xiuli Sun, Yi Zhang, Jianliu Wang, Lihui Wei, Hui Li, Gregory Hanley, Miaoqing Zhao, Yi Li, Deling Yin

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Endometrial Cancer](#) : CK(239) : AC(43)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Glycogen synthase kinase-3beta \(GSK-3beta\) Inhibitor](#) : CK(4) : AC(4)

Additional Keywords : [Stilbenes](#) : CK(414) : AC(245)

[Resveratrol combines favorably with paclitaxel to induce cell death in lung cancer cells.](#) - GMI Summary

Pubmed Data : Anticancer Res. 2003 Sep-Oct;23(5A):4039-46. PMID: [14666716](#)

Article Published Date : Sep 01, 2003

Authors : Tetsuya Kubota, Yoshiki Uemura, Makoto Kobayashi, Hirokuni Taguchi

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Stilbenes](#) : CK(414) : AC(245)

[Resveratrol enhances the anti-tumor activity of rapamycin in breast cancer cell lines.](#) - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 28;301(2):168-76. Epub 2010 Dec 17. PMID: [21168265](#)

Article Published Date : Feb 28, 2011

Authors : Xin He, Yu Wang, Jinhong Zhu, Mohammed Orloff, Charis Eng

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Rapamycin](#) : CK(1) : AC(1), [Drug Synergy](#) : CK(309) : AC(137), [Stilbenes](#) : CK(414) : AC(245)

[Resveratrol increase the sensitivity of non-Hodgkin's lymphoma and multiple myeloma cell lines to paclitaxel-induced programmed cell death.](#) - GMI Summary

Pubmed Data : Mol Cancer Ther. 2004 Jan;3(1):71-84. PMID: [14749477](#)

Article Published Date : Jan 01, 2004

Authors : Ali R Jazirehi, Benjamin Bonavida

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Multiple Myeloma](#) : CK(125) : AC(50), [Non-Hodgkin Lymphoma](#) : CK(445) : AC(63)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Stilbenes](#) : CK(414) : AC(245)

[Resveratrol induces cell-cycle disruption and programmed cell death in chemoresistant melanoma.](#) - GMI Summary

Pubmed Data : J Cell Biochem. 2010 Jul 1;110(4):893-902. PMID: [20564188](#)

Article Published Date : Jul 01, 2010

Authors : Grégory Gatouillat, Emilie Balasse, Débora Joseph-Pietras, Hamid Morjani, Claudie Madoulet

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Melanoma](#) : CK(169) : AC(87)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Stilbenes](#) : CK(414) : AC(245)

[Resveratrol may help overcome multi-drug resistance in human cancer cell lines.](#) - GMI Summary

Pubmed Data : Anticancer Res. 2010 Nov;30(11):4587-93. PMID: [21115910](#)

Article Published Date : Nov 01, 2010

Authors : Olga Wesolowska, Jerzy Wisniewski, Aleksandra Bielawska-Pohl, Maria Paprocka, Noelia Duarte, Maria-José U Ferreira, Danuta Dus, Krystyna Michalak

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Colorectal Cancer](#) : CK(768) : AC(299)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Stilbenes](#) : CK(414) : AC(245)

[Resveratrol protects against Cisplatin-induced cardiotoxicity by alleviating oxidative damage.](#) - GMI Summary

Pubmed Data : Cancer Biother Radiopharm. 2009 Dec;24(6):675-80. PMID: [20025547](#)

Article Published Date : Dec 01, 2009

Authors : Jingxuan Wang, Dongning He, Qingyuan Zhang, Ying Han, Shi Jin, Feng Qi

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Stilbenes](#) : CK(414) : AC(245)

[Resveratrol reverses doxorubicin resistance in acute myeloid leukemia cells.](#) - GMI Summary

Pubmed Data : Environ Health. 2008;7:21. Epub 2008 May 30. PMID: [20350534](#)

Article Published Date : Jan 01, 2008

Authors : Sin Ho Kweon, Ju Han Song, Tae Sung Kim

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Stilbenes](#) : CK(414) : AC(245)

[Resveratrol sensitizes resistant leukemia cells to the the effects of anticancer drugs.](#) - GMI Summary

Pubmed Data : Neoplasma. 2006;53(5):384-92. PMID: [17013532](#)

Article Published Date : Jan 01, 2006

Authors : J Duraj, J Bodo, M Sulikova, P Rauko, J Sedlak

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Leukemia](#) : CK(694) : AC(270)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Stilbenes](#) : CK(414) : AC(245)

A variety of natural substances may function as novel anticancer agents, proteasome inhibitors and chemosensitizers. - GMI Summary

Pubmed Data : Drug Resist Updat. 2006 Dec;9(6):263-73. Epub 2007 Jan 2. PMID: [17197231](#)

Article Published Date : Dec 01, 2006

Authors : Kristin R Landis-Piowar, Vesna Milacic, Di Chen, Huanjie Yang, Yunfeng Zhao, Tak Hang Chan, Bing Yan, Q Ping Dou

Study Type : Review

Additional Links

Substances : [Catechin](#) : CK(408) : AC(130), [Curcumin](#) : CK(2870) : AC(1475), [Genistein](#) : CK(457) : AC(176), [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157), [Proteasome Inhibitors](#) : CK(39) : AC(25), [Radiosensitizer](#) : CK(50) : AC(28)

Additional Keywords : [Stilbenes](#) : CK(414) : AC(245)

Resveratrol has chemosensitizing and/or anti-cancer activity. - GMI Summary

Pubmed Data : Crit Rev Food Sci Nutr. 2009 Oct;49(9):782-99. PMID: [20443159](#)

Article Published Date : Oct 01, 2009

Authors : Thomas E Kraft, Daniel Parisotto, Christina Schempp, Thomas Efferth

Study Type : Review

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Anti-Angiogenic](#) : CK(133) : AC(99), [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Selective Cytotoxicity](#) : CK(41) : AC(36), [Stilbenes](#) : CK(414) : AC(245)

Myelodysplastic Syndrome (AC 3)

Therapy-related acute myeloid leukemia and myelodysplastic syndrome has been reported. - GMI Summary

Pubmed Data : J Med Food. 2005 Fall;8(3):382-5. PMID: [3857944](#)

Article Published Date : Sep 01, 2005

Authors : S D Michels, R W McKenna, D C Arthur, R D Brunning

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28), [Lymphoma](#) : CK(211) : AC(68), [Myelodysplastic Syndrome](#) : CK(188) : AC(17), [Radiation Induced Illness](#) : CK(994) : AC(245)

Additional Keywords : [Iatrogenic Disease](#) : CK(218) : AC(22)

Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33), [Radiotherapy](#) : CK(287) : AC(41)

Woodfordia fruticosa has an immunostimulatory effect and may protect the bone marrow. - GMI Summary

Pubmed Data : Pharm Biol. 2010 Sep;48(9):1066-72. PMID: [20731559](#)

Article Published Date : Sep 01, 2010

Authors : Abhishek S Shah, Archana R Juvekar

Study Type : Animal Study

Additional Links

Substances : [Woodfordia fruticosa](#) : CK(2) : AC(1)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Immune Disorders: Low Immune Function](#) : CK(483) : AC(116), [Myelodysplastic Syndrome](#) : CK(188) : AC(17)

Pharmacological Actions : [Immunomodulatory](#) : CK(516) : AC(145)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

[Triptolide inhibits transcription factor NF-kappa B, which translates into a therapeutic effect against various leukemias, multiple myeloma and myelodysplastic syndrome.](#) - GMI Summary

Pubmed Data : Curr Mol Pharmacol. 2010 Jul 2. Epub 2010 Jul 2. PMID: [20594187](#)

Article Published Date : Jul 02, 2010

Authors : Ota Fuchs

Study Type : In Vitro Study

Additional Links

Substances : [Tripterygium wilfordii](#) : CK(104) : AC(26), [Triptolide](#) : CK(11) : AC(9)

Diseases : [Leukemia](#) : CK(694) : AC(270), [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28), [Leukemia: Chronic Lymphocytic Leukemia \(CLL\)](#) : CK(52) : AC(24), [Leukemia: Chronic myelogenous leukemia \(CML\)](#) : CK(28) : AC(17), [Multiple Myeloma](#) : CK(125) : AC(50), [Myelodysplastic Syndrome](#) : CK(188) : AC(17)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Chemotherapy-Induced Toxicity: Paclitaxel (AC 2)

[Alpha lipoic acid prevents mitochondrial damage and neurotoxicity in experimental chemotherapy neuropathy.](#) - GMI Summary

Pubmed Data : Exp Neurol. 2008 Dec;214(2):276-84. Epub 2008 Sep 9. PMID: [18809400](#)

Article Published Date : Dec 01, 2008

Authors : Giorgia Melli, Michela Taiana, Francesca Camozzi, Daniela Triolo, Paola Podini, Angelo Quattrini, Franco Taroni, Giuseppe Lauria

Study Type : Human Study

Additional Links

Substances : [Alpha-Lipoic Acid](#) : CK(406) : AC(80)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Chemotherapy-Induced Toxicity: Paclitaxel](#) : CK(32) : AC(4), [Chemotherapy-Induced Toxicity: Peripheral Neuropathy](#) : CK(195) : AC(5)

Pharmacological Actions : [Neuroprotective Agents](#) : CK(927) : AC(468)

[Maitake beta-glucan promotes recovery of leukocytes and myeloid cell function in peripheral blood from paclitaxel hematotoxicity.](#) - GMI Summary

Pubmed Data : Cancer Immunol Immunother. 2010 Feb 6. Epub 2010 Feb 6. PMID: [20140432](#)

Article Published Date : Feb 06, 2010

Authors : Hong Lin, Elisa de Stanchina, Xi Kathy Zhou, Feng Hong, Andrew Seidman, Monica Fornier, Wei-Lie Xiao, Edward J Kennelly, Kathleen Wesa, Barrie R Cassileth, Susanna Cunningham-Rundles

Study Type : Animal Study

Additional Links

Substances : [Beta-glucan](#) : CK(223) : AC(41), [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Paclitaxel](#) : CK(32) : AC(4), [Myelotoxicity](#) : CK(31) : AC(8)

Pharmacological Actions : [Chemopreventive](#) : CK(1254) : AC(342)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Colony-Stimulating Factors (CSFs) (AC 3)

[A proprietary honey-based herbal formula reduces chemotherapy-induced neutropenia and the need for colony-stimulating factors.](#) - GMI Summary

Pubmed Data : Med Oncol. 2006;23(4):549-52. PMID: [17303914](#)

Article Published Date : Jan 01, 2006

Authors : Jamal Zidan, Lika Shetver, Anthony Gershuny, Amira Abzah, Sigalit Tamam, Moshe Stein, Eitan Friedman

Study Type : Human Study

Additional Links

Substances : [Honey: Life Mel Proprietary Formula](#) : CK(205) : AC(31)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Neutropenia](#) : CK(90) : AC(22), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\)](#) : CK(33) : AC(10)

[Maitake beta-glucan MD-fraction enhances bone marrow colony formation and reduces doxorubicin toxicity in vitro.](#) - GMI Summary

Pubmed Data : Int Immunopharmacol. 2004 Jan;4(1):91-9. PMID: [14975363](#)

Article Published Date : Jan 01, 2004

Authors : Hong Lin, Yu-Hong She, Barrie R Cassileth, Frank Sirotnak, Susanna Cunningham Rundles

Study Type : In Vitro Study

Additional Links

Substances : [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Hematopoietic](#) : CK(20) : AC(9)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\)](#) : CK(33) : AC(10)

[Maitake enhances granulopoiesis and mobilization of granulocytes by increasing granulocyte colony-stimulating factor.](#) - GMI Summary

Pubmed Data : Int Immunopharmacol. 2009 Jun 30. PMID: [19573626](#)

Article Published Date : Jun 30, 2009

Authors : Koichi Ito, Yuki Masuda, Yoshihiko Yamasaki, Yoshinobu Yokota, Hiroaki Nanba

Study Type : Commentary

Additional Links

Substances : [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Leukopenia: Chemotherapy Induced](#) : CK(25) : AC(5), [Neutropenia](#) : CK(90) : AC(22), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17), [Neutropenia: Cyclic](#) : CK(48) : AC(16)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\)](#) : CK(33) : AC(10)

Tumor Suppressor Protein p53 Upregulation (AC 9)

[Astaxanthin intervention ameliorates cyclophosphamide-induced oxidative stress, DNA damage and early hepatocarcinogenesis in rat.](#) - GMI Summary

Pubmed Data : Mutat Res. 2010 Feb ;696(1):69-80. Epub 2009 Dec 28. PMID: [20038455](#)

Article Published Date : Feb 01, 2010

Authors : D N Tripathi, G B Jena

Study Type : Animal Study

Additional Links

Substances : [Astaxanthin](#) : CK(585) : AC(104)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [DNA damage](#) : CK(687) : AC(287), [Liver Damage](#) : CK(598) : AC(209), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Chemopreventive](#) : CK(1254) : AC(342), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

[Curcumin has anticancer, chemosensitization and radiosensitization effects in prostate cancer.](#) - GMI Summary

Pubmed Data : Cancer Res. 2007 Mar 1;67(5):1988-96. PMID: [17332326](#)

Article Published Date : Mar 01, 2007

Authors : Mao Li, Zhuo Zhang, Donald L Hill, Hui Wang, Ruiwen Zhang

Study Type : Animal Study

Additional Links**Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Prostate Cancer](#) : CK(961) : AC(288)**Pharmacological Actions** : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)**Additional Keywords** : [Drug: Gemcitabine](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin induces programmed cell death in human melanoma cells.](#) - GMI Summary**Pubmed Data** : Exp Cell Res. 2001 Dec 10;271(2):305-14. PMID: [11716543](#)**Article Published Date** : Dec 10, 2001**Authors** : J A Bush, K J Cheung, G Li**Study Type** : In Vitro Study**Additional Links****Substances** : [Curcumin](#) : CK(2870) : AC(1475)**Diseases** : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Melanoma](#) : CK(169) : AC(87)**Pharmacological Actions** : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Enzyme Inhibitors](#) : CK(385) : AC(210), [NF-kappaB Inhibitor](#) : CK(596) : AC(403), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

[Melatonin sensitizes kidney cancer cells to kahweol-induced programmed cell death.](#) - GMI Summary**Pubmed Data** : J Pineal Res. 2011 Jan 18. Epub 2011 Jan 18. PMID: [21244481](#)**Article Published Date** : Jan 18, 2011**Authors** : Hee Jung Um, Jong-Wook Park, Taeg Kyu Kwon**Study Type** : In Vitro Study**Additional Links****Substances** : [Kahweol](#) : CK(1) : AC(1), [Melatonin](#) : CK(454) : AC(115)**Diseases** : [Renal Cancer](#) : CK(5) : AC(3)**Pharmacological Actions** : [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)**Additional Keywords** : [Natural Substance Synergy](#) : CK(127) : AC(77)

[Paclitaxel and beta-lapachone \(a compound within Tabebuia\) synergistically induce programmed cell death in human retinoblastoma cells.](#) - GMI Summary**Pubmed Data** : J Cell Physiol. 2010 Feb;222(2):433-43. PMID: [19918798](#)**Article Published Date** : Feb 01, 2010**Authors** : Antonella D'Anneo, Giuseppa Augello, Andrea Santulli, Michela Giuliano, Riccardo di Fiore, Concetta Messina, Giovanni Tesoriere, Renza Vento**Study Type** : In Vitro Study**Additional Links****Substances** : [Tabebuia](#) : CK(10) : AC(9)**Diseases** : [Retinoblastoma](#) : CK(24) : AC(6)**Pharmacological Actions** : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)**Additional Keywords** : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

[Quercetin abrogates chemoresistance in melanoma cells.](#) - GMI Summary**Pubmed Data** : BMC Cancer. 2010;10:282. Epub 2010 Jun 11. PMID: [20540768](#)**Article Published Date** : Jan 01, 2010**Authors** : Thilakavathy Thangasamy, Sivanandane Sittadjody, Geoffrey C Mitchell, Erin E Mendoza, Vijayababu M Radhakrishnan, Kirsten H Limesand, Randy Burd**Study Type** : In Vitro Study**Additional Links****Substances** : [Quercetin](#) : CK(312) : AC(140)**Diseases** : [DNA damage](#) : CK(687) : AC(287), [Melanoma](#) : CK(169) : AC(87)**Pharmacological Actions** : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157),

Sulforaphane reduces doxorubicin resistance. - GMI Summary

Pubmed Data : Mutat Res. 2006 Oct 10;601(1-2):92-101. Epub 2006 Jul 14. PMID: [16843502](#)

Article Published Date : Oct 10, 2006

Authors : Carmela Fimognari, Michael Nüsse, Monia Lenzi, Davide Sciuscio, Giorgio Cantelli-Forti, Patrizia Hrelia

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

The association of sulforaphane-doxorubicin may therefore allow doxorubicin to be administered at lower doses, thereby reducing its potential toxicity. - GMI Summary

Pubmed Data : Ann N Y Acad Sci. 2007 Jan;1095:62-9. PMID: [17404018](#)

Article Published Date : Jan 01, 2007

Authors : Carmela Fimognari, Monia Lenzi, Davide Sciuscio, Giorgio Cantelli-Forti, Patrizia Hrelia

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Vitamin C augments chemotherapeutic response of cervical carcinoma cells. - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2001 Mar 30;282(2):409-15. PMID: [11401473](#)

Article Published Date : Mar 30, 2001

Authors : V G Reddy, N Khanna, N Singh

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin C : CK\(1208\) : AC\(238\)](#)

Diseases : [Cervical Cancer : CK\(322\) : AC\(65\)](#), [Human Papillomavirus \(HPV\) : CK\(490\) : AC\(23\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Kidney Damage: Drug-Induced (AC 5)

Curcumin prevents adriamycin nephrotoxicity in rats. - GMI Summary

Pubmed Data : Br J Pharmacol. 2000 Jan;129(2):231-4. PMID: [10694226](#)

Article Published Date : Jan 01, 2000

Authors : [No authors listed]

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin : CK\(17\) : AC\(10\)](#), [Kidney Damage: Drug-Induced : CK\(86\) : AC\(18\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Grape seed extract prevents gentamicin-induced nephrotoxicity and genotoxicity in bone marrow cells of mice. - GMI Summary

Pubmed Data : Basic Clin Pharmacol Toxicol. 2006 Sep;99(3):230-6. PMID: [16930296](#)

Article Published Date : Sep 01, 2006

Authors : Ibrahim M El-Ashmawy, Abeer F El-Nahas, Osama M Salama

Study Type : Animal Study

Additional Links

Substances : [Grape Seed Extract](#) : CK(172) : AC(58)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity: Gentamicin](#) : CK(20) : AC(10), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Genoprotective](#) : CK(109) : AC(46), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Melatonin, a pineal secretory product with antioxidant properties, protects against cisplatin-induced nephrotoxicity in rats. - GMI Summary

Pubmed Data : J Pineal Res. 2001 Apr;30(3):129-38. PMID: [11316323](#)

Article Published Date : Apr 01, 2001

Authors : M Hara, M Yoshida, H Nishijima, M Yokosuka, M Iigo, R Ohtani-Kaneko, A Shimada, T Hasegawa, Y Akama, K Hirata

Study Type : Animal Study

Additional Links

Substances : [Melatonin](#) : CK(454) : AC(115)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84)

Royal jelly and green tea have a protective effect against cisplatin-induced nephrotoxicity in mice. - GMI Summary

Pubmed Data : J Chromatogr B Analyt Technol Biomed Life Sci. 2004 Apr 25;803(2):225-31. PMID: [19857080](#)

Article Published Date : Apr 25, 2004

Authors : Kürşad Yapar, Kültiğin Cavuşoğlu, Ertan Oruç, Emine Yalçın

Study Type : Animal Study

Additional Links

Substances : [Green Tea](#) : CK(931) : AC(279), [Royal Jelly](#) : CK(59) : AC(32)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Taurine has a protective effect against cisplatin-induced nephrotoxicity in rats. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2007 May;32(9):835-9. PMID: [11901256](#)

Article Published Date : May 01, 2007

Authors : Sherif Y Saad, Ammar C Al-Rikabi

Study Type : Animal Study

Additional Links

Substances : [Taurine](#) : CK(145) : AC(33)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84)

Lipid Peroxidation (AC 4)

Astaxanthin protects against cyclophosphamide-induced oxidative stress and DNA damage. - GMI Summary

Pubmed Data : Chem Biol Interact. 2009 Aug 14;180(3):398-406. Epub 2009 Apr 2. PMID: [19539803](#)

Article Published Date : Aug 14, 2009

Authors : D N Tripathi, G B Jena

Study Type : Animal Study

Additional Links

Substances : [Astaxanthin](#) : CK(585) : AC(104)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [DNA damage](#) : CK(687) : AC(287), [Lipid Peroxidation](#) : CK(333) : AC(125), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Malondialdehyde Down-regulation](#) : CK(68) : AC(18), [Superoxide Dismutase Up-regulation](#) : CK(127) : AC(40)

Celery has a protective effect against doxorubicin toxicity. - GMI Summary

Pubmed Data : Molecules. 2009 ;14(4):1627-38. Epub 2009 Apr 24. PMID: [19396021](#)

Article Published Date : Jan 01, 2009

Authors : Jovanka Kolarovic, Mira Popovic, Momir Mikov, Radoslav Mitic, Ljiljana Gvozdenovic

Study Type : Animal Study

Additional Links

Substances : [Celery](#) : CK(28) : AC(12)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Lipid Peroxidation](#) : CK(333) : AC(125)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Plant Extracts](#) : CK(3297) : AC(1135)

Curcumin inhibits lipid peroxidation and cholesterol levels in mice. - GMI Summary

Pubmed Data : Indian J Physiol Pharmacol. 1992 Oct;36(4):239-43. PMID: [1291474](#)

Article Published Date : Oct 01, 1992

Authors : K K Soudamini, M C Unnikrishnan, K B Soni, R Kuttan

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [Lipid Peroxidation](#) : CK(333) : AC(125)

Pharmacological Actions : [Hepatoprotective](#) : CK(528) : AC(257)

Loquat seed inhibits oxidative stress associated with adriamycin-induced nephropathy. - GMI Summary

Pubmed Data : Biol Pharm Bull. 2004 Dec;27(12):1961-4. PMID: [15577213](#)

Article Published Date : Dec 01, 2004

Authors : Atsuhide Hamada, Saburo Yoshioka, Daisuke Takuma, Junko Yokota, Tailine Cui, Masahiko Kusunose, Mitsuhiko Miyamura, Shojiro Kyotani, Yutaka Nishioka

Study Type : Animal Study

Additional Links

Substances : [Loquat Seeds](#) : CK(11) : AC(6)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10), [Lipid Peroxidation](#) : CK(333) : AC(125), [Nephropathy](#) : CK(161) : AC(29), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Glutathione Upregulation](#) : CK(152) : AC(47), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Plant Extracts](#) : CK(3297) : AC(1135)

Ovarian Cancer (AC 7)

Resveratrol adds to the growth inhibitory/anticancer activity of cisplatin and doxorubicin in vitro and protects against doxorubicin-induced cardiac

toxicity both in vitro and in mice. - GMI Summary

Pubmed Data : Am J Obstet Gynecol. 2006 May;194(5):e23-6. Epub 2006 Apr 21. PMID: [16647892](#)

Article Published Date : May 01, 2006

Authors : Youssef A Rezk, Sujata S Balulad, Rebecca S Keller, James A Bennett

Study Type : Animal Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Ovarian Cancer](#) : CK(117) : AC(50), [Uterine Cancer](#) : CK(24) : AC(10)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Curcumin enhances programmed cell death in chemoresistant ovarian cancer cells. - GMI Summary

Pubmed Data : Gynecol Oncol. 2007 Apr;105(1):104-12. Epub 2006 Dec 15. PMID: [17174384](#)

Article Published Date : Apr 01, 2007

Authors : Heather Wahl, Lijun Tan, Kent Griffith, Miheon Choi, J Rebecca Liu

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin induces cell cycle arrest and programmed cell death in cisplatin-resistant human ovarian cancer cells. - GMI Summary

Pubmed Data : Cancer Biol Ther. 2007 Feb;6(2):178-84. Epub 2007 Feb 5. PMID: [17218783](#)

Article Published Date : Feb 01, 2007

Authors : Nathan M Weir, Karuppaiyah Selvendiran, Vijay Kumar Kutala, Liyue Tong, Shilpa Vishwanath, Murugesan Rajaram, Susheela Tridandapani, Shrikant Anant, Periannan Kuppusamy

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin induces chemo/radio-sensitization in ovarian cancer cells and curcumin nanoparticles inhibit ovarian cancer cell growth. - GMI Summary

Pubmed Data : J Ovarian Res. 2010;3:11. Epub 2010 Apr 29. PMID: [20429876](#)

Article Published Date : Jan 01, 2010

Authors : Murali M Yallapu, Diane M Maher, Vasudha Sundram, Maria C Bell, Meena Jaggi, Subhash C Chauhan

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

Curcumin inhibits growth and sensitizes ovarian cancer cells to cisplatin-mediated killing. - GMI Summary

Pubmed Data : Carcinogenesis. 1982;3(11):1331-8. PMID: [12447990](#)

Article Published Date : Jan 01, 1982

Authors : Marion M Chan, Dunne Fong, Kenneth J Soprano, William F Holmes, Harry Heverling

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Interleukin-6 Downregulation : CK\(497\) : AC\(133\)](#)

Curcumin may have chemosensitizing properties in the treatment of human ovarian cancer. - GMI Summary

Pubmed Data : Cell Prolif. 2009 Apr;42(2):195-206. Epub 2009 Feb 18. PMID: [19236381](#)

Article Published Date : Apr 01, 2009

Authors : M Montopoli, E Ragazzi, G Frolidi, L Caparrotta

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug: Oxaliplatin : CK\(6\) : AC\(5\)](#)

The essential oil of thyme is cytotoxic to human ovarian cancer cells resistant to chemotherapy. - GMI Summary

Pubmed Data : Braz J Med Biol Res. 2007 Nov;40(11):1537-44. PMID: [17934650](#)

Article Published Date : Nov 01, 2007

Authors : L Ait M'barek, H Ait Mouse, A Jaâfari, R Aboufatima, A Benharref, M Kamal, J Bénard, N El Abbadi, M Bensalah, A Gamouh, A Chait, A Dalal, A Zyad

Study Type : In Vitro Study

Additional Links

Substances : [Thyme : CK\(37\) : AC\(25\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Garlic (AC 4)

Aged garlic extract and grape seed proanthocyanidin protect against doxorubicin-induced cardiotoxicity. - GMI Summary

Pubmed Data : Can J Physiol Pharmacol. 2009 Aug;87(8):633-40. PMID: [19767888](#)

Article Published Date : Aug 01, 2009

Authors : Erkan Demirkaya, Aslihan Avci, Vural Kesik, Yildirim Karslioglu, Emin Oztas, Erol Kismet, Erdal Gokcay, Ilker Durak, Vedat Koseoglu

Study Type : Animal Study

Additional Links

Substances : [Garlic : CK\(488\) : AC\(156\)](#), [Grape Seed Extract : CK\(172\) : AC\(58\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#), [Proanthocyanidins : CK\(167\) : AC\(45\)](#)

Aged garlic extract protects against doxorubicin-induced cardiotoxicity in rats. - GMI Summary

Pubmed Data : Nutrition. 2006 Feb;22(2):136-45. PMID: [20060872](#)

Article Published Date : Feb 01, 2006

Authors : Huda Alkreathy, Zoheir A Damanhoury, Nessar Ahmed, Mark Slevin, Soad S Ali, Abdel-Moneim M Osman

Study Type : Animal Study

Additional Links

Substances : [Garlic](#) : CK(488) : AC(156)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Saffron, garlic and curcumin protect against cyclophosphamide induced genotoxicity in mice. - GMI Summary

Pubmed Data : Asia Pac J Clin Nutr. 2004;13(3):292-4. PMID: [15331343](#)

Article Published Date : Jan 01, 2004

Authors : Kumpati Premkumar, Sundramoorthy Kavitha, Sathiyavedu T Santhiya, A-Rabandi Ramesh, Jiraporn Suwanteerangkul

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475), [Garlic](#) : CK(488) : AC(156)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9)

Pharmacological Actions : [Antimutagenic Agents](#) : CK(73) : AC(43), [Genoprotective](#) : CK(109) : AC(46)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Garlic may attenuate the cardiotoxicity of the chemotherapy agent adriamycin. - GMI Summary

Pubmed Data : Kathmandu Univ Med J (KUMJ). 2006 Jul-Sep;4(3):337-9. PMID: [18603930](#)

Article Published Date : Jul 01, 2006

Authors : R N Das, N Poudel

Study Type : Commentary

Additional Links

Substances : [Garlic](#) : CK(488) : AC(156)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Matrix metalloproteinase-2 (MMP-2) inhibitor (AC 4)

A Chinese herbal formula containing Red Sage, Cordyceps and Peach kernel is superior to methylprednisone against experimental pulmonary fibrosis. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2007 May;32(9):835-9. PMID: [17639988](#)

Article Published Date : May 01, 2007

Authors : Shan-Zhong Tan, Cheng-Hai Liu, Wei Zhang, Xiong Lu, Wei-Cheng Ye, Zhen-Zhen Cai, Ping Liu

Study Type : Animal Study

Additional Links

Substances : [Red Sage](#) : CK(134) : AC(40)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21)

Pharmacological Actions : [Matrix metalloproteinase-2 \(MMP-2\) inhibitor](#) : CK(141) : AC(68)

Additional Keywords : [Superiority of Natural Substances versus Drugs](#) : CK(897) : AC(173)

Hu Zhang (Polygonum cuspidatum), a rich source of resveratrol, inhibits the expression of inflammation in lung fibroblasts and reduces alveolitis and pulmonary fibrosis. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2009 Jun;34(12):1574-7. PMID: [19777850](#)

Article Published Date : Jun 01, 2009

Authors : Xiaoying Jin, Xianfang Luo, Kong Song, Yongliang Xia, Jianzhen Dan, Yongmei Sun

Study Type : Animal Study

Additional Links

Substances : [Hu Zhang \(Polygonum cuspidatum\)](#) : CK(964) : AC(9), [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [Anti-Inflammatory Agents](#) : CK(1159) : AC(412), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor](#) : CK(141) : AC(68)

Hyperforin, a compound found within St. John's wort, has powerful anti-inflammatory therapeutic potential in reducing lung fibrosis. - GMI Summary

Pubmed Data : J Pharmacol Exp Ther. 2007 May;321(2):492-500. Epub 2007 Feb 8. PMID: [17289834](#)

Article Published Date : May 01, 2007

Authors : Isabella Dell'Aica, Raffaele Niero, Francesco Piazza, Anna Cabrelle, Luigi Sartor, Cristiano Colalto, Enrico Brunetta, Gireca Lorusso, Roberto Benelli, Adriana Albini, Fiorella Calabrese, Carlo Agostini, Spiridione Garbisa

Study Type : Animal Study

Additional Links

Substances : [St. Johns Wort](#) : CK(186) : AC(48)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Cystic Fibrosis](#) : CK(703) : AC(82), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [Anti-Inflammatory Agents](#) : CK(1159) : AC(412), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor](#) : CK(141) : AC(68)

Genistein acts as a chemosensitizer, augmenting the efficacy of cisplatin in pancreatic cancer. - GMI Summary

Pubmed Data : Int J Cancer. 2007 Feb 15;120(4):906-17. PMID: [17131310](#)

Article Published Date : Feb 15, 2007

Authors : Sanjeev Banerjee, Yuxiang Zhang, Zhiwei Wang, Mingxin Che, Paul J Chiao, James L Abbruzzese, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor](#) : CK(141) : AC(68), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin](#) : CK(4) : AC(3), [Drug: Cisplatin](#) : CK(31) : AC(11), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

AHCC (AC 3)

AHCC attenuates cisplatin (chemotherapy) induced side effects in tumor-bearing mice. - GMI Summary

Pubmed Data : Toxicol Appl Pharmacol. 2007 Jul 15;222(2):152-8. Epub 2007 Apr 20. PMID: [17555784](#)

Article Published Date : Jul 15, 2007

Authors : Aya Hirose, Eri Sato, Hajime Fujii, Buxiang Sun, Hiroshi Nishioka, Okezie I Aruoma

Study Type : Animal Study

Additional Links

Substances : [AHCC](#) : CK(48) : AC(17)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Tumors](#) : CK(179) : AC(107)

AHCC improves treatment outcome and reduces side effects in anticancer drug treated mice. - GMI Summary

Pubmed Data : J Exp Ther Oncol. 2009;8(1):43-51. PMID: [19827270](#)

Article Published Date : Jan 01, 2009

Authors : Kota Shigama, Akihiro Nakaya, Koji Wakame, Hiroshi Nishioka, Hajime Fujii

Study Type : Animal Study

Additional Links

Substances : [AHCC : CK\(48\) : AC\(17\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Myelotoxicity : CK\(31\) : AC\(8\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

[AHCC prevents chemotherapy induced hair loss.](#) - GMI Summary

Pubmed Data : Cancer Epidemiol. 2009 Oct;33(3-4):293-9. Epub 2009 Aug 20. PMID: [19699163](#)

Article Published Date : Oct 01, 2009

Authors : Buxiang Sun, Koji Wakame, Eri Sato, Hiroshi Nishioka, Okezie I Aruoma, Hajime Fujii

Study Type : Animal Study

Additional Links

Substances : [AHCC : CK\(48\) : AC\(17\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Hair Loss : CK\(99\) : AC\(22\)](#)

Paclitaxel (AC 3)

[Paclitaxel has a myelotoxic and immunosuppressive effect.](#) - GMI Summary

Pubmed Data : Eksp Klin Farmakol. 2007 Jul-Aug;70(4):39-43. PMID: [18078042](#)

Article Published Date : Jul 01, 2007

Authors : G V Karpov, T I Fomina, O L Voronova, E V Abramova, E A Timina, T Iu Lamzina, L A Ermolaeva, A V Perova

Study Type : Animal Study

Additional Links

Diseases : [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#)

Problem Substances : [Paclitaxel : CK\(28\) : AC\(6\)](#)

[Paclitaxel has a toxic effect on the rat liver and induces permanent structural and functional changes.](#) - GMI Summary

Pubmed Data : Bull Exp Biol Med. 2008 Feb;145(2):263-5. PMID: [19023985](#)

Article Published Date : Feb 01, 2008

Authors : L A Ermolaeva, T Yu Dubskaya, T I Fomina, T V Vetoshkina, V E Gol'dberg

Study Type : Animal Study

Additional Links

Diseases : [Chemotherapy-Induced Liver Toxicity : CK\(14\) : AC\(8\)](#)

Problem Substances : [Paclitaxel : CK\(28\) : AC\(6\)](#)

[Paclitaxel has a wide range of adverse effects in mice.](#) - GMI Summary

Pubmed Data : Bull Exp Biol Med. 2008 Feb;145(2):213-7. PMID: [19023972](#)

Article Published Date : Feb 01, 2008

Authors : A A Churin, V E Gol'dberg, G V Karpova, O L Voronova, E P Feodorova, O V Kolotova, E G Skurikhin, O V Pershina

Study Type : Animal Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#)

Problem Substances : [Paclitaxel : CK\(28\) : AC\(6\)](#)

Tumors (AC 5)

[AHCC attenuates cisplatin \(chemotherapy\) induced side effects in tumor-bearing mice.](#) - GMI Summary

Pubmed Data : Toxicol Appl Pharmacol. 2007 Jul 15;222(2):152-8. Epub 2007 Apr 20. PMID:

[17555784](#)

Article Published Date : Jul 15, 2007

Authors : Aya Hirose, Eri Sato, Hajime Fujii, Buxiang Sun, Hiroshi Nishioka, Okezie I Aruoma

Study Type : Animal Study

Additional Links

Substances : [AHCC : CK\(48\) : AC\(17\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Tumors : CK\(179\) : AC\(107\)](#)

[Lobelia can reverse multidrug resistance in tumor cells. - GMI Summary](#)

Pubmed Data : Toxicol Pathol. 2010;38(3):366-71. Epub 2010 Mar 9. PMID: [18222670](#)

Article Published Date : Jan 01, 2010

Authors : Yonggang Ma, Michael Wink

Study Type : In Vitro Study

Additional Links

Substances : [Lobelia : CK\(8\) : AC\(5\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Tumors : CK\(179\) : AC\(107\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

[Vitamin C \(dehydroascorbic acid\) and mixtures of vitamin E and beta-carotene possess antitumor properties upon radiation and increase the chemotherapeutic activity of mitomycin C. - GMI Summary](#)

Pubmed Data : In Vivo. 2004 Nov-Dec;18(6):795-8. PMID: [15646822](#)

Article Published Date : Nov 01, 2004

Authors : Cornelia Kammerer, Nikola Getoff

Study Type : In Vitro Study

Additional Links

Substances : [beta-Carotene : CK\(201\) : AC\(31\)](#), [Vitamin C : CK\(1208\) : AC\(238\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Tumors : CK\(179\) : AC\(107\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

[Curcumin has radiosensitizing and chemosensitizing effects on tumors while protecting healthy tissue from damage. - GMI Summary](#)

Pubmed Data : Nutr Cancer. 2010 Oct;62(7):919-30. PMID: [20924967](#)

Article Published Date : Oct 01, 2010

Authors : Ajay Goel, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Radiation Induced Illness : CK\(994\) : AC\(245\)](#), [Tumors : CK\(179\) : AC\(107\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

[Resveratrol exhibits tumor chemosensitizing properties. - GMI Summary](#)

Pubmed Data : Ann N Y Acad Sci. 2011 Jan;1215(1):150-60. PMID: [21261654](#)

Article Published Date : Jan 01, 2011

Authors : Subash C Gupta, Ramaswamy Kannappan, Simone Reuter, Ji Hye Kim, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Acute Myeloid Leukemia : CK\(51\) : AC\(21\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#), [Multiple Myeloma : CK\(125\) : AC\(50\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#), [Promyelocytic leukemia : CK\(137\) : AC\(75\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#), [Skin Cancer : CK\(438\) : AC\(174\)](#), [Tumors : CK\(179\) : AC\(107\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Anti-Bacterial Agents (AC 3)

[Curcumin inhibits bleomycin-induced pulmonary fibrosis in rats.](#) - GMI Summary

Pubmed Data : Br J Pharmacol. 2000 Sep;131(2):169-72. PMID: [10991907](#)

Article Published Date : Sep 01, 2000

Authors : D Punithavathi, N Venkatesan, M Babu

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity](#): [Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Pharmacological Actions : [Anti-Bacterial Agents](#) : CK(901) : AC(280)

[Carotenoids extracted from red paprika, Valencia orange and Golden delicious apple exhibit anti-H. pylori and anti-multidrug resistance activity.](#) - GMI Summary

Pubmed Data : Phytother Res. 2005 Aug;19(8):700-7. PMID: [16177974](#)

Article Published Date : Aug 01, 2005

Authors : Péter Molnár, Masami Kawase, Kazue Satoh, Yoshitaka Sohara, Toru Tanaka, Satoru Tani, Hiroshi Sakagami, Hideki Nakashima, Noboru Motohashi, Nóra Gyémánt, Joseph Molnár

Study Type : In Vitro Study

Additional Links

Substances : [Apple](#): [Golden Delicious](#) : CK(2) : AC(2), [Carotenoids](#) : CK(1041) : AC(114), [Orange](#) : CK(127) : AC(28), [Paprika](#) : CK(8) : AC(6)

Diseases : [Cancers](#): All : CK(8323) : AC(2625), [Cancers](#): Multi-Drug Resistant : CK(87) : AC(72), [Helicobacter Pylori Infection](#) : CK(294) : AC(61)

Pharmacological Actions : [Anti-Bacterial Agents](#) : CK(901) : AC(280), [Antioxidants](#) : CK(3530) : AC(1293), [Chemosensitizer](#) : CK(188) : AC(157)

[Topical curcumin can inhibit deleterious effects of upper respiratory tract bacteria on human oropharyngeal cells.](#) - GMI Summary

Pubmed Data : Support Care Cancer. 2010 May 14. Epub 2010 May 14. PMID: [20467756](#)

Article Published Date : May 14, 2010

Authors : Sonja Lüer, Rolf Troller, Marion Jetter, Violeta Spaniol, Christoph Aebi

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Mucositis](#) : CK(49) : AC(10), [Upper Respiratory Infections](#) : CK(849) : AC(92)

Pharmacological Actions : [Anti-Bacterial Agents](#) : CK(901) : AC(280), [Anti-Inflammatory Agents](#) : CK(1159) : AC(412)

Beta-glucan (AC 2)

[Maitake beta-glucan enhances therapeutic effect and reduces myelosuppression and nephrotoxicity of cisplatin in mice.](#) - GMI Summary

Pubmed Data : Int Immunopharmacol. 2009 May;9(5):620-6. Epub 2009 Feb 26. PMID: [19249389](#)

Article Published Date : May 01, 2009

Authors :

Yuki Masuda, Munechika Inoue, Ayu Miyata, Shigeto Mizuno, Hiroaki Nanba

Study Type : Animal Study

Additional Links

Substances : [Beta-glucan](#) : CK(223) : AC(41), [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy-Induced Toxicity](#): [Cisplatin](#) : CK(165) : AC(64), [Myelotoxicity](#) : CK(31) :

[AC\(8\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Maitake beta-glucan promotes recovery of leukocytes and myeloid cell function in peripheral blood from paclitaxel hematotoxicity. - GMI Summary

Pubmed Data : Cancer Immunol Immunother. 2010 Feb 6. Epub 2010 Feb 6. PMID: [20140432](#)

Article Published Date : Feb 06, 2010

Authors : Hong Lin, Elisa de Stanchina, Xi Kathy Zhou, Feng Hong, Andrew Seidman, Monica Fornier, Wei-Lie Xiao, Edward J Kennelly, Kathleen Wesa, Barrie R Cassileth, Susanna Cunningham-Rundles

Study Type : Animal Study

Additional Links

Substances : [Beta-glucan : CK\(223\) : AC\(41\)](#), [Maitake Mushroom : CK\(61\) : AC\(34\)](#)

Diseases : [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Paclitaxel : CK\(32\) : AC\(4\)](#), [Myelotoxicity : CK\(31\) : AC\(8\)](#)

Pharmacological Actions : [Chemopreventive : CK\(1254\) : AC\(342\)](#)

Additional Keywords : [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Drug: Mitomycin (AC 3)

Curcumin reduced the side effects of mitomycin C in the treatment of breast cancer. - GMI Summary

Pubmed Data : Cancer Sci. 2009 Nov;100(11):2040-5. Epub 2009 Jul 23. PMID: [19703194](#)

Article Published Date : Nov 01, 2009

Authors : Qian-Mei Zhou, Hui Zhang, Yi-Yu Lu, Xiu-Feng Wang, Shi-Bing Su

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Mitomycin-C : CK\(6\) : AC\(4\)](#), [DNA damage : CK\(687\) : AC\(287\)](#)

Pharmacological Actions : [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Drug: Mitomycin : CK\(4\) : AC\(3\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin improves chemotherapy by simultaneously sensitising cancer cells and reducing side effects. - GMI Summary

Pubmed Data : Eur J Cancer. 2011 May 24. Epub 2011 May 24. PMID: [21616659](#)

Article Published Date : May 24, 2011

Authors : Qian-Mei Zhou, Xiu-Feng Wang, Xin-Jun Liu, Hui Zhang, Yi-Yu Lu, Shuang Huang, Shi-Bing Su

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Mitomycin-C : CK\(6\) : AC\(4\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Cytoprotective : CK\(10\) : AC\(8\)](#)

Additional Keywords : [Drug: Mitomycin : CK\(4\) : AC\(3\)](#)

EGCG sensitizes human cholangiocarcinoma cells to chemotherapy-induced programmed cell death. - GMI Summary

Pubmed Data : Liver Int. 2009 May;29(5):670-7. Epub 2009 Feb 17. PMID: [19226332](#)

Article Published Date : May 01, 2009

Authors : Molly Lang, Roger Henson, Chiara Braconi, Tushar Patel

Study Type : In Vitro Study

Additional Links

Substances : [Catechin](#) : CK(408) : AC(130), [EGCG \(Epigallocatechin gallate\)](#) : CK(176) : AC(115)
Diseases : [Cholangiocarcinoma](#) : CK(23) : AC(11)
Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)
Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23), [Drug: Mitomycin](#) : CK(4) : AC(3), [Plant Extracts](#) : CK(3297) : AC(1135)

Malondialdehyde Down-regulation (AC 2)

[Astaxanthin protects against cyclophosphamide-induced oxidative stress and DNA damage.](#) - GMI Summary

Pubmed Data : Chem Biol Interact. 2009 Aug 14;180(3):398-406. Epub 2009 Apr 2. PMID: [19539803](#)
Article Published Date : Aug 14, 2009
Authors : D N Tripathi, G B Jena
Study Type : Animal Study
Additional Links
Substances : [Astaxanthin](#) : CK(585) : AC(104)
Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [DNA damage](#) : CK(687) : AC(287), [Lipid Peroxidation](#) : CK(333) : AC(125), [Oxidative Stress](#) : CK(1858) : AC(703)
Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Malondialdehyde Down-regulation](#) : CK(68) : AC(18), [Superoxide Dismutase Up-regulation](#) : CK(127) : AC(40)

[Resveratrol exhibits chemosensitizing and chemopreventive properties.](#) - GMI Summary

Pubmed Data : Chemotherapy. 2010;56(1):60-5. Epub 2010 Mar 19. PMID: [20299793](#)
Article Published Date : Jan 01, 2010
Authors : A M El-Mowafy, M E El-Mesery, H A Salem, M M Al-Gayyar, M M Darweish
Study Type : Animal Study
Additional Links
Substances : [Resveratrol](#) : CK(963) : AC(600), [Stilbenes](#) : CK(123) : AC(88)
Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)
Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Chemopreventive](#) : CK(1254) : AC(342), [Chemosensitizer](#) : CK(188) : AC(157), [Malondialdehyde Down-regulation](#) : CK(68) : AC(18), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)
Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11)

Saffron (AC 2)

[Saffron extract has a protective effect against genetic damage induced by anti-tumor agents in mice.](#) - GMI Summary

Pubmed Data : Hum Exp Toxicol. 2006 Feb;25(2):79-84. PMID: [16539212](#)
Article Published Date : Feb 01, 2006
Authors : K Premkumar, C Thirunavukkarasu, S K Abraham, S T Santhiya, A Ramesh
Study Type : Animal Study
Additional Links
Substances : [Saffron](#) : CK(123) : AC(32)
Diseases : [Chemotherapy-Induced Liver Toxicity](#) : CK(14) : AC(8)
Pharmacological Actions : [Chemopreventive](#) : CK(1254) : AC(342), [Chemotherapeutic](#) : CK(3) : AC(2)

[Saffron protects against chromosomal damage induced by cisplatin, mitomycin-C and urethane.](#) - GMI Summary

Pubmed Data : Asia Pac J Clin Nutr. 2003;12(4):474-6. PMID: [14672873](#)
Article Published Date : Jan 01, 2003
Authors : Kumpati Premkumar, Suresh K Abraham, Sathiyavedu T Santhiya, Arabandi Ramesh
Study Type : Animal Study
Additional Links

Substances : [Saffron](#) : CK(123) : AC(32)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Chemopreventive](#) : CK(1254) : AC(342)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Chemotherapy-Induced Toxicity: Mitomycin-C (AC 2)

[Curcumin reduced the side effects of mitomycin C in the treatment of breast cancer.](#) - GMI Summary

Pubmed Data : Cancer Sci. 2009 Nov;100(11):2040-5. Epub 2009 Jul 23. PMID: [19703194](#)

Article Published Date : Nov 01, 2009

Authors : Qian-Mei Zhou, Hui Zhang, Yi-Yu Lu, Xiu-Feng Wang, Shi-Bing Su

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Mitomycin-C](#) : CK(6) : AC(4), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Mitomycin](#) : CK(4) : AC(3), [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin improves chemotherapy by simultaneously sensitising cancer cells and reducing side effects.](#) - GMI Summary

Pubmed Data : Eur J Cancer. 2011 May 24. Epub 2011 May 24. PMID: [21616659](#)

Article Published Date : May 24, 2011

Authors : Qian-Mei Zhou, Xiu-Feng Wang, Xin-Jun Liu, Hui Zhang, Yi-Yu Lu, Shuang Huang, Shi-Bing Su

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Mitomycin-C](#) : CK(6) : AC(4)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Cytoprotective](#) : CK(10) : AC(8)

Additional Keywords : [Drug: Mitomycin](#) : CK(4) : AC(3)

Schisandra (AC 2)

[Schisandra protects against adriamycin-induced cardiotoxicity in rats.](#) - GMI Summary

Pubmed Data : Chang Gung Med J. 2006 Jan-Feb;29(1):63-70. PMID: [16642728](#)

Article Published Date : Jan 01, 2006

Authors : Jyh-Sheng You, Tai-Long Pan, Yu-Chang Hou

Study Type : Animal Study

Additional Links

Substances : [Schisandra](#) : CK(129) : AC(44)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Schisandra ameloriates doxorubicin-induced cytotoxicity to cardomyocytes.](#) - GMI Summary

Pubmed Data : Genes Nutr. 2008 Feb;2(4):337-45. PMID: [18850228](#)

Article Published Date : Feb 01, 2008

Authors : Eun Hye Choi, Nari Lee, Hyun Jung Kim, Mi Kyung Kim, Sung-Gil Chi, Dae Young Kwon, Hyang Sook Chun

Study Type : In Vitro Study

Additional Links

Substances : [Schisandra](#) : CK(129) : AC(44)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Antihypertensive Agents (AC 1)

[Oleuropein confers protection against doxorubicin-induced cardiotoxicity.](#) - GMI Summary

Pubmed Data : NMR Biomed. 2009 Jul;22(6):585-92. PMID: [19308947](#)

Article Published Date : Jul 01, 2009

Authors : Ioanna Andreadou, Maria Papaefthimiou, Athina Zira, Maria Constantinou, Fragiska Sigala, Alexios-Leandros Skaltsounis, Anna Tsantili-Kakoulidou, Efsthathios K Iliodromitis, Dimitrios T Kremastinos, Emmanuel Mikros

Study Type : Animal Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antihypertensive Agents](#) : CK(194) : AC(38), [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Bee Propolis (AC 1)

[Caffeic acid phenetyl ester, a compound found within bee propolis, protects against doxorubicin-induced cardiotoxicity in rats.](#) - GMI Summary

Pubmed Data : Am J Ind Med. 2010 Sep 30. Epub 2010 Sep 30. PMID: [14745846](#)

Article Published Date : Sep 30, 2010

Authors : Ersin Fadillioglu, Emin Oztas, Hasan Erdogan, Murat Yagmurca, Sadik Sogut, Muharrem Ucar, M Kemal Irmak

Study Type : Animal Study

Additional Links

Substances : [Bee Propolis](#) : CK(222) : AC(88), [Caffeic acid phenethyl ester](#) : CK(15) : AC(8)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Cancers: Drug Resistant (AC 51)

[Curcumin ameliorates oxaliplatin-induced chemoresistance in HCT116 colorectal cancer cells in vitro and in vivo.](#) - GMI Summary

Pubmed Data : Int J Cancer. 2010 Sep 13. Epub 2010 Sep 13. PMID: [20839263](#)

Article Published Date : Sep 13, 2010

Authors : Lynne M Howells, Stewart Sale, Sathya Neelature Sriramareddy, Glen R B Irving, Donald J L Jones, Christopher J Ottley, D Graham Pearson, Christopher D Mann, Margaret M Manson, David P Berry, Andreas Gescher, William P Steward, Karen Brown

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy](#) : CK(65) : AC(16), [Colorectal Cancer](#) : CK(768) : AC(299)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin ameliorates oxaliplatin-induced chemoresistance in HCT116 colorectal cancer cells in vitro and in vivo.](#) - GMI Summary

Pubmed Data : Int J Cancer. 2010 Sep 13. Epub 2010 Sep 13. PMID: [20839263](#)

Article Published Date : Sep 13, 2010

Authors : Lynne M Howells, Stewart Sale, Sathya Neelature Sriramareddy, Glen R B Irving, Donald J L Jones, Christopher J Ottley, D Graham Pearson, Christopher D Mann, Margaret M Manson, David P Berry, Andreas Gescher, William P Steward, Karen Brown

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy](#) : CK(65) : AC(16), [Colorectal Cancer](#) : CK(768) : AC(299)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Oxaliplatin](#) : CK(6) : AC(5), [Drug Synergy](#) : CK(309) : AC(137)

Curcumin has anticancer, chemosensitization and radiosensitization effects in prostate cancer. - GMI Summary

Pubmed Data : Cancer Res. 2007 Mar 1;67(5):1988-96. PMID: [17332326](#)

Article Published Date : Mar 01, 2007

Authors : Mao Li, Zhuo Zhang, Donald L Hill, Hui Wang, Ruiwen Zhang

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Gemcitabine](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

Galangin, a compound found within Alpinia galanga, acts as a chemosensitizer in drug-resistant leukemia cells. - GMI Summary

Pubmed Data : Cancer Lett. 2008 Jul 8;265(2):289-97. Epub 2008 Apr 18. PMID: [18374481](#)

Article Published Date : Jul 08, 2008

Authors : Manlio Tolomeo, Stefania Grimaudo, Antonietta Di Cristina, Rosaria M Pipitone, Luisa Dusonchet, Maria Meli, Lucia Crosta, Nicola Gebbia, Francesco Paolo Invidiata, Lucina Titone, Daniele Simoni

Study Type : Animal Study

Additional Links

Substances : [Alpinia galanga](#) : CK(5) : AC(4), [Flavonoids](#) : CK(887) : AC(289)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28), [Leukemia: Chronic myelogenous leukemia \(CML\)](#) : CK(28) : AC(17)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Green tea catechins augment the antitumor activity of doxorubicin in an in vivo mouse model for chemoresistant liver cancer. - GMI Summary

Pubmed Data : Int J Oncol. 2010 Jul ;37(1):111-23. PMID: [20514403](#)

Article Published Date : Jul 01, 2010

Authors : Gang Liang, Anzhou Tang, Xiaozhen Lin, Li Li, Su Zhang, Zhiming Huang, Haihua Tang, Qingdi Quentin Li

Study Type : Animal Study

Additional Links

Substances : [Catechin](#) : CK(408) : AC(130), [Tea](#) : CK(951) : AC(226)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug Synergy](#) : CK(309) : AC(137)

Artesunate and bufalin may have value in treating multi-drug resistant human leukemia cells. - GMI Summary

Pubmed Data : Blood Cells Mol Dis. 2002 Mar-Apr;28(2):160-8. PMID: [12064912](#)

Article Published Date : Mar 01, 2002

Authors : Thomas Efferth, Mary Davey, Armin Olbrich, Gerhard Rücker, Erich Gebhart, Ross Davey

Study Type : In Vitro Study

Additional Links

Substances : [Artesunate](#) : CK(1) : AC(1), [Bufalin](#) : CK(1) : AC(1)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Leukemia](#) : CK(694) : AC(270)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157)

Camptothecin acts synergistically with imatinib and overcomes imatinib resistance in chronic myelogenous leukemia (CML) cells. - GMI Summary

Pubmed Data : Cancer Lett. 2007 Jul 8;252(1):75-85. Epub 2007 Jan 16. PMID: [17223257](#)

Article Published Date : Jul 08, 2007

Authors : Dong-Sik Ju, Mi-Ju Kim, Jae-Ho Bae, Hye-Soon Song, Byung-Seon Chung, Min-Ki Lee, Chi-Dug Kang, Hyun-Sun Lee, Dong-Wan Kim, Sun-Hee Kim

Study Type : In Vitro Study

Additional Links

Substances : [Camptothecin](#) : CK(5) : AC(5)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Curcumin enhances programmed cell death in chemoresistant ovarian cancer cells. - GMI Summary

Pubmed Data : Gynecol Oncol. 2007 Apr;105(1):104-12. Epub 2006 Dec 15. PMID: [17174384](#)

Article Published Date : Apr 01, 2007

Authors : Heather Wahl, Lijun Tan, Kent Griffith, Miheon Choi, J Rebecca Liu

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin has anti-cancer activity against drug-resistant chronic myeloid leukemia cells. - GMI Summary

Pubmed Data : Mol Cancer Res. 2006 Jul;4(7):457-69. PMID: [16849521](#)

Article Published Date : Jul 01, 2006

Authors : Kamila Wolanin, Adriana Magalska, Grazyna Mosieniak, Rut Klinger, Sharon McKenna, Susanne Vejda, Ewa Sikora, Katarzyna Piwocka

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chronic Myeloid Leukemia](#) : CK(21) : AC(11)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin has chemosensitizing activity in multidrug resistant tumor cell lines. - GMI Summary

Pubmed Data : Zhong Yao Cai. 2001 Sep;24(9):655-7. PMID: [11799777](#)

Article Published Date : Sep 01, 2001

Authors : H Zhang, L Yang, S Liu, L Ren

Study Type : In Vitro Study

Additional Links

Substances : [Berberine](#) : CK(142) : AC(67), [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) :

[AC\(72\)](#)

Pharmacological Actions : [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin improves chemotherapy by simultaneously sensitising cancer cells and reducing side effects. - GMI Summary

Pubmed Data : Eur J Cancer. 2011 May 24. Epub 2011 May 24. PMID: [21616659](#)

Article Published Date : May 24, 2011

Authors : Qian-Mei Zhou, Xiu-Feng Wang, Xin-Jun Liu, Hui Zhang, Yi-Yu Lu, Shuang Huang, Shi-Bing Su

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Mitomycin-C : CK\(6\) : AC\(4\)](#)

Pharmacological Actions : [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#), [Cytoprotective : CK\(10\) : AC\(8\)](#)

Additional Keywords : [Drug: Mitomycin : CK\(4\) : AC\(3\)](#)

Curcumin induces cell cycle arrest and programmed cell death in cisplatin-resistant human ovarian cancer cells. - GMI Summary

Pubmed Data : Cancer Biol Ther. 2007 Feb;6(2):178-84. Epub 2007 Feb 5. PMID: [17218783](#)

Article Published Date : Feb 01, 2007

Authors : Nathan M Weir, Karupaiyah Selvendiran, Vijay Kumar Kutala, Liyue Tong, Shilpa Vishwanath, Murugesan Rajaram, Susheela Tridandapani, Shrikant Anant, Periannan Kuppusamy

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#)

Curcumin induces programmed cell death in human melanoma cells. - GMI Summary

Pubmed Data : Exp Cell Res. 2001 Dec 10;271(2):305-14. PMID: [11716543](#)

Article Published Date : Dec 10, 2001

Authors : J A Bush, K J Cheung, G Li

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Melanoma : CK\(169\) : AC\(87\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic Agents : CK\(188\) : AC\(157\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Curcumin inhibits growth and sensitizes ovarian cancer cells to cisplatin-mediated killing. - GMI Summary

Pubmed Data : Carcinogenesis. 1982;3(11):1331-8. PMID: [12447990](#)

Article Published Date : Jan 01, 1982

Authors : Marion M Chan, Dunne Fong, Kenneth J Soprano, William F Holmes, Harry Heverling

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) :](#)

[AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Interleukin-6 Downregulation : CK\(497\) : AC\(133\)](#)

Curcumin inhibits multi drug resistance associated protein (MRP1) in retinoblastoma cells. - GMI Summary

Pubmed Data : Bioinformation. 2012 ;8(1):13-9. Epub 2012 Jan 6. PMID: [22359429](#)

Article Published Date : Jan 01, 2012

Authors : Seethalakshmi Sreenivasan, Sathyabaarathi Ravichandran, Umashankar Vetrivel, Subramanian Krishnakumar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Retinoblastoma : CK\(24\) : AC\(6\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin inhibits multi-drug resistance gene expression in human leukemic cells. - GMI Summary

Pubmed Data : Arch Pharm Res. 2006 Oct;29(10):866-73. PMID: [17121181](#)

Article Published Date : Oct 01, 2006

Authors : Songyot Anuchapreeda, Pattria Thanarattanakorn, Somjai Sittipreechacharn, Singkome Tima, Prasit Chanarat, Pornngarm Limtrakul

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin may act as a chemosensitizer in multi-drug resistant cancer. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2010 Sep;35(18):2460-3. PMID: [21141501](#)

Article Published Date : Sep 01, 2010

Authors : Yanfen Huang, Gaixia Dong, Xingqiu Hong, Hui Chai, Xiaofeng Yuan

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin may be used as a chemosensitizer to make the retinoblastoma cells more sensitive to the effects of chemotherapy. - GMI Summary

Pubmed Data : Curr Eye Res. 2009 Oct;34(10):845-51. PMID: [19895312](#)

Article Published Date : Oct 01, 2009

Authors : Seethalakshmi Thiyagarajan, Karthiyayini Thirumalai, Sudarshan Nirmala, Jyotirmay Biswas, Subramanian Krishnakumar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Retinoblastoma : CK\(24\) : AC\(6\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin may have chemosensitizing properties in the treatment of human

ovarian cancer. - GMI Summary

Pubmed Data : Cell Prolif. 2009 Apr;42(2):195-206. Epub 2009 Feb 18. PMID: [19236381](#)

Article Published Date : Apr 01, 2009

Authors : M Montopoli, E Ragazzi, G Froidi, L Caparrotta

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug: Oxaliplatin : CK\(6\) : AC\(5\)](#)

Curcumin may improve outcome in chemotherapy-refractory Natural killer/T-cell lymphoma (NKTL). - GMI Summary

Pubmed Data : Br J Haematol. 2005 Oct;131(1):59-66. PMID: [16173963](#)

Article Published Date : Oct 01, 2005

Authors : Kihyun Kim, Kyoungju Ryu, Younghyeh Ko, Chaehwa Park

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Lymphoma : CK\(211\) : AC\(68\)](#), [Natural killer/T-cell lymphoma \(NKTL\) : CK\(1\) : AC\(1\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Curcumin promotes programmed cell death in multidrug-resistant human lung cancer cells. - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2010 Aug 13;399(1):1-6. Epub 2010 Jul 11. PMID: [20627087](#)

Article Published Date : Aug 13, 2010

Authors : Jian Zhang, Tao Zhang, Xinyu Ti, Jieran Shi, Changgui Wu, Xinling Ren, Hong Yin

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin promotes programmed cell death of cisplatin-resistant human lung carcinoma cells. - GMI Summary

Pubmed Data : Zhongguo Fei Ai Za Zhi. 2010 Apr;13(4):301-6. PMID: [20677554](#)

Article Published Date : Apr 01, 2010

Authors : Ni Tang, Jian Zhang, Yongping Du

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin : CK\(4\) : AC\(3\)](#), [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

Curcumin reduces chemo-resistance of melanoma cells to tamoxifen. - GMI Summary

Pubmed Data : Cancer Biol Ther. 2011 Jan 29;11(2). Epub 2011 Jan 29. PMID: [21088500](#)

Article Published Date : Jan 29, 2011

Authors : Sudipa June Chatterjee, Siyaram Pandey

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Melanoma](#) : CK(169) : AC(87)

Pharmacological Actions : [Chemotherapeutic Agents](#) : CK(188) : AC(157)

[Curcumin reverse multi-drug resistance in multiple myeloma cells.](#) - GMI Summary

Pubmed Data : Ann Hematol. 2010 Apr;89(4):399-404. Epub 2009 Sep 15. PMID: [19756599](#)

Article Published Date : Apr 01, 2010

Authors : Hui Xiao, Qi Xiao, Kejian Zhang, Xuelan Zuo, Umid Kumar Shrestha

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Multiple Myeloma](#) : CK(125) : AC(50)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Chemotherapeutic Agents](#) : CK(188) : AC(157)

[Curcumin sensitizes cervical cancer cells to curcumin-induced programmed cell death.](#) - GMI Summary

Pubmed Data : J Biol Chem. 2005 Feb 25;280(8):6301-8. Epub 2004 Dec 7. PMID: [15590651](#)

Article Published Date : Feb 25, 2005

Authors : Smitha V Bava, Vineshkumar T Puliappadamba, Ayswaria Deepti, Asha Nair, Devarajan Karunagaran, Ruby John Anto

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cervical Cancer](#) : CK(322) : AC(65)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agents](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Taxol](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin works synergistically with cyclophosphamide to reverse multi-drug resistance of a human lymphoma cell line.](#) - GMI Summary

Pubmed Data : Zhongguo Shi Yan Xue Ye Xue Za Zhi. 2008 Aug;16(4):804-8. PMID: [18718065](#)

Article Published Date : Aug 01, 2008

Authors : Hui Xiao, Ke-Jian Zhang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Lymphoma](#) : CK(211) : AC(68)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Chemotherapeutic Agents](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin works synergistically with the chemotoxic agent FOLFOX to eliminate colon cancer stem cells.](#) - GMI Summary

Pubmed Data : Transl Oncol. 2009 Dec;2(4):321-8. PMID: [19956394](#)

Article Published Date : Dec 01, 2009

Authors : Yingjie Yu, Shailender S Kanwar, Bhaumik B Patel, Jyoti Nautiyal, Fazlul H Sarkar, Adhip Pn Majumdar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy](#) : CK(65) : AC(16)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Cancer Stem Cells](#) : CK(4) : AC(3), [Drug: FOLFOX](#) : CK(1) : AC(1)

[DHA may induce cell death in chemotherapy resistant colon cancer cells.](#) - GMI Summary

Pubmed Data : Nutr Cancer. 2010 Jul;62(5):611-21. PMID: [20574922](#)

Article Published Date : Jul 01, 2010

Authors : Jens E Slagsvold, Caroline H H Pettersen, Gro L Størvold, Turid Follestad, Hans E Krokan, Svanhild A Schønberg

Study Type : In Vitro Study

Additional Links

Substances : [DHA \(Docosahexaenoic Acid\)](#) : CK(603) : AC(100)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Colon Cancer](#) : CK(375) : AC(230)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

[EGCG may act as a chemosensitizing agent in tamoxifen-resistant breast cancer cells.](#) - GMI Summary

Pubmed Data : Mutat Res. 2002 Jun 27;518(1):71-84. PMID: [20149610](#)

Article Published Date : Jun 27, 2002

Authors :

F Farabegoli, A Papi, G Bartolini, R Ostan, M Orlandi

Study Type : In Vitro Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\)](#) : CK(176) : AC(115)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Drug synergy](#) : CK(51) : AC(14)

Additional Keywords : [Tamoxifen Resistance](#) : CK(3) : AC(3)

[Genistein acts as a chemosensitizer, contributing to overcoming drug-resistance in prostate, breast, lung and pancreatic cancers.](#) - GMI Summary

Pubmed Data : Cancer Res. 2005 Aug 1;65(15):6934-42. PMID: [16061678](#)

Article Published Date : Aug 01, 2005

Authors : Yiwei Li, Fakhara Ahmed, Shadan Ali, Philip A Philip, Omer Kucuk, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185), [Pancreatic Cancer](#) : CK(524) : AC(160), [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Ginsenoside Rh\(2\) exhibits activity against adriamycin-resistant breast cancer cells.](#) - GMI Summary

Pubmed Data : Talanta. 2012 Jan 15 ;88:345-51. Epub 2011 Nov 2. PMID: [22265509](#)

Article Published Date : Jan 15, 2012

Authors : Bei Zhou, Xiuli Xiao, Lili Xu, Lian Zhu, Liang Tan, Hao Tang, Youyu Zhang, Qingji Xie, Shouzhao Yao

Study Type : In Vitro Study

Additional Links

Substances : [Ginsenosides](#) : CK(47) : AC(18)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)
Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)
Additional Keywords : [Drug: Adriamycin : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Glucosamine's anticancer activity may be due to its ability to inhibit the transglutaminase 2 enzyme. - GMI Summary

Pubmed Data : Cancer Lett. 2008 Sep 18. PMID: [18804908](#)

Article Published Date : Sep 18, 2008

Authors : Dae-Seok Kim, Kang-Seo Park, Kyung-Chae Jeong, Byung Ii Lee, Chang-Hoon Lee, Soo-Youl Kim

Study Type : In Vitro Study

Additional Links

Substances : [Glucosamine : CK\(116\) : AC\(21\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Loquat contains a compound which may have chemosensitizing properties. - GMI Summary

Pubmed Data : Bioorg Med Chem. 2011 Jan 15;19(2):1002-9. Epub 2010 Oct 25. PMID: [21087868](#)

Article Published Date : Jan 15, 2011

Authors : Petra H Pfisterer, Chenxi Shen, Zaneta Nikolovska-Coleska, Lilianna Schyschka, Daniela Schuster, Anita Rudy, Gerhard Wolber, Angelika M Vollmar, Judith M Rollinger, Hermann Stuppner

Study Type : In Vitro Study

Additional Links

Substances : [Flavonoids : CK\(887\) : AC\(289\)](#), [Loquat : CK\(65\) : AC\(31\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Nicotine induces resistance to chemotherapy by modulating mitochondrial signaling in lung cancer. - GMI Summary

Pubmed Data : Am J Respir Cell Mol Biol. 2009 Feb;40(2):135-46. Epub 2008 Aug 1. PMID: [18676776](#)

Article Published Date : Feb 01, 2009

Authors : Jingmei Zhang, Opal Kamdar, Wei Le, Glenn D Rosen, Daya Upadhyay

Study Type : In Vitro Study

Additional Links

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#), [Smoking : CK\(508\) : AC\(68\)](#)

Problem Substances : [Nicotine : CK\(52\) : AC\(6\)](#)

Nicotine induces resistance to chemotherapy in nasal epithelial cancer. - GMI Summary

Pubmed Data : Am J Rhinol Allergy. 2010 Mar;24(2):e73-7. PMID: [20338106](#)

Article Published Date : Mar 01, 2010

Authors : Tianjie Shen, Wei Le, Allison Yee, Opal Kamdar, Peter H Hwang, Daya Upadhyay

Study Type : In Vitro Study

Additional Links

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Skin Cancer: Squamous Cell : CK\(52\) : AC\(16\)](#), [Smoking : CK\(508\) : AC\(68\)](#)

Problem Substances : [Nicotine : CK\(52\) : AC\(6\)](#)

Adverse Pharmacological Actions : [Carcinogen : CK\(59\) : AC\(11\)](#)

Oleuropein profoundly increases the susceptibility of breast cancer cells to trastuzumab treatment. - GMI Summary

Pubmed Data : BMC Cancer. 2007;7:80. Epub 2007 May 9. PMID: [17490486](#)

Article Published Date : Jan 01, 2007

Authors : Javier A Menendez, Alejandro Vazquez-Martin, Ramon Colomer, Joan Brunet, Alegria Carrasco-Pancorbo, Rocio Garcia-Villalba, Alberto Fernandez-Gutierrez, Antonio Segura-Carretero

Study Type : In Vitro Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Bitter Principle](#) : CK(11) : AC(2), [Drug Resistant Cancer](#) : CK(9) : AC(9), [Plant Extracts](#) : CK(3297) : AC(1135)

[Pterostilbene and 3'-hydroxypterostilbene are effective in multi-drug resistant leukemia cells.](#) - GMI Summary

Pubmed Data : Indian J Med Res. 2000 Sep;112:73-7. PMID: [15878840](#)

Article Published Date : Sep 01, 2000

Authors : Manlio Tolomeo, Stefania Grimaudo, Antonietta Di Cristina, Marinella Roberti, Daniela Pizzirani, Maria Meli, Luisa Dusancho, Nicola Gebbia, Vincenzo Abbadesse, Lucia Crosta, Riccardo Barucchetto, Giuseppina Grisolia, Francesco Invidiata, Daniele Simoni

Study Type : In Vitro Study

Additional Links

Substances : [Pterostilbene](#) : CK(999) : AC(29)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Leukemia](#) : CK(694) : AC(270)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Stilbenes](#) : CK(414) : AC(245)

[Quercetin may reduce chemotherapy resistance in human pancreatic cancer cells.](#) - GMI Summary

Pubmed Data : Molecules. 2010;15(2):857-70. Epub 2010 Feb 9. PMID: [20335952](#)

Article Published Date : Jan 01, 2010

Authors : Sylwia Borska, Mirosław Sopol, Magdalena Chmielewska, Maciej Zabel, Piotr Dziegiel

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin](#) : CK(312) : AC(140)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

[Quercetin pretreatment sensitizes human cervical cells to cisplatin-induced programmed cell death.](#) - GMI Summary

Pubmed Data : Biochem Pharmacol. 2005 May 1;69(9):1343-50. PMID: [15826605](#)

Article Published Date : May 01, 2005

Authors : J Jakubowicz-Gil, R Paduch, T Piersiak, K Główniak, A Gawron, M Kandefer-Szerszeń

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin](#) : CK(312) : AC(140)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cervical Cancer](#) : CK(322) : AC(65), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Resveratrol down-regulates survivin and induces programmed cell death in human multidrug-resistant cells.](#) - GMI Summary

Pubmed Data : Oncol Rep. 2010 Jan;23(1):279-86. PMID: [19956893](#)

Article Published Date : Jan 01, 2010

Authors : Weiguo Zhao, Pengtao Bao, Haowen Qi, Houcheng You

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600), [Stilbenes](#) : CK(123) : AC(88)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [Survivin Down-Regulation](#) : CK(1) : AC(1)

[Resveratrol induces cell-cycle disruption and programmed cell death in chemoresistant melanoma.](#) - GMI Summary

Pubmed Data : J Cell Biochem. 2010 Jul 1;110(4):893-902. PMID: [20564188](#)

Article Published Date : Jul 01, 2010

Authors : Grégory Gatouillat, Emilie Balasse, Débora Joseph-Pietras, Hamid Morjani, Claudie Madoulet

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Melanoma](#) : CK(169) : AC(87)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Stilbenes](#) : CK(414) : AC(245)

[Resveratrol may help overcome multi-drug resistance in human cancer cell lines.](#) - GMI Summary

Pubmed Data : Anticancer Res. 2010 Nov;30(11):4587-93. PMID: [21115910](#)

Article Published Date : Nov 01, 2010

Authors : Olga Wesolowska, Jerzy Wisniewski, Aleksandra Bielawska-Pohl, Maria Paprocka, Noelia Duarte, Maria-José U Ferreira, Danuta Dus, Krystyna Michalak

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Colorectal Cancer](#) : CK(768) : AC(299)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Stilbenes](#) : CK(414) : AC(245)

[Sulforaphane reduces doxorubicin resistance.](#) - GMI Summary

Pubmed Data : Mutat Res. 2006 Oct 10;601(1-2):92-101. Epub 2006 Jul 14. PMID: [16843502](#)

Article Published Date : Oct 10, 2006

Authors : Carmela Fimognari, Michael Nüsse, Monia Lenzi, Davide Sciuscio, Giorgio Cantelli-Forti, Patrizia Hrelia

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Triptolide may reduce drug resistance in cancer cells.](#) - GMI Summary

Pubmed Data : Immunol Invest. 2010 Jan;39(2):159-70. PMID: [20932347](#)

Article Published Date : Jan 01, 2010

Authors : Zhao-Li Zhou, Zhi-Guo Luo, Bing Yu, Yi Jiang, Yi Chen, Jian-Ming Feng, Mei Dai, Lin-Jiang Tong, Zheng Li, Yuan-Chao Li, Jian Ding, Ze-Hong Miao

Study Type : In Vitro Study

Additional Links

Substances : [Triptolide : CK\(11\) : AC\(9\)](#)
Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)
Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

[Ursolic acid induces doxorubicin-resistant liver cancer cell death. - GMI Summary](#)

Pubmed Data : Cancer Lett. 2010 Dec 1;298(1):128-38. Epub 2010 Jul 13. PMID: [20630652](#)

Article Published Date : Dec 01, 2010

Authors : Lu Yang, Xiaozhuo Liu, Zengbing Lu, Judy Yuet-Wa Chan, Linli Zhou, Kwok-Pui Fung, Ping Wu, Shihua Wu

Study Type : In Vitro Study

Additional Links

Substances : [Ursolic Acid : CK\(18\) : AC\(13\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

[Vitamin D3 sensitizes breast cancer cells to chemotherapy-induced death. - GMI Summary](#)

Pubmed Data : Immunopharmacol Immunotoxicol. 2010 Mar 17. Epub 2010 Mar 17. PMID: [10766196](#)

Article Published Date : Mar 17, 2010

Authors : Q Wang, W Yang, M S Uyttingco, S Christakos, R Wieder

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin D : CK\(1493\) : AC\(220\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#)

[A number of plant polyphenols have chemosensitizing and radiosensitizing activity. - GMI Summary](#)

Pubmed Data : Antioxid Redox Signal. 2005 Nov-Dec;7(11-12):1630-47. PMID: [16356126](#)

Article Published Date : Nov 01, 2005

Authors : Amit K Garg, Thomas A Buchholz, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Betulinic acid : CK\(6\) : AC\(6\)](#), [Caffeic acid phenethyl ester : CK\(15\) : AC\(8\)](#), [Curcumin : CK\(2870\) : AC\(1475\)](#), [Emodin : CK\(30\) : AC\(19\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Genistein : CK\(457\) : AC\(176\)](#), [Green Tea : CK\(931\) : AC\(279\)](#), [Polyphenols : CK\(417\) : AC\(171\)](#), [Resveratrol : CK\(963\) : AC\(600\)](#), [Silymarin : CK\(36\) : AC\(6\)](#), [Ursolic Acid : CK\(18\) : AC\(13\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

[A variety of natural substances may function as novel anticancer agents, proteasome inhibitors and chemosensitizers. - GMI Summary](#)

Pubmed Data : Drug Resist Updat. 2006 Dec;9(6):263-73. Epub 2007 Jan 2. PMID: [17197231](#)

Article Published Date : Dec 01, 2006

Authors : Kristin R Landis-Piwowar, Vesna Milacic, Di Chen, Huanjie Yang, Yunfeng Zhao, Tak Hang Chan, Bing Yan, Q Ping Dou

Study Type : Review

Additional Links

Substances : [Catechin : CK\(408\) : AC\(130\)](#), [Curcumin : CK\(2870\) : AC\(1475\)](#), [Genistein : CK\(457\) : AC\(176\)](#), [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [Proteasome Inhibitors : CK\(39\) : AC\(25\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

Additional Keywords : [Stilbenes : CK\(414\) : AC\(245\)](#)

Curcumin may work synergistically with taxane chemotherapy for hormone-refractory prostate cancer treatment. - GMI Summary

Pubmed Data : Nutr Cancer. 2010;62(2):148-53. PMID: [20099188](#)

Article Published Date : Jan 01, 2010

Authors : Aurelie Cabrespine-Faugeras, Mathilde Bayet-Robert, Jacques-Olivier Bay, Philippe Chollet, Chantal Barthomeuf

Study Type : Review

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy : CK\(65\) : AC\(16\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Taxane : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Ginger has therapeutic properties relevant to cancer treatment. - GMI Summary

Pubmed Data : J BUON. 2011 Jul-Sep;16(3):414-24. PMID: [22006742](#)

Article Published Date : Jul 01, 2011

Authors : M M Pereira, R Haniadka, P P Chacko, P L Palatty, M S Baliga

Study Type : Review

Additional Links

Substances : [Ginger : CK\(299\) : AC\(91\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radioprotective : CK\(453\) : AC\(180\)](#)

Resveratrol has chemosensitizing and/or anti-cancer activity. - GMI Summary

Pubmed Data : Crit Rev Food Sci Nutr. 2009 Oct;49(9):782-99. PMID: [20443159](#)

Article Published Date : Oct 01, 2009

Authors : Thomas E Kraft, Daniel Parisotto, Christina Schempp, Thomas Efferth

Study Type : Review

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Anti-Angiogenic : CK\(133\) : AC\(99\)](#), [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Selective Cytotoxicity : CK\(41\) : AC\(36\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Chemotherapy-Induced Toxicity: Bleomycin (AC 21)

DI-alpha-tocopherol acetate does not protect against chemotherapy-induced chromosome damage and reduces the level of plasma gamma tocopherol. - GMI Summary

Pubmed Data : Melanoma Res. 2002 Feb;12(1):83-90. PMID: [11828262](#)

Article Published Date : Feb 01, 2002

Authors : S Mahabir, D Coit, L Liebes, M S Brady, J J Lewis, G Roush, M Nestle, D Fry, M Berwick

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Melanoma : CK\(169\) : AC\(87\)](#)

Problem Substances : [DI-alpha-tocopherol acetate : CK\(81\) : AC\(14\)](#)

A Chinese herbal formula containing Red Sage, Cordyceps and Peach kernel is superior to methylprednisone against experimental pulmonary fibrosis. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2007 May;32(9):835-9. PMID: [17639988](#)

Article Published Date : May 01, 2007

Authors : Shan-Zhong Tan, Cheng-Hai Liu, Wei Zhang, Xiong Lu, Wei-Cheng Ye, Zhen-Zhen Cai, Ping Liu

Study Type : Animal Study

Additional Links

Substances : [Red Sage](#) : CK(134) : AC(40)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21)

Pharmacological Actions : [Matrix metalloproteinase-2 \(MMP-2\) inhibitor](#) : CK(141) : AC(68)

Additional Keywords : [Superiority of Natural Substances versus Drugs](#) : CK(897) : AC(173)

[Alpha lipoic acid attenuates bleomycin-induced pulmonary fibrosis in mice.](#) - GMI Summary

Pubmed Data : Int J Mol Med. 2007 Jun;19(6):865-73. PMID: [17487418](#)

Article Published Date : Jun 01, 2007

Authors : Rui Liu, Kazi Mokim Ahmed, Danupon Nantajit, Frank S Rosenthal, Chun-Xun Hai, Jian Jian Li

Study Type : Animal Study

Additional Links

Substances : [Alpha-Lipoic Acid](#) : CK(406) : AC(80)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

[An extract of Mandarin Orange demonstrates anti-pulmonary fibrosis effects.](#) - GMI Summary

Pubmed Data : J Ethnopharmacol. 2009 Oct 29;126(1):143-8. Epub 2009 Jul 28. PMID: [19643175](#)

Article Published Date : Oct 29, 2009

Authors : Xian-Mei Zhou, Min-Min Huang, Cui-Cui He, Jian-Xin Li

Study Type : Animal Study

Additional Links

Substances : [Orange: Mandarin](#) : CK(4) : AC(2)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

[Cordyceps alleviates bleomycin-induced alveolitis and fibrosis.](#) - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2007 Dec;32(24):2623-7. PMID: [18338602](#)

Article Published Date : Dec 01, 2007

Authors : Shao-Jie Wang, Wen Bai, Chun-Ling Wang, Zhong Dai

Study Type : Animal Study

Additional Links

Substances : [Cordyceps sinensis](#) : CK(110) : AC(41)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

[Curcumin can alleviate alveolitis and pulmonary fibrosis induced by bleomycin in rats.](#) - GMI Summary

Pubmed Data : Zhonghua Jie He He Hu Xi Za Zhi. 2007 Mar;30(3):197-201. PMID: [17572999](#)

Article Published Date : Mar 01, 2007

Authors : De-ping Zhang, Hui Qiu, Yi Zhuang, Fan-qing Meng

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Alveolitis: Fibrosing](#) : CK(151) : AC(1), [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

[Curcumin has a similar effect to hydrocortisone in preventing bleomycin-induced pulmonary fibrosis.](#) - GMI Summary

Pubmed Data : J Ethnopharmacol. 2007 Jun 13;112(2):292-9. Epub 2007 Mar 13. PMID: [17434272](#)
Article Published Date : Jun 13, 2007
Authors : Min Xu, Bin Deng, Yeuk-Lung Chow, Zhong-Zhen Zhao, Bin Hu
Study Type : Animal Study
Additional Links
Substances : [Curcumin](#) : CK(2870) : AC(1475)
Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)
Additional Keywords : [Superiority of Natural Substances versus Drugs](#) : CK(897) : AC(173)

Curcumin inhibits bleomycin-induced pulmonary fibrosis in rats. - GMI Summary

Pubmed Data : Br J Pharmacol. 2000 Sep;131(2):169-72. PMID: [10991907](#)
Article Published Date : Sep 01, 2000
Authors : D Punithavathi, N Venkatesan, M Babu
Study Type : Animal Study
Additional Links
Substances : [Curcumin](#) : CK(2870) : AC(1475)
Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)
Pharmacological Actions : [Anti-Bacterial Agents](#) : CK(901) : AC(280)

Curcumin inhibits fibrosis-related effects in IPF fibroblasts and in mice following bleomycin-induced lung injury. - GMI Summary

Pubmed Data : Am J Physiol Lung Cell Mol Physiol. 2010 Jan 8. Epub 2010 Jan 8. PMID: [20061443](#)
Article Published Date : Jan 08, 2010
Authors : Monica R Smith, Srinivasa R Gangireddy, Venkata R Narala, Cory M Hogaboam, Theodore J Standiford, Paul J Christensen, Anand K Kondapi, Raju C Reddy
Study Type : Animal Study
Additional Links
Substances : [Curcumin](#) : CK(2870) : AC(1475)
Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)
Pharmacological Actions : [Transforming growth factor beta \(TGF- \$\beta\$ \) inhibitor](#) : CK(32) : AC(9)
Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Curcumin is more effective than prednisone at suppressing bleomycin-induced pulmonary fibrosis in rats. - GMI Summary

Pubmed Data : Zhonghua Lao Dong Wei Sheng Zhi Ye Bing Za Zhi. 2008 May;26(5):257-61. PMID: [18727865](#)
Article Published Date : May 01, 2008
Authors : Bi Chen, De-Ping Zhang, Wei Gao
Study Type : Animal Study
Additional Links
Substances : [Curcumin](#) : CK(2870) : AC(1475)
Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)
Pharmacological Actions : [Transforming growth factor beta \(TGF- \$\beta\$ \) inhibitor](#) : CK(32) : AC(9)
Additional Keywords : [Superiority of Natural Substances versus Drugs](#) : CK(897) : AC(173)

Curcumin may play its therapeutuic role by leveling down the content of extracellular matrix in rats with pulmonary fibrosis induced by bleomycin. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2006 Apr;31(7):570-3. PMID: [16780161](#)
Article Published Date : Apr 01, 2006
Authors : Gang Zhou, Ji-Feng Wang, Jian-Zhao Niu, Yin-Sheng Lu, Wei-Tao Chen, Ze-Hua Li, Tong-

Xiang Lin

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity](#): [Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Curcumin protects against bleomycin-induced damages in pulmonary functions in rats - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2008 Jun;33(12):1434-8. PMID: [18837350](#)

Article Published Date : Jun 01, 2008

Authors : Cheng-jiang Zhao, Jian-zhao Niu, Ji-feng Wang, Gang Zhou, Bing-hua Tang

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity](#): [Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Curcumin protects bleomycin-induced lung injury in rats. - GMI Summary

Pubmed Data : Pharm Res. 2008 Sep;25(9):2181-9. Epub 2008 Apr 25. PMID: [9250724](#)

Article Published Date : Sep 01, 2008

Authors : N Venkatesan, V Punithavathi, G Chandrakasan

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity](#): [Bleomycin](#) : CK(50) : AC(21), [Lung Injury: Acute](#) : CK(30) : AC(11), [Oxidative Stress](#) : CK(1858) : AC(703)

EGCG exhibits anti-fibrotic effects in a rat model of pulmonary fibrosis. - GMI Summary

Pubmed Data : Chem Biol Interact. 2009 Jul 15;180(2):271-80. Epub 2009 Mar 20. PMID: [19497426](#)

Article Published Date : Jul 15, 2009

Authors : Narayanan Sriram, Srinivasan Kalayarasan, Ganapasam Sudhandiran

Study Type : Animal Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\)](#) : CK(176) : AC(115)

Diseases : [Chemotherapy-Induced Toxicity](#): [Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Ginkgo biloba prevents bleomycin-induced oxidative injury in rats. - GMI Summary

Pubmed Data : Toxicol Ind Health. 2006 Feb;22(1):47-52. PMID: [16572711](#)

Article Published Date : Feb 01, 2006

Authors : Hasan Erdogan, Ersin Fadillioğlu, Mahir Kotuk, Mustafa Iraz, Seda Tasdemir, Yesim Oztas, Zeki Yildirim

Study Type : Animal Study

Additional Links

Substances : [Ginkgo biloba](#) : CK(505) : AC(101)

Diseases : [Chemotherapy-Induced Toxicity](#): [Bleomycin](#) : CK(50) : AC(21)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Plant Extracts](#) : CK(3297) : AC(1135)

Ginkgo biloba has a positive effect on pulmonary interstitial fibrosis in rats - GMI Summary

Pubmed Data : Zhongguo Zhong Xi Yi Jie He Za Zhi. 2000 Jun;20(6):441-3. PMID: [11789230](#)

Article Published Date : Jun 01, 2000

Authors : J Chen, B He, X Liu

Study Type : Animal Study

Additional Links

Substances : [Ginkgo biloba : CK\(505\) : AC\(101\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

Pharmacological Actions : [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#), [Transforming growth factor beta \(TGF-β\) inhibitor : CK\(32\) : AC\(9\)](#)

Hu Zhang (Polygonum cuspidatum), a rich source of resveratrol, inhibits the expression of inflammation in lung fibroblasts and reduces alveolitis and pulmonary fibrosis. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2009 Jun;34(12):1574-7. PMID: [19777850](#)

Article Published Date : Jun 01, 2009

Authors : Xiaoying Jin, Xianfang Luo, Kong Song, Yongliang Xia, Jianzhen Dan, Yongmei Sun

Study Type : Animal Study

Additional Links

Substances : [Hu Zhang \(Polygonum cuspidatum\) : CK\(964\) : AC\(9\)](#), [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

Pharmacological Actions : [Anti-Inflammatory Agents : CK\(1159\) : AC\(412\)](#), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor : CK\(141\) : AC\(68\)](#)

Hyperforin, a compound found within St. John's wort, has powerful anti-inflammatory therapeutic potential in reducing lung fibrosis. - GMI Summary

Pubmed Data : J Pharmacol Exp Ther. 2007 May;321(2):492-500. Epub 2007 Feb 8. PMID: [17289834](#)

Article Published Date : May 01, 2007

Authors : Isabella Dell'Aica, Raffaele Niero, Francesco Piazza, Anna Cabrelle, Luigi Sartor, Cristiano Colalto, Enrico Brunetta, Gireca Lorusso, Roberto Benelli, Adriana Albini, Fiorella Calabrese, Carlo Agostini, Spiridione Garbisa

Study Type : Animal Study

Additional Links

Substances : [St. Johns Wort : CK\(186\) : AC\(48\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Cystic Fibrosis : CK\(703\) : AC\(82\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

Pharmacological Actions : [Anti-Inflammatory Agents : CK\(1159\) : AC\(412\)](#), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor : CK\(141\) : AC\(68\)](#)

L-carnitine and ginkgo biloba extract exhibits a protective agent in an animal model of bleomycin-induced lung fibrosis - GMI Summary

Pubmed Data : Pharmacol Res. 2002 Jun;45(6):461-7. PMID: [12162946](#)

Article Published Date : Jun 01, 2002

Authors : Mohamed H Daba, Abdel-Aziz H Abdel-Aziz, Adel M Moustafa, Abdulhakeem A Al-Majed, Othman A Al-Shabanah, Hassan A El-Kashef

Study Type : Animal Study

Additional Links

Substances : [Carnitine : CK\(650\) : AC\(67\)](#), [Ginkgo biloba : CK\(505\) : AC\(101\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

Pharmacological Actions : [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

Lecithinized superoxide dismutase has protective activity against bleomycin-induced pulmonary fibrosis. - GMI Summary

Pubmed Data : Am J Physiol Lung Cell Mol Physiol. 2009 Dec 24. Epub 2009 Dec 24. PMID: [20034962](#)

Article Published Date : Dec 24, 2009

Authors : Ken-Ichiro Tanaka, Tomoaki Ishihara, Arata Azuma, Shoji Kudoh, Masahito Ebina,

Toshihiro Nukiwa, Yukihiro Sugiyama, Yuichi Tasaka, Takushi Namba, Tsutomu Ishihara, Keizo Sato, Yutaka Mizushima, Tohru Mizushima

Study Type : Animal Study

Additional Links

Substances : [Lecithin](#) : CK(28) : AC(10), [Superoxide dismutase](#) : CK(16) : AC(5)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Resveratrol alleviates chemotherapy-induced \(bleomycin\) lung injury in rats.](#) **- GMI Summary**

Pubmed Data : : Pulm Pharmacol Ther. 2007;20(6):642-9. Epub 2006 Sep 3. PMID: [17035056](#)

Article Published Date : Jan 01, 2007

Authors : Göksel Sener, Nurhayat Topaloğlu, A Ozer Sehirli, Feriha Ercan, Nursal Gedik

Study Type : Animal Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10), [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Chemotherapy Induced Myelotoxicity (AC 13)

[Soy isoflavones ameliorate the adverse effects of chemotherapy in children.](#) **GMI Summary**

Pubmed Data : J Infect Dis. 1996 Oct;174(4):747-51. PMID: [20924976](#)

Article Published Date : Oct 01, 1996

Authors : Nurdan Tacyildiz, Derya Ozyoruk, Gulsan Yavuz, Emel Unal, Handan Dincaslan, Figen Dogu, Kazim Sahin, Omer Kucuk

Study Type : Human Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176), [Isoflavones](#) : CK(621) : AC(122)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13)

[The decrease in neutrophil count caused by breast carcinoma chemotherapy was ameliorated by dietary supplementation with a multivitamin or vitamin E.](#) **- GMI Summary**

Pubmed Data : Cancer. 2004 Sep 1;101(5):1058-64. PMID: [15329916](#)

Article Published Date : Sep 01, 2004

Authors : Richard F Branda, Shelly J Naud, Elice M Brooks, Zhuan Chen, Hyman Muss

Study Type : Human Study

Additional Links

Substances : [Folic Acid](#) : CK(572) : AC(79), [Vitamin B-12](#) : CK(752) : AC(98), [Vitamin E](#) : CK(1288) : AC(227)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Mucositis](#) : CK(49) : AC(10), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293)

[Wheat grass juice may reduce myelotoxicity and need for granulocyte colony-stimulating factors in breast cancer patients receiving chemotherapy.](#) **- GMI Summary**

Pubmed Data : Nutr Cancer. 2007;58(1):43-8. PMID: [17571966](#)

Article Published Date : Jan 01, 2007

Authors : Gil Bar-Sela, Medy Tsalic, Getta Fried, Hadassah Goldberg

Study Type : Human Study

Additional Links

Substances : [Wheat Grass](#) : CK(182) : AC(11)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Myelotoxicity](#) : CK(31) : AC(8)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

AHCC improves treatment outcome and reduces side effects in anticancer drug treated mice. - GMI Summary

Pubmed Data : J Exp Ther Oncol. 2009;8(1):43-51. PMID: [19827270](#)

Article Published Date : Jan 01, 2009

Authors : Kota Shigama, Akihiro Nakaya, Koji Wakame, Hiroshi Nishioka, Hajime Fujii

Study Type : Animal Study

Additional Links

Substances : [AHCC](#) : CK(48) : AC(17)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Myelotoxicity](#) : CK(31) : AC(8)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Bilberry enhances the effects and reduces the side effects of the chemotoxic agent 5-flouroucil. - GMI Summary

Pubmed Data : Biofactors. 2007;29(1):55-65. PMID: [17611294](#)

Article Published Date : Jan 01, 2007

Authors : Eun Hye Choi, Hyun Ee Ok, Yoosik Yoon, Bernadene A Magnuson, Mi Kyung Kim, Hyang Sook Chun

Study Type : Animal Study

Additional Links

Substances : [Bilberry](#) : CK(787) : AC(22)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Myelotoxicity](#) : CK(31) : AC(8)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Curcumin prevents cisplatin-induced chromosomal abberations in rat bone marrow cells. - GMI Summary

Pubmed Data : Mutat Res. 2000 Feb 16;465(1-2):131-7. PMID: [10708978](#)

Article Published Date : Feb 16, 2000

Authors : L M Antunes, M C Araújo, J D Darin, M L Bianchi

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Genoprotective](#) : CK(109) : AC(46)

Curcumin reduced the side effects of mitomycin C in the treatment of breast cancer. - GMI Summary

Pubmed Data : Cancer Sci. 2009 Nov;100(11):2040-5. Epub 2009 Jul 23. PMID: [19703194](#)

Article Published Date : Nov 01, 2009

Authors : Qian-Mei Zhou, Hui Zhang, Yi-Yu Lu, Xiu-Feng Wang, Shi-Bing Su

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Mitomycin-C](#) : CK(6) : AC(4), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Mitomycin](#) : CK(4) : AC(3), [Drug Synergy](#) : CK(309) : AC(137)

Grape seed extract prevents gentamicin-induced nephrotoxicity and genotoxicity in bone marrow cells of mice. - GMI Summary

Pubmed Data : Basic Clin Pharmacol Toxicol. 2006 Sep;99(3):230-6. PMID: [16930296](#)

Article Published Date : Sep 01, 2006

Authors : Ibrahim M El-Ashmawy, Abeer F El-Nahas, Osama M Salama

Study Type : Animal Study

Additional Links

Substances : [Grape Seed Extract](#) : CK(172) : AC(58)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity: Gentamicin](#) : CK(20) : AC(10), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Genoprotective](#) : CK(109) : AC(46), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Maitake beta-glucan promotes recovery of leukocytes and myeloid cell function in peripheral blood from paclitaxel hematotoxicity. - GMI Summary

Pubmed Data : Cancer Immunol Immunother. 2010 Feb 6. Epub 2010 Feb 6. PMID: [20140432](#)

Article Published Date : Feb 06, 2010

Authors : Hong Lin, Elisa de Stanchina, Xi Kathy Zhou, Feng Hong, Andrew Seidman, Monica Fornier, Wei-Lie Xiao, Edward J Kennelly, Kathleen Wesa, Barrie R Cassileth, Susanna Cunningham-Rundles

Study Type : Animal Study

Additional Links

Substances : [Beta-glucan](#) : CK(223) : AC(41), [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Paclitaxel](#) : CK(32) : AC(4), [Myelotoxicity](#) : CK(31) : AC(8)

Pharmacological Actions : [Chemopreventive](#) : CK(1254) : AC(342)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Paclitaxel has a myelotoxic and immunosuppressive effect. - GMI Summary

Pubmed Data : Eksp Klin Farmakol. 2007 Jul-Aug;70(4):39-43. PMID: [18078042](#)

Article Published Date : Jul 01, 2007

Authors : G V Karpov, T I Fomina, O L Voronova, E V Abramova, E A Timina, T Iu Lamzina, L A Ermolaeva, A V Perova

Study Type : Animal Study

Additional Links

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Problem Substances : [Paclitaxel](#) : CK(28) : AC(6)

Woodfordia fruticosa has an immunostimulatory effect and may protect the bone marrow. - GMI Summary

Pubmed Data : Pharm Biol. 2010 Sep;48(9):1066-72. PMID: [20731559](#)

Article Published Date : Sep 01, 2010

Authors : Abhishek S Shah, Archana R Juvekar

Study Type : Animal Study

Additional Links

Substances : [Woodfordia fruticosa](#) : CK(2) : AC(1)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Immune Disorders: Low Immune Function](#) : CK(483) : AC(116), [Myelodysplastic Syndrome](#) : CK(188) : AC(17)

Pharmacological Actions : [Immunomodulatory](#) : CK(516) : AC(145)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Astragalus stimulates hematopoiesis and may attenuate the myelosuppressive effects of anti-cancer chemotherapy. - GMI Summary

Pubmed Data : Zhong Yao Cai. 2005 Sep;28(9):791-3. PMID: [16447871](#)

Article Published Date : Sep 01, 2005

Authors : Yan Lv, Xuemei Feng, Bide Zhu

Study Type : In Vitro Study

Additional Links

Substances : [Astragalus](#) : CK(284) : AC(57)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Myelodysplastic Syndromes](#) : CK(189) : AC(17), [Myelotoxicity](#) : CK(31) : AC(8), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17)

Pharmacological Actions : [Hematopoietic](#) : CK(20) : AC(9)

[Delta-tocotrienol protects mouse and human hematopoietic progenitors from gamma-irradiation.](#) - GMI Summary

Pubmed Data : Haematologica. 2010 Dec;95(12):1996-2004. Epub 2010 Sep 7. PMID: [20823133](#)

Article Published Date : Dec 01, 2010

Authors : [No authors listed]

Study Type : In Vitro Study

Additional Links

Substances : [Tocotrienol: Delta](#) : CK(7) : AC(7)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Radiation Induced Illness: Bone Marrow](#) : CK(22) : AC(12)

Pharmacological Actions : [Radioprotective](#) : CK(453) : AC(180)

Chemotherapy (AC 9)

[Astragalus may provide an ideal complementary treatment to chemotherapy.](#) - GMI Summary

Pubmed Data : Food Chem Toxicol. 2008 Mar;46(3):1089-96. Epub 2007 Nov 17. PMID: [12592686](#)

Article Published Date : Mar 01, 2008

Authors : Ping Duan, Zai-mo Wang

Study Type : Human Study

Additional Links

Substances : [Astragalus](#) : CK(284) : AC(57)

Diseases : [Chemotherapy](#) : CK(65) : AC(16), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

[Cannabis extract is safe and efficacious in reducing chemotherapy-induced nausea and vomiting.](#) - GMI Summary

Pubmed Data : Br J Clin Pharmacol. 2010 Nov;70(5):656-63. PMID: [21039759](#)

Article Published Date : Nov 01, 2010

Authors : Marta Duran, Eulàlia Pérez, Sergio Abanades, Xavier Vidal, Cristina Saura, Margarita Majem, Eudurne Arriola, Manel Rabanal, Antoni Pastor, Magí Farré, Neus Rams, Joan-Ramon Laporte, Dolors Capellà

Study Type : Human Study

Additional Links

Substances : [Cannabis](#) : CK(702) : AC(133)

Diseases : [Chemotherapy](#) : CK(65) : AC(16), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Nausea: Chemotherapy-Induced](#) : CK(60) : AC(5)

Pharmacological Actions : [Antiemetics](#) : CK(40) : AC(4)

[Carnitine improves fatigue, quality of life, lean body mass and appetite in advanced cancer patients undergoing anticancer therapy.](#) - GMI Summary

Pubmed Data : Nutrition. 2006 Feb;22(2):136-45. PMID: [16459226](#)

Article Published Date : Feb 01, 2006

Authors : Giulia Gramignano, Maria Rita Lusso, Clelia Madeddu, Elena Massa, Roberto Serpe, Laura Deiana, Giovanna Lamonica, Mariele Dessì, Carla Spiga, Giorgio Astara, Antonio Macciò, Giovanni Mantovani

Study Type : Human Study

Additional Links

Substances : [Carnitine](#) : CK(650) : AC(67)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy](#) : CK(65) : AC(16), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Fatigue](#) : CK(218) : AC(29), [Quality of Life: Poor](#) : CK(170) : AC(16)

Additional Keywords : [Antineoplastic Agents](#) : CK(69) : AC(28), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Curcumin ameliorates oxaliplatin-induced chemoresistance in HCT116 colorectal cancer cells in vitro and in vivo.](#) - GMI Summary

Pubmed Data : Int J Cancer. 2010 Sep 13. Epub 2010 Sep 13. PMID: [20839263](#)

Article Published Date : Sep 13, 2010

Authors : Lynne M Howells, Stewart Sale, Sathya Neelature Sriramareddy, Glen R B Irving, Donald J L Jones, Christopher J Ottley, D Graham Pearson, Christopher D Mann, Margaret M Manson, David P Berry, Andreas Gescher, William P Steward, Karen Brown

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy](#) : CK(65) : AC(16), [Colorectal Cancer](#) : CK(768) : AC(299)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin ameliorates oxaliplatin-induced chemoresistance in HCT116 colorectal cancer cells in vitro and in vivo.](#) - GMI Summary

Pubmed Data : Int J Cancer. 2010 Sep 13. Epub 2010 Sep 13. PMID: [20839263](#)

Article Published Date : Sep 13, 2010

Authors : Lynne M Howells, Stewart Sale, Sathya Neelature Sriramareddy, Glen R B Irving, Donald J L Jones, Christopher J Ottley, D Graham Pearson, Christopher D Mann, Margaret M Manson, David P Berry, Andreas Gescher, William P Steward, Karen Brown

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy](#) : CK(65) : AC(16), [Colorectal Cancer](#) : CK(768) : AC(299)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Oxaliplatin](#) : CK(6) : AC(5), [Drug Synergy](#) : CK(309) : AC(137)

[Pre-treatment with curcumin enhances oral bioavailability of docetaxel in rats.](#) - GMI Summary

Pubmed Data : Int J Pharm. 2010 Oct 31;399(1-2):116-20. Epub 2010 Aug 18. PMID: [20727390](#)

Article Published Date : Oct 31, 2010

Authors : Yi-Dong Yan, Dae Hwan Kim, Jun Ho Sung, Chul Soon Yong, Han Gon Choi

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy](#) : CK(65) : AC(16)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157), [Enzyme Inhibitors](#) : CK(385) : AC(210)

Additional Keywords : [Chemotherapeutic Synergy: Docetaxel](#) : CK(3) : AC(2), [Drug: Docetaxel](#) : CK(2) : AC(1)

[Curcumin reduces NF-kappa B factor activation associated with anticancer drugs.](#) - GMI Summary

Pubmed Data : Endocr Relat Cancer. 2009 Dec;16(4):1339-50. Epub 2009 Sep 2. PMID: [12007574](#)

Article Published Date : Dec 01, 2009

Authors : Shuang En Chuang, Pei Yen Yeh, Yen Shen Lu, Gi Ming Lai, Chao Ming Liao, Ming Gao, Ann Lii Cheng

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy : CK\(65\) : AC\(16\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug: Tamoxifen : CK\(367\) : AC\(53\)](#)

Curcumin works synergistically with the chemotoxic agent FOLFOX to eliminate colon cancer stem cells. - GMI Summary

Pubmed Data : Transl Oncol. 2009 Dec;2(4):321-8. PMID: [19956394](#)

Article Published Date : Dec 01, 2009

Authors : Yingjie Yu, Shailender S Kanwar, Bhaumik B Patel, Jyoti Nautiyal, Fazlul H Sarkar, Adhip Pn Majumdar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy : CK\(65\) : AC\(16\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Cancer Stem Cells : CK\(4\) : AC\(3\)](#), [Drug: FOLFOX : CK\(1\) : AC\(1\)](#)

Curcumin may work synergistically with taxane chemotherapy for hormone-refractory prostate cancer treatment. - GMI Summary

Pubmed Data : Nutr Cancer. 2010;62(2):148-53. PMID: [20099188](#)

Article Published Date : Jan 01, 2010

Authors : Aurelie Cabrespine-Faugeras, Mathilde Bayet-Robert, Jacques-Olivier Bay, Philippe Chollet, Chantal Barthomeuf

Study Type : Review

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy : CK\(65\) : AC\(16\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Taxane : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Esophageal Cancer (AC 4)

Bi-weekly administration of paclitaxel and cisplatin in patients with advanced esophageal cancer results in a median survival for all patients of 9 months. - GMI Summary

Pubmed Data : Br J Cancer. 2002 Mar 4;86(5):669-73. PMID: [11875723](#)

Article Published Date : Mar 04, 2002

Authors : M B Poole, F A L M Eskens, M E L van der Burg, T A W Splinter, P D Siersema, H W Tilanus, J Verweij, G Stoter, A van der Gaast

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Esophageal Cancer : CK\(293\) : AC\(54\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug: Paclitaxel : CK\(36\) : AC\(13\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#)

Chemotherapy used in advanced gastric or gastroesophageal adenocarcinoma results in an overall median survival time of between 7-9 months. - GMI Summary

Pubmed Data : J Clin Oncol. 2010 Mar 20;28(9):1547-53. Epub 2010 Feb 16. PMID: [20159816](#)

Article Published Date : Mar 20, 2010

Authors : Jaffer A Ajani, Wuilbert Rodriguez, Gyorgy Bodoky, Vladimir Moiseyenko, Mikhail Lichinitser, Vera Gorbunova, Ihor Vynnychenko, August Garin, Istvan Lang, Silvia Falcon

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Esophageal Cancer : CK\(293\) : AC\(54\)](#), [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Additional Keywords : [Chemotherapy : CK\(20\) : AC\(2\)](#), [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#)

Oral glutamine supplementation protects lymphocytes and attenuates gut permeability in patients with esophageal cancer during radiochemotherapy.

- GMI Summary

Pubmed Data : Ann Surg. 1998 Apr;227(4):485-91. PMID: [9563534](#)

Article Published Date : Apr 01, 1998

Authors : S Yoshida, M Matsui, Y Shirouzu, H Fujita, H Yamana, K Shirouzu

Study Type : Human Study

Additional Links

Substances : [Glutamine : CK\(120\) : AC\(22\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Esophageal Cancer : CK\(293\) : AC\(54\)](#), [Radiation Induced Illness : CK\(994\) : AC\(245\)](#)

Additional Keywords : [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#), [Drug Side Effect Attenuation : CK\(252\) : AC\(50\)](#)

Curcumin promotes programmed cell death, increases chemosensitivity, and inhibits nuclear factor kappaB in esophageal adenocarcinoma.

Summary

Pubmed Data : Transl Oncol. 2010 Apr;3(2):99-108. PMID: [20360934](#)

Article Published Date : Apr 01, 2010

Authors : Wibisono Hartojo, Amy L Silvers, Dafydd G Thomas, Christopher W Seder, Lin Lin, Hyma Rao, Zhuwen Wang, Joel K Greenson, Thomas J Giordano, Mark B Orringer, Alnawaz Rehemtulla, Mahaveer S Bhojani, David G Beer, Andrew C Chang

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Esophageal Cancer : CK\(293\) : AC\(54\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Mucositis (AC 4)

Saccharomyces boulardii has significant therapeutic activity in irinotecan-induced (chemotherapy) diarrhea and mucositis.

- GMI Summary

Pubmed Data : Med Oncol. 2008 Dec 9. PMID: [19067257](#)

Article Published Date : Dec 09, 2008

Authors : Atakan Sezer, Ufuk Usta, Irfan Cicin

Study Type : Human Study

Additional Links

Substances : [Saccharomyces Boulardii : CK\(137\) : AC\(21\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Diarrhea : CK\(519\) : AC\(69\)](#), [Mucositis : CK\(49\) : AC\(10\)](#)

Additional Keywords : [Drug: Irinotecan : CK\(10\) : AC\(1\)](#)

The decrease in neutrophil count caused by breast carcinoma chemotherapy was ameliorated by dietary supplementation with a multivitamin or vitamin E.

- GMI Summary

Pubmed Data : Cancer. 2004 Sep 1;101(5):1058-64. PMID: [15329916](#)

Article Published Date : Sep 01, 2004

Authors : Richard F Branda, Shelly J Naud, Elice M Brooks, Zhuan Chen, Hyman Muss

Study Type : Human Study

Additional Links

Substances : [Folic Acid : CK\(572\) : AC\(79\)](#), [Vitamin B-12 : CK\(752\) : AC\(98\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Mucositis : CK\(49\) : AC\(10\)](#), [Neutropenia: Chemotherapy Induced : CK\(82\) : AC\(17\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Curcumin and CAPE may reduce chemotherapy-induced mucosal barrier injury. - GMI Summary

Pubmed Data : Leukemia. 2004 Feb;18(2):276-84. PMID: [14671640](#)

Article Published Date : Feb 01, 2004

Authors : B van't Land, N M A Blijlevens, J Marteiijn, S Timal, J P Donnelly, T J M de Witte, L M'Rabet

Study Type : Animal Study

Additional Links

Substances : [Caffeic acid phenethyl ester : CK\(15\) : AC\(8\)](#), [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Mucositis : CK\(49\) : AC\(10\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Topical curcumin can inhibit deleterious effects of upper respiratory tract bacteria on human oropharyngeal cells. - GMI Summary

Pubmed Data : Support Care Cancer. 2010 May 14. Epub 2010 May 14. PMID: [20467756](#)

Article Published Date : May 14, 2010

Authors : Sonja Lüer, Rolf Troller, Marion Jetter, Violeta Spaniol, Christoph Aebi

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Mucositis : CK\(49\) : AC\(10\)](#), [Upper Respiratory Infections : CK\(849\) : AC\(92\)](#)

Pharmacological Actions : [Anti-Bacterial Agents : CK\(901\) : AC\(280\)](#), [Anti-Inflammatory Agents : CK\(1159\) : AC\(412\)](#)

Inflammation (AC 2)

There are high rates of behavioral symptoms in breast cancer survivors, particularly those treated with chemotherapy - GMI Summary

Pubmed Data : J Clin Oncol. 2011 Aug 8. Epub 2011 Aug 8. PMID: [21825266](#)

Article Published Date : Aug 08, 2011

Authors : Julianne E Bower, Patricia A Ganz, Michael R Irwin, Lorna Kwan, Elizabeth C Breen, Steve W Cole

Study Type : Meta Analysis

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Depression: Unipolar : CK\(601\) : AC\(80\)](#), [Fatigue : CK\(218\) : AC\(29\)](#), [Inflammation : CK\(1001\) : AC\(341\)](#), [Insomnia : CK\(459\) : AC\(54\)](#)

Anti Therapeutic Actions : [Chemotherapy : CK\(250\) : AC\(33\)](#)

Problem Substances : [Chemotherapy : CK\(325\) : AC\(35\)](#)

Adverse Pharmacological Actions : [Inflammatory : CK\(123\) : AC\(32\)](#), [Tumor necrosis factor \$\alpha\$ \(TNF \$\alpha\$ \) up-regulation : CK\(42\) : AC\(4\)](#)

Curcumin oil has a protective effect against cisplatin-induced nephrotoxicity. - GMI Summary

Pubmed Data : J Agric Food Chem. 2007 Dec 12;55(25):10150-5. Epub 2007 Nov 15. PMID: [18001039](#)

Article Published Date : Dec 12, 2007

Authors : Anurag Kuhad, Sangeeta Pilkhwal, Sameer Sharma, Naveen Tirkey, Kanwaljit Chopra

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Inflammation : CK\(1001\) : AC\(341\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Anti-Inflammatory Agents : CK\(1159\) : AC\(412\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Lung Cancer (AC 11)

[Caffeine potentiates chemotherapy for metastatic osteosarcoma. - GMI Summary](#)

Pubmed Data : J Orthop Sci. 2009 Sep;14(5):556-65. Epub 2009 Oct 3. PMID: [19802667](#)

Article Published Date : Sep 01, 2009

Authors : Hiroaki Kimura, Hiroyuki Tsuchiya, Toshiharu Shirai, Hideji Nishida, Katsuhiko Hayashi, Akihiko Takeuchi, Issei Ohnari, Katsuro Tomita

Study Type : Human Study

Additional Links

Substances : [Caffeine : CK\(99\) : AC\(17\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

[Curcumin inhibits lung cancer cell metastasis. - GMI Summary](#)

Pubmed Data : Clin Exp Metastasis. 2000;18(7):539-45. PMID: [11688958](#)

Article Published Date : Jan 01, 2000

Authors : K Ichiki, N Mitani, Y Doki, H Hara, T Misaki, I Saiki

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancer Metastasis : CK\(283\) : AC\(132\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Anti-metastatic : CK\(172\) : AC\(95\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#)

[Curcumin acts as a chemosensitizing agent in lung cancer cells. - GMI Summary](#)

Pubmed Data : Biochem Biophys Res Commun. 2005 Jun 17;331(4):1245-52. PMID: [15883009](#)

Article Published Date : Jun 17, 2005

Authors : Sudip Sen, Himani Sharma, Neeta Singh

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Carcinoma: Non-Small-Cell Lung : CK\(19\) : AC\(13\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

[Curcumin promotes programmed cell death in multidrug-resistant human lung cancer cells. - GMI Summary](#)

Pubmed Data : Biochem Biophys Res Commun. 2010 Aug 13;399(1):1-6. Epub 2010 Jul 11. PMID: [20627087](#)

Article Published Date : Aug 13, 2010

Authors : Jian Zhang, Tao Zhang, Xinyu Ti, Jieran Shi, Changgui Wu, Xinling Ren, Hong Yin

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin promotes programmed cell death of cisplatin-resistant human lung carcinoma cells. - GMI Summary

Pubmed Data : Zhongguo Fei Ai Za Zhi. 2010 Apr;13(4):301-6. PMID: [20677554](#)

Article Published Date : Apr 01, 2010

Authors : Ni Tang, Jian Zhang, Yongping Du

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin : CK\(4\) : AC\(3\)](#), [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

Curcumin sensitizes lung cancer cells to cisplatin-induced programmed cell death. - GMI Summary

Pubmed Data : Phytother Res. 1999 Jun;13(4):318-22. PMID: [19283527](#)

Article Published Date : Jun 01, 1999

Authors : Pithi Chanvorachote, Varisa Pongrakhananon, Sumalee Wannachaiyasit, Sudjit Luanpitpong, Yon Rojanasakul, Ubonthip Nimmannit

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Genistein acts as a chemosensitizer, contributing to overcoming drug-resistance in prostate, breast, lung and pancreatic cancers. - GMI Summary

Pubmed Data : Cancer Res. 2005 Aug 1;65(15):6934-42. PMID: [16061678](#)

Article Published Date : Aug 01, 2005

Authors : Yiwei Li, Fakhara Ahmed, Shadan Ali, Philip A Philip, Omer Kucuk, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)
Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Nicotine induces resistance to chemotherapy by modulating mitochondrial signaling in lung cancer. - GMI Summary

Pubmed Data : Am J Respir Cell Mol Biol. 2009 Feb;40(2):135-46. Epub 2008 Aug 1. PMID: [18676776](#)

Article Published Date : Feb 01, 2009

Authors : Jingmei Zhang, Opal Kamdar, Wei Le, Glenn D Rosen, Daya Upadhyay

Study Type : In Vitro Study

Additional Links

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#), [Smoking : CK\(508\) : AC\(68\)](#)

Problem Substances : [Nicotine : CK\(52\) : AC\(6\)](#)

[Resveratrol combines favorably with paclitaxel to induce cell death in lung cancer cells.](#) - GMI Summary

Pubmed Data : Anticancer Res. 2003 Sep-Oct;23(5A):4039-46. PMID: [14666716](#)

Article Published Date : Sep 01, 2003

Authors : Tetsuya Kubota, Yoshiki Uemura, Makoto Kobayashi, Hirokuni Taguchi

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Paclitaxel : CK\(36\) : AC\(13\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

[Vitamin C \(ascorbic acid\) reverses chemoresistance of human non-small lung-cancer cells.](#) - GMI Summary

Pubmed Data : Biochem J. 1994 Aug 1;301 (Pt 3):759-64. PMID: [7914401](#)

Article Published Date : Aug 01, 1994

Authors : C D Chiang, E J Song, V C Yang, C C Chao

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin C : CK\(1208\) : AC\(238\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

[Resveratrol exhibits tumor chemosensitizing properties.](#) - GMI Summary

Pubmed Data : Ann N Y Acad Sci. 2011 Jan;1215(1):150-60. PMID: [21261654](#)

Article Published Date : Jan 01, 2011

Authors : Subash C Gupta, Ramaswamy Kannappan, Simone Reuter, Ji Hye Kim, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Acute Myeloid Leukemia : CK\(51\) : AC\(21\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#), [Multiple Myeloma : CK\(125\) : AC\(50\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#), [Promyelocytic leukemia : CK\(137\) : AC\(75\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#), [Skin Cancer : CK\(438\) : AC\(174\)](#), [Tumors : CK\(179\) : AC\(107\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Cell cycle arrest (AC 19)

[Galangin, a compound found within Alpinia galanga, acts as a chemosensitizer in drug-resistant leukemia cells.](#) - GMI Summary

Pubmed Data : Cancer Lett. 2008 Jul 8;265(2):289-97. Epub 2008 Apr 18. PMID: [18374481](#)

Article Published Date : Jul 08, 2008

Authors : Manlio Tolomeo, Stefania Grimaudo, Antonietta Di Cristina, Rosaria M Pipitone, Luisa Dusonchet, Maria Meli, Lucia Crosta, Nicola Gebbia, Francesco Paolo Invidiata, Lucina Titone, Daniele Simoni

Study Type : Animal Study

Additional Links

Substances : [Alpinia galanga : CK\(5\) : AC\(4\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Leukemia: Acute myelogenous leukemia \(AML\) : CK\(96\) : AC\(28\)](#), [Leukemia: Chronic myelogenous leukemia \(CML\) : CK\(28\) : AC\(17\)](#)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Cannabinoids work synergistically with paclitaxel in gastric cancer cell lines. - GMI Summary

Pubmed Data : J Surg Res. 2009 Jul;155(1):40-7. Epub 2008 Aug 9. PMID: [19394652](#)

Article Published Date : Jul 01, 2009

Authors : Hideyo Miyato, Joji Kitayama, Hiroharu Yamashita, Daisuke Souma, Masahiro Asakage, Jun Yamada, Hirokazu Nagawa

Study Type : In Vitro Study

Additional Links

Substances : [Cannabinoids](#) : CK(183) : AC(53)

Diseases : [Gastric Cancer](#) : CK(360) : AC(108)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

Curcumin chemosensitizes prostate cancer cells to TRAIL-induce programmed cell death. - GMI Summary

Pubmed Data : J Exp Ther Oncol. 2005;5(2):81-91. PMID: [16471035](#)

Article Published Date : Jan 01, 2005

Authors : Dorrah D Deeb, Hao Jiang, Xiaohua Gao, George Divine, Scott A Dulchavsky, Subhash C Gautam

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin enhances chemotherapeutic agents in prostate cancer cells. - GMI Summary

Pubmed Data : Prostate. 2002 May 15;51(3):211-8. PMID: [11967955](#)

Article Published Date : May 15, 2002

Authors : Tzyh-Chyuan Hour, Jun Chen, Chao-Yuan Huang, Jing-Yi Guan, Shiu-Hui Lu, Yeong-Shiau Pu

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin induces cell cycle arrest and programmed cell death in cisplatin-resistant human ovarian cancer cells. - GMI Summary

Pubmed Data : Cancer Biol Ther. 2007 Feb;6(2):178-84. Epub 2007 Feb 5. PMID: [17218783](#)

Article Published Date : Feb 01, 2007

Authors : Nathan M Weir, Karuppaiyah Selvendiran, Vijay Kumar Kutala, Liyue Tong, Shilpa Vishwanath, Murugesan Rajaram, Susheela Tridandapani, Shrikant Anant, Periannan Kuppusamy

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) :

[AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Curcumin may have chemosensitizing properties in the treatment of human ovarian cancer. - GMI Summary

Pubmed Data : Cell Prolif. 2009 Apr;42(2):195-206. Epub 2009 Feb 18. PMID: [19236381](#)

Article Published Date : Apr 01, 2009

Authors : M Montopoli, E Ragazzi, G Froldi, L Caparrotta

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug: Oxaliplatin : CK\(6\) : AC\(5\)](#)

DHA may induce cell death in chemotherapy resistant colon cancer cells. - GMI Summary

Pubmed Data : Nutr Cancer. 2010 Jul;62(5):611-21. PMID: [20574922](#)

Article Published Date : Jul 01, 2010

Authors : Jens E Slagsvold, Caroline H H Pettersen, Gro L Størvold, Turid Follestad, Hans E Krokan, Svanhild A Schønberg

Study Type : In Vitro Study

Additional Links

Substances : [DHA \(Docosahexaenoic Acid\) : CK\(603\) : AC\(100\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Colon Cancer : CK\(375\) : AC\(230\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

DHA sensitizes neuroblastoma cells to chemotherapy and asenic-induced oxidative stress. - GMI Summary

Pubmed Data : Int J Cancer. 2006 May 15;118(10):2584-93. PMID: [16353135](#)

Article Published Date : May 15, 2006

Authors : Magnus Lindskog, Helena Gleissman, Frida Ponthan, Juan Castro, Per Kogner, John Inge Johnsen

Study Type : In Vitro Study

Additional Links

Substances : [DHA \(Docosahexaenoic Acid\) : CK\(603\) : AC\(100\)](#)

Diseases : [Neuroblastoma : CK\(51\) : AC\(31\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Gamma tocotrienol has a chemosensitizing property. - GMI Summary

Pubmed Data : J Biol Chem. 2010 Oct 22;285(43):33520-8. Epub 2010 Aug 18. PMID: [20720018](#)

Article Published Date : Oct 22, 2010

Authors : Ramaswamy Kannappan, Vivek R Yadav, Bharat B Aggarwal

Study Type : In Vitro Study

Additional Links

Substances : [Tocotrienol: Gamma : CK\(12\) : AC\(12\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#), [Vitamin E: Gamma-tocotrienol : CK\(42\) : AC\(11\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#)

Pharmacological Actions : [Anti-Angiogenic : CK\(133\) : AC\(99\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Genistein potentiates the effect of arsenic trioxide against human hepatocellular carcinoma. - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 1 ;301(1):75-84. PMID: [21078540](#)

Article Published Date : Feb 01, 2011

Authors : Yong Ma, Jizhou Wang, Lianxin Liu, Huaqiang Zhu, Xiaoning Chen, Shangha Pan, Xueying Sun, Hongchi Jiang

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Arsenic Trioxide : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Gold exhibits antitumor effects by growth suppression of cultured cancer cells. Gold is less toxic than cisplatin. - GMI Summary

Pubmed Data : Cancer Biother Radiopharm. 1998 Jun;13(3):189-92. PMID: [10850355](#)

Article Published Date : Jun 01, 1998

Authors : T Koide, T Kojima, H Kamei

Study Type : In Vitro Study

Additional Links

Substances : [Gold : CK\(3\) : AC\(2\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Colon Cancer : CK\(375\) : AC\(230\)](#), [Lymphoma : CK\(211\) : AC\(68\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#)

Additional Keywords : [Natural Substances Versus Drugs : CK\(1003\) : AC\(167\)](#)

Luteolin has anti-proliferative and chemosensitizing effects on human gastric cancer cells. - GMI Summary

Pubmed Data : Mol Cell Biochem. 2008 Jun;313(1-2):125-32. Epub 2008 Apr 9. PMID: [18398671](#)

Article Published Date : Jun 01, 2008

Authors : Bin Wu, Qiang Zhang, Weiming Shen, Jun Zhu

Study Type : In Vitro Study

Additional Links

Substances : [Luteolin : CK\(61\) : AC\(51\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Gastric Cancer : CK\(360\) : AC\(108\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Resveratrol down-regulates survivin and induces programmed cell death in human multidrug-resistant cells. - GMI Summary

Pubmed Data : Oncol Rep. 2010 Jan;23(1):279-86. PMID: [19956893](#)

Article Published Date : Jan 01, 2010

Authors : Weiguo Zhao, Pengtao Bao, Haowen Qi, Houcheng You

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#), [Stilbenes : CK\(123\) : AC\(88\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Survivin Down-Regulation : CK\(1\) : AC\(1\)](#)

Resveratrol increase the sensitivity of non-Hodgkin's lymphoma and multiple

myeloma cell lines to paclitaxel-induced programmed cell death. - GMI Summary

Pubmed Data : Mol Cancer Ther. 2004 Jan;3(1):71-84. PMID: [14749477](#)

Article Published Date : Jan 01, 2004

Authors : Ali R Jazirehi, Benjamin Bonavida

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Multiple Myeloma](#) : CK(125) : AC(50), [Non-Hodgkin Lymphoma](#) : CK(445) : AC(63)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Stilbenes](#) : CK(414) : AC(245)

Resveratrol induces cell-cycle disruption and programmed cell death in chemoresistant melanoma. - GMI Summary

Pubmed Data : J Cell Biochem. 2010 Jul 1;110(4):893-902. PMID: [20564188](#)

Article Published Date : Jul 01, 2010

Authors : Grégory Gatouillat, Emilie Balasse, Débora Joseph-Pietras, Hamid Morjani, Claudie Madoulet

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Melanoma](#) : CK(169) : AC(87)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Stilbenes](#) : CK(414) : AC(245)

Resveratrol sensitizes resistant leukemia cells to the the effects of anticancer drugs. - GMI Summary

Pubmed Data : Neoplasma. 2006;53(5):384-92. PMID: [17013532](#)

Article Published Date : Jan 01, 2006

Authors : J Duraj, J Bodo, M Sulikova, P Rauko, J Sedlak

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Leukemia](#) : CK(694) : AC(270)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Stilbenes](#) : CK(414) : AC(245)

Vitamin A and D have an anti-tumor effect against head and neck squamous cell carcinoma. - GMI Summary

Pubmed Data : Auris Nasus Larynx. 2003 Dec;30(4):403-12. PMID: [14656567](#)

Article Published Date : Dec 01, 2003

Authors : Kenichi Satake, Emi Takagi, Akiko Ishii, Yasumasa Kato, Yukari Imagawa, Yuu Kimura, Mamoru Tsukuda

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin A](#) : CK(358) : AC(53), [Vitamin D](#) : CK(1493) : AC(220)

Diseases : [Head and Neck Cancer](#) : CK(36) : AC(14), [Skin Cancer: Squamous Cell](#) : CK(52) : AC(16)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-fluorouracil](#) : CK(88) : AC(23)

Vitamin C augments chemotherapeutic response of cervical carcinoma cells. -

GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2001 Mar 30;282(2):409-15. PMID: [11401473](#)

Article Published Date : Mar 30, 2001

Authors : V G Reddy, N Khanna, N Singh

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin C](#) : CK(1208) : AC(238)

Diseases : [Cervical Cancer](#) : CK(322) : AC(65), [Human Papillomavirus \(HPV\)](#) : CK(490) : AC(23)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemotherapeutic](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Curcumin may work synergistically with taxane chemotherapy for hormone-refractory prostate cancer treatment.](#) - GMI Summary

Pubmed Data : Nutr Cancer. 2010;62(2):148-53. PMID: [20099188](#)

Article Published Date : Jan 01, 2010

Authors : Aurelie Cabrespine-Faugeras, Mathilde Bayet-Robert, Jacques-Olivier Bay, Philippe Chollet, Chantal Barthomeuf

Study Type : Review

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy](#) : CK(65) : AC(16), [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemotherapeutic](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Taxane](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

Drug: Paclitaxel (AC 7)

[Bi-weekly administration of paclitaxel and cisplatin in patients with advanced esophageal cancer results in a median survival for all patients of 9 months.](#) - GMI Summary

Pubmed Data : Br J Cancer. 2002 Mar 4;86(5):669-73. PMID: [11875723](#)

Article Published Date : Mar 04, 2002

Authors : M B Poole, F A L M Eskens, M E L van der Burg, T A W Splinter, P D Siersema, H W Tilanus, J Verweij, G Stoter, A van der Gaast

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Esophageal Cancer](#) : CK(293) : AC(54)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11), [Drug: Paclitaxel](#) : CK(36) : AC(13)

Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33)

[Diosgenin, a compound isolated from fenugreek, has chemosensitizing activity against human liver cancer cells.](#) - GMI Summary

Pubmed Data : Cancer Lett. 2010 Jan 4. Epub 2010 Jan 4. PMID: [20053498](#)

Article Published Date : Jan 04, 2010

Authors : Feng Li, Prasanna Priscilla Fernandez, Peramaiyan Rajendran, Kam M Hui, Gautam Sethi

Study Type : Animal Study

Additional Links

Substances : [Diosgenin](#) : CK(2) : AC(1), [Fenugreek](#) : CK(71) : AC(28)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Chemotherapeutic](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[EGCG sensitizes breast cancer cells to paclitaxel in a mouse model of breast](#)

carcinoma. - GMI Summary

Pubmed Data : Breast Cancer Res. 2010 Jan 15;12(1):R8. Epub 2010 Jan 15. PMID: [20078855](#)

Article Published Date : Jan 15, 2010

Authors : Ting Luo, Jiao Wang, Yancun Yin, Hui Hua, Jing Jing, Xiangming Sun, Minjing Li, You Zhang, Yangfu Jiang

Study Type : Animal Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\)](#) : CK(176) : AC(115)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13)

Cannabinoids work synergistically with paclitaxel in gastric cancer cell lines. - GMI Summary

Pubmed Data : J Surg Res. 2009 Jul;155(1):40-7. Epub 2008 Aug 9. PMID: [19394652](#)

Article Published Date : Jul 01, 2009

Authors : Hideyo Miyato, Joji Kitayama, Hiroharu Yamashita, Daisuke Souma, Masahiro Asakage, Jun Yamada, Hirokazu Nagawa

Study Type : In Vitro Study

Additional Links

Substances : [Cannabinoids](#) : CK(183) : AC(53)

Diseases : [Gastric Cancer](#) : CK(360) : AC(108)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

Paclitaxel and beta-lapachone (a compound within Tabebuia) synergistically induce programmed cell death in human retinoblastoma cells. - GMI Summary

Pubmed Data : J Cell Physiol. 2010 Feb;222(2):433-43. PMID: [19918798](#)

Article Published Date : Feb 01, 2010

Authors : Antonella D'Anneo, Giuseppa Augello, Andrea Santulli, Michela Giuliano, Riccardo di Fiore, Concetta Messina, Giovanni Tesoriere, Renza Vento

Study Type : In Vitro Study

Additional Links

Substances : [Tabebuia](#) : CK(10) : AC(9)

Diseases : [Retinoblastoma](#) : CK(24) : AC(6)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agent](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

Resveratrol combines favorably with paclitaxel to induce cell death in lung cancer cells. - GMI Summary

Pubmed Data : Anticancer Res. 2003 Sep-Oct;23(5A):4039-46. PMID: [14666716](#)

Article Published Date : Sep 01, 2003

Authors : Tetsuya Kubota, Yoshiki Uemura, Makoto Kobayashi, Hirokuni Taguchi

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Stilbenes](#) : CK(414) : AC(245)

Resveratrol increase the sensitivity of non-Hodgkin's lymphoma and multiple myeloma cell lines to paclitaxel-induced programmed cell death. - GMI

Summary

Pubmed Data : Mol Cancer Ther. 2004 Jan;3(1):71-84. PMID: [14749477](#)

Article Published Date : Jan 01, 2004

Authors : Ali R Jazirehi, Benjamin Bonavida

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Multiple Myeloma](#) : CK(125) : AC(50), [Non-Hodgkin Lymphoma](#) : CK(445) : AC(63)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Stilbenes](#) : CK(414) : AC(245)

Chemotherapy-Induced Toxicity: Adriamycin (AC 10)

[Curcumin attenuates acute adriamycin myocardial toxicity in rats.](#) - GMI Summary

Pubmed Data : Br J Pharmacol. 1998 Jun;124(3):425-7. PMID: [9647462](#)

Article Published Date : Jun 01, 1998

Authors : N Venkatesan

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

[Curcumin prevents adriamycin nephrotoxicity in rats.](#) - GMI Summary

Pubmed Data : Br J Pharmacol. 2000 Jan;129(2):231-4. PMID: [10694226](#)

Article Published Date : Jan 01, 2000

Authors : [No authors listed]

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

[Loquat seed inhibits oxidative stress associated with adriamycin-induced nephropathy.](#) - GMI Summary

Pubmed Data : Biol Pharm Bull. 2004 Dec;27(12):1961-4. PMID: [15577213](#)

Article Published Date : Dec 01, 2004

Authors : Atsuhide Hamada, Saburo Yoshioka, Daisuke Takuma, Junko Yokota, Tailine Cui, Masahiko Kusunose, Mitsuhiko Miyamura, Shojiro Kyotani, Yutaka Nishioka

Study Type : Animal Study

Additional Links

Substances : [Loquat Seeds](#) : CK(11) : AC(6)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10), [Lipid Peroxidation](#) : CK(333) : AC(125), [Nephropathy](#) : CK(161) : AC(29), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Glutathione Upregulation](#) : CK(152) : AC(47), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Plant Extracts](#) : CK(3297) : AC(1135)

[Panax ginseng reduces adriamycin-induced heart failure in rats.](#) - GMI Summary

Pubmed Data : J Immunol. 2010 Jun 15;184(12):6815-21. Epub 2010 May 17. PMID: [16372366](#)

Article Published Date : Jun 15, 2010

Authors : Jyh-Sheng You, Hui-Feng Huang, Ying-Ling Chang

Study Type : Animal Study

Additional Links

Substances : [Panax Ginseng](#) : CK(49) : AC(21)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10)

[Red sage \(*S. miltiorrhiza*\) has a protective effect on adriamycin-induced cardiac and liver toxicity in rats.](#) - GMI Summary

Pubmed Data : Phytother Res. 2007 Dec;21(12):1146-52. PMID: [17639557](#)

Article Published Date : Dec 01, 2007

Authors : Jyh-Sheng You, Tai-Long Pan, Ying-Shiung Lee

Study Type : Animal Study

Additional Links

Substances : [Red Sage](#) : CK(134) : AC(40)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10)

[Resveratrol alleviates chemotherapy-induced \(bleomycin\) lung injury in rats.](#) - GMI Summary

Pubmed Data : : Pulm Pharmacol Ther. 2007;20(6):642-9. Epub 2006 Sep 3. PMID: [17035056](#)

Article Published Date : Jan 01, 2007

Authors : Göksel Sener, Nurhayat Topaloğlu, A Ozer Sehirli, Feriha Ercan, Nursal Gedik

Study Type : Animal Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10), [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Schisandra protects against adriamycin-induced cardiotoxicity in rats.](#) - GMI Summary

Pubmed Data : Chang Gung Med J. 2006 Jan-Feb;29(1):63-70. PMID: [16642728](#)

Article Published Date : Jan 01, 2006

Authors : Jyh-Sheng You, Tai-Long Pan, Yu-Chang Hou

Study Type : Animal Study

Additional Links

Substances : [Schisandra](#) : CK(129) : AC(44)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Rehmannia protects against adriamycin-induced cytotoxicity in cardiac muscle cells.](#) - GMI Summary

Pubmed Data : Life Sci. 2005 Mar 18;76(18):2027-42. PMID: [15826871](#)

Article Published Date : Mar 18, 2005

Authors : Han-Jung Chae, Hyung-Ryong Kim, Do-Sung Kim, Eun-Rhan Woo, Yong-Gon Cho, Soo-Wan Chae

Study Type : In Vitro Study

Additional Links

Substances : [Rehmannia](#) : CK(145) : AC(36)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)

[Terminalia arjuna protects against adriamycin-induced DNA damage.](#) - GMI Summary

Pubmed Data : Phytother Res. 2008 Sep;22(9):1188-94. PMID: [18729254](#)

Article Published Date : Sep 01, 2008

Authors : Tiyyagura Koti Reddy, Prabhu Seshadri, K Kodanda Rami Reddy, G C Jagetia, C Damodar Reddy

Study Type : In Vitro Study

Additional Links

Substances : [Arjuna](#) : CK(79) : AC(13)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10)

[Garlic may attenuate the cardiotoxicity of the chemotherapy agent adriamycin.](#) - GMI Summary

Pubmed Data : Kathmandu Univ Med J (KUMJ). 2006 Jul-Sep;4(3):337-9. PMID: [18603930](#)

Article Published Date : Jul 01, 2006

Authors : R N Das, N Poudel

Study Type : Commentary

Additional Links

Substances : [Garlic](#) : CK(488) : AC(156)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Leukemia: Acute myelogenous leukemia (AML) (AC 5)

[Therapy-related acute myeloid leukemia and myelodysplastic syndrome has been reported.](#) - GMI Summary

Pubmed Data : J Med Food. 2005 Fall;8(3):382-5. PMID: [3857944](#)

Article Published Date : Sep 01, 2005

Authors : S D Michels, R W McKenna, D C Arthur, R D Brunning

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9), [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28), [Lymphoma](#) : CK(211) : AC(68), [Myelodysplastic Syndrome](#) : CK(188) : AC(17), [Radiation Induced Illness](#) : CK(994) : AC(245)

Additional Keywords : [Iatrogenic Disease](#) : CK(218) : AC(22)

Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33), [Radiotherapy](#) : CK(287) : AC(41)

[Galangin, a compound found within Alpinia galanga, acts as a chemosensitizer in drug-resistant leukemia cells.](#) - GMI Summary

Pubmed Data : Cancer Lett. 2008 Jul 8;265(2):289-97. Epub 2008 Apr 18. PMID: [18374481](#)

Article Published Date : Jul 08, 2008

Authors : Manlio Tolomeo, Stefania Grimaudo, Antonietta Di Cristina, Rosaria M Pipitone, Luisa Dusonchet, Maria Meli, Lucia Crosta, Nicola Gebbia, Francesco Paolo Invidiata, Lucina Titone, Daniele Simoni

Study Type : Animal Study

Additional Links

Substances : [Alpinia galanga](#) : CK(5) : AC(4), [Flavonoids](#) : CK(887) : AC(289)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28), [Leukemia: Chronic myelogenous leukemia \(CML\)](#) : CK(28) : AC(17)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

[Camptothecin acts synergistically with imatinib and overcomes imatinib resistance in chronic myelogenous leukemia \(CML\) cells.](#) - GMI Summary

Pubmed Data : Cancer Lett. 2007 Jul 8;252(1):75-85. Epub 2007 Jan 16. PMID: [17223257](#)

Article Published Date : Jul 08, 2007

Authors : Dong-Sik Ju, Mi-Ju Kim, Jae-Ho Bae, Hye-Soon Song, Byung-Seon Chung, Min-Ki Lee, Chi-Dug Kang, Hyun-Sun Lee, Dong-Wan Kim, Sun-Hee Kim

Study Type : In Vitro Study

Additional Links

Substances : [Camptothecin : CK\(5\) : AC\(5\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Leukemia: Acute myelogenous leukemia \(AML\) : CK\(96\) : AC\(28\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Resveratrol reverses doxorubicin resistance in acute myeloid leukemia cells. - GMI Summary

Pubmed Data : Environ Health. 2008;7:21. Epub 2008 May 30. PMID: [20350534](#)

Article Published Date : Jan 01, 2008

Authors : Sin Ho Kweon, Ju Han Song, Tae Sung Kim

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Leukemia: Acute myelogenous leukemia \(AML\) : CK\(96\) : AC\(28\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Stilbenes : CK\(414\) : AC\(245\)](#)

Triptolide inhibits transcription factor NF-kappa B, which translates into a therapeutic effect against various leukemias, multiple myeloma and myelodysplastic syndrome. - GMI Summary

Pubmed Data : Curr Mol Pharmacol. 2010 Jul 2. Epub 2010 Jul 2. PMID: [20594187](#)

Article Published Date : Jul 02, 2010

Authors : Ota Fuchs

Study Type : In Vitro Study

Additional Links

Substances : [Tripterygium wilfordii : CK\(104\) : AC\(26\)](#), [Triptolide : CK\(11\) : AC\(9\)](#)

Diseases : [Leukemia : CK\(694\) : AC\(270\)](#), [Leukemia: Acute myelogenous leukemia \(AML\) : CK\(96\) : AC\(28\)](#), [Leukemia: Chronic Lymphocytic Leukemia \(CLL\) : CK\(52\) : AC\(24\)](#), [Leukemia: Chronic myelogenous leukemia \(CML\) : CK\(28\) : AC\(17\)](#), [Multiple Myeloma : CK\(125\) : AC\(50\)](#), [Myelodysplastic Syndrome : CK\(188\) : AC\(17\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Alpha-Lipoic Acid (AC 3)

Alpha lipoic acid prevents mitochondrial damage and neurotoxicity in experimental chemotherapy neuropathy. - GMI Summary

Pubmed Data : Exp Neurol. 2008 Dec;214(2):276-84. Epub 2008 Sep 9. PMID: [18809400](#)

Article Published Date : Dec 01, 2008

Authors : Giorgia Melli, Michela Taiana, Francesca Camozzi, Daniela Triolo, Paola Podini, Angelo Quattrini, Franco Taroni, Giuseppe Lauria

Study Type : Human Study

Additional Links

Substances : [Alpha-Lipoic Acid : CK\(406\) : AC\(80\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Chemotherapy-Induced Toxicity: Paclitaxel : CK\(32\) : AC\(4\)](#), [Chemotherapy-Induced Toxicity: Peripheral Neuropathy : CK\(195\) : AC\(5\)](#)

Pharmacological Actions : [Neuroprotective Agents : CK\(927\) : AC\(468\)](#)

Alpha lipoic acid attenuates bleomycin-induced pulmonary fibrosis in mice. - GMI Summary

Pubmed Data : Int J Mol Med. 2007 Jun;19(6):865-73. PMID: [17487418](#)

Article Published Date : Jun 01, 2007

Authors : Rui Liu, Kazi Mokim Ahmed, Danupon Nantajit, Frank S Rosenthal, Chun-Xun Hai, Jian Jian

Li

Study Type : Animal Study

Additional Links

Substances : [Alpha-Lipoic Acid](#) : CK(406) : AC(80)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Pulmonary Fibrosis](#) : CK(149) : AC(49)

[Alpha lipoic acid attenuates cisplatin-induced acute kidney injury in mice by suppressing renal inflammation.](#) - GMI Summary

Pubmed Data : Nephrol Dial Transplant. 2009 Oct;24(10):3012-20. Epub 2009 May 27. PMID: [19474282](#)

Article Published Date : Oct 01, 2009

Authors : Kyung Pyo Kang, Duk Hoon Kim, Yu Jin Jung, Ae Sin Lee, Sik Lee, Sang Yong Lee, Kyu Yun Jang, Mi Jeong Sung, Sung Kwang Park, Won Kim

Study Type : Animal Study

Additional Links

Substances : [Alpha-Lipoic Acid](#) : CK(406) : AC(80)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Melanoma (AC 5)

[DL-alpha-tocopherol acetate does not protect against chemotherapy-induced chromosome damage and reduces the level of plasma gamma tocopherol.](#) - GMI Summary

Pubmed Data : Melanoma Res. 2002 Feb;12(1):83-90. PMID: [11828262](#)

Article Published Date : Feb 01, 2002

Authors : S Mahabir, D Coit, L Liebes, M S Brady, J J Lewis, G Roush, M Nestle, D Fry, M Berwick

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21), [Melanoma](#) : CK(169) : AC(87)

Problem Substances : [DL-alpha-tocopherol acetate](#) : CK(81) : AC(14)

[Curcumin induces programmed cell death in human melanoma cells.](#) - GMI Summary

Pubmed Data : Exp Cell Res. 2001 Dec 10;271(2):305-14. PMID: [11716543](#)

Article Published Date : Dec 10, 2001

Authors : J A Bush, K J Cheung, G Li

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Melanoma](#) : CK(169) : AC(87)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Enzyme Inhibitors](#) : CK(385) : AC(210), [NF-kappaB Inhibitor](#) : CK(596) : AC(403), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

[Curcumin reduces chemo-resistance of melanoma cells to tamoxifen.](#) - GMI Summary

Pubmed Data : Cancer Biol Ther. 2011 Jan 29;11(2). Epub 2011 Jan 29. PMID: [21088500](#)

Article Published Date : Jan 29, 2011

Authors : Sudipa June Chatterjee, Siyaram Pandey

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Melanoma](#) : CK(169) : AC(87)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Quercetin abrogates chemoresistance in melanoma cells. - GMI Summary

Pubmed Data : BMC Cancer. 2010;10:282. Epub 2010 Jun 11. PMID: [20540768](#)

Article Published Date : Jan 01, 2010

Authors : Thilakavathy Thangasamy, Sivanandane Sittadjody, Geoffrey C Mitchell, Erin E Mendoza, Vijayababu M Radhakrishnan, Kirsten H Limesand, Randy Burd

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin](#) : CK(312) : AC(140)

Diseases : [DNA damage](#) : CK(687) : AC(287), [Melanoma](#) : CK(169) : AC(87)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157),

[Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Resveratrol induces cell-cycle disruption and programmed cell death in chemoresistant melanoma. - GMI Summary

Pubmed Data : J Cell Biochem. 2010 Jul 1;110(4):893-902. PMID: [20564188](#)

Article Published Date : Jul 01, 2010

Authors : Grégory Gatouillat, Emilie Balasse, Débora Joseph-Pietras, Hamid Morjani, Claudie Madoulet

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Melanoma](#) : CK(169) : AC(87)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Stilbenes](#) : CK(414) : AC(245)

Acute lymphoblastic leukemia (ALL) (AC 3)

Vitamin E and N-acetylcysteine are an effective antioxidant adjuvant therapy in children with acute lymphoblastic leukemia to reduce the chemo-/radiotherapy toxicity of treatment. - GMI Summary

Pubmed Data : Adv Hematol. 2009;2009:689639. Epub 2009 Oct 20. PMID: [19960046](#)

Article Published Date : Jan 01, 2009

Authors : Youssef Al-Tonbary, Mohammad Al-Haggar, Rasha El-Ashry, Sahar El-Dakroory, Hanan Azzam, Ashraf Fouda

Study Type : Human Study

Additional Links

Substances : [NAC \(N-acetyl-L-cysteine\)](#) : CK(248) : AC(64), [Vitamin E](#) : CK(1288) : AC(227)

Diseases : [Acute lymphoblastic leukemia \(ALL\)](#) : CK(95) : AC(28), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Radiation Induced Illness](#) : CK(994) : AC(245)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Cholesterol derived from LDL acts as a chemosensitizer in multidrug resistant lymphoblastic leukemia cells. - GMI Summary

Pubmed Data : Biochem Cell Biol. 2007 Oct;85(5):638-46. PMID: [17901905](#)

Article Published Date : Oct 01, 2007

Authors : Yu Shu, Hu Liu

Study Type : Animal Study

Additional Links

Substances : [Cholesterol](#) : CK(392) : AC(43)

Diseases : [Acute lymphoblastic leukemia \(ALL\)](#) : CK(95) : AC(28), [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Leukemia: T-cell acute Lymphoblastic](#) : CK(35) : AC(14)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin potentiates antitumor activity of l-asparaginase in acute

lymphoblastic leukemia. - GMI Summary

Pubmed Data : Leuk Lymphoma. 2012 Jan 25. Epub 2012 Jan 25. PMID: [22185211](#)

Article Published Date : Jan 25, 2012

Authors : Hua Wang, Qi-Rong Geng, Liang Wang, Yue Lu

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Acute lymphoblastic leukemia \(ALL\)](#) : CK(95) : AC(28)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Neuroblastoma (AC 3)

Children treated for solid tumors or lymphoma with chemotherapy have increased caries of the primary teeth. - GMI Summary

Pubmed Data : Int J Paediatr Dent. 2010 Jan;20(1):15-23. PMID: [20059589](#)

Article Published Date : Jan 01, 2010

Authors : Alison Hutton, Moira Bradwell, Martin English, Iain Chapple

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Dental Caries](#) : CK(247) : AC(33), [Neuroblastoma](#) : CK(51) : AC(31)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Resveratrol enhances the anti-tumor effect of immunotherapy in a neuroblastoma model. - GMI Summary

Pubmed Data : Cancer Immunol Immunother. 2011 Feb 22. Epub 2011 Feb 22. PMID: [21340652](#)

Article Published Date : Feb 22, 2011

Authors : Brenda L Soto, Jacquelyn A Hank, Tyler J Van De Voort, Lalita Subramanian, Arthur S Polans, Alexander L Rakhmilevich, Richard K Yang, Songwong Seo, KyungMann Kim, Ralph A Reisfeld, Stephen D Gillies, Paul M Sondel

Study Type : Animal Study

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Neuroblastoma](#) : CK(51) : AC(31)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

DHA sensitizes neuroblastoma cells to chemotherapy and asenic-induced oxidative stress. - GMI Summary

Pubmed Data : Int J Cancer. 2006 May 15;118(10):2584-93. PMID: [16353135](#)

Article Published Date : May 15, 2006

Authors : Magnus Lindskog, Helena Gleissman, Frida Ponthan, Juan Castro, Per Kogner, John Inge Johnsen

Study Type : In Vitro Study

Additional Links

Substances : [DHA \(Docosahexaenoic Acid\)](#) : CK(603) : AC(100)

Diseases : [Neuroblastoma](#) : CK(51) : AC(31), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Cardiotoxicity: Chemotherapy-Induced (AC 6)

Caffeic acid phenetyl ester, a compound found within bee propolis, protects against doxorubicin-induced cardiotoxicity in rats. - GMI Summary

Pubmed Data : Am J Ind Med. 2010 Sep 30. Epub 2010 Sep 30. PMID: [14745846](#)

Article Published Date : Sep 30, 2010

Authors : Ersin Fadillioglu, Emin Oztas, Hasan Erdogan, Murat Yagmurca, Sadik Sogut, Muharrem Ucar, M Kemal Irmak

Study Type : Animal Study

Additional Links

Substances : [Bee Propolis](#) : CK(222) : AC(88), [Caffeic acid phenethyl ester](#) : CK(15) : AC(8)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Grape seed extract has a protective role against doxorubicin-induced cardiotoxicity and genotoxicity in albino mice. - GMI Summary

Pubmed Data : J Med Food. 2010 Aug;13(4):917-25. PMID: [20553142](#)

Article Published Date : Aug 01, 2010

Authors : Emine Yalçın, Ertan Oruç, Kültiğın Cavuşoğlu, Kürşad Yapar

Study Type : Animal Study

Additional Links

Substances : [Grape Seed Extract](#) : CK(172) : AC(58)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [DNA damage](#) : CK(687) : AC(287)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185), [Genoprotective](#) : CK(109) : AC(46)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Oleuropein confers protection against doxorubicin-induced cardiotoxicity. - GMI Summary

Pubmed Data : NMR Biomed. 2009 Jul;22(6):585-92. PMID: [19308947](#)

Article Published Date : Jul 01, 2009

Authors : Ioanna Andreadou, Maria Papaefthimiou, Athina Zira, Maria Constantinou, Fragiska Sigala, Alexios-Leandros Skaltsounis, Anna Tsantili-Kakoulidou, Efstathios K Iliodromitis, Dimitrios T Kremastinos, Emmanuel Mikros

Study Type : Animal Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antihypertensive Agents](#) : CK(194) : AC(38), [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Oleuropein prevents doxorubicin-induced cardiotoxicity and improves therapeutic outcome. - GMI Summary

Pubmed Data : J Mol Cell Cardiol. 2007 Mar;42(3):549-58. Epub 2007 Jan 16. PMID: [17223128](#)

Article Published Date : Mar 01, 2007

Authors : Ioanna Andreadou, Fragiska Sigala, Efstathios K Iliodromitis, Maria Papaefthimiou, Constantinos Sigalas, Nektarios Aligiannis, Paraskevi Savvari, Vassilis Gorgoulis, Efstathios Papalabros, Dimitrios Th Kremastinos

Study Type : Animal Study

Additional Links

Substances : [Oleuropein](#) : CK(41) : AC(29)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Oxidative Stress: CK\(1858\) : AC\(703\)](#)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Panax Notoginseng has a protective effect against doxorubicin-induced

cardiotoxicity in mice. - GMI Summary

Pubmed Data : Planta Med. 2008 Feb;74(3):203-9. Epub 2008 Feb 8. PMID: [18260050](#)

Article Published Date : Feb 01, 2008

Authors : Li Liu, Run Shi, Qiang Shi, Yiyu Cheng, Yang Huo

Study Type : Animal Study

Additional Links

Substances : [Panax Notoginseng](#) : CK(42) : AC(9)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Spirulina has a protective effect against doxorubicin-induced cardiotoxicity in mice. - GMI Summary

Pubmed Data : Phytother Res. 2005 Dec;19(12):1030-7. PMID: [16372368](#)

Article Published Date : Dec 01, 2005

Authors : Mahmood Khan, Jagdish Chandra Shobha, Iyyapu Krishna Mohan, Madireddi Umamaheswara Rao Naidu, Challa Sundaram, Shashi Singh, Periannan Kuppusamy, Vijay Kumar Kutala

Study Type : Animal Study

Additional Links

Substances : [Spirulina](#) : CK(77) : AC(23)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Neurotoxic (AC 2)

Memory deficits occur in breast cancer patients who receive either chemotherapy or tamoxifen. - GMI Summary

Pubmed Data : J Psychosoc Oncol. 2011 Sep-Oct;29(5):499-514. PMID: [21882931](#)

Article Published Date : Sep 01, 2011

Authors : Svetlana Prokasheva, Yifat Faran, Julie Cwikel, David B Geffen

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Memory Disorders: Drug-Induced](#) : CK(74) : AC(9), [Memory Loss](#) : CK(117) : AC(34)

Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33)

Problem Substances : [Tamoxifen](#) : CK(294) : AC(39)

Adverse Pharmacological Actions : [Neurotoxic](#) : CK(976) : AC(155)

"Impaired cognitive function and hippocampal neurogenesis following cancer chemotherapy." - GMI Summary

Pubmed Data : Clin Cancer Res. 2012 Feb 14. Epub 2012 Feb 14. PMID: [22338017](#)

Article Published Date : Feb 14, 2012

Authors : Lori-Ann Christie, Munjal M Acharya, Vipin K Parihar, Anna Nguyen, Vahan Martirosian, Charles L Limoli

Study Type : Animal Study

Additional Links

Diseases : [Brain Injury: Hippocampal Damage](#) : CK(35) : AC(12), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Cognitive Decline/Dysfunction](#) : CK(500) : AC(80)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33)

Problem Substances : [Cyclophosphamide](#) : CK(2) : AC(1), [Doxorubicin](#) : CK(2) : AC(1)

Adverse Pharmacological Actions : [Neurotoxic](#) : CK(976) : AC(155)

Pancreatic Cancer (AC 10)

[Sulforaphane enhances the anticancer activity of a chemo-agent against pancreatic cancer. - GMI Summary](#)

Pubmed Data : Nutr Cancer. 2011 Aug 29. Epub 2011 Aug 29. PMID: [21875325](#)

Article Published Date : Aug 29, 2011

Authors : Yanyan Li, Tao Zhang, Steven J Schwartz, Duxin Sun

Study Type : Transgenic Animal Study

Additional Links

Substances : [Broccoli](#) : CK(435) : AC(185), [Sprouts](#) : CK(76) : AC(36), [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[Sulforaphane increases the effectiveness of various cytotoxic drugs against pancreatic cancer stem cells without inducing additional toxicity in mice. - GMI Summary](#)

Pubmed Data : J Med Food. 2004 Summer;7(2):157-61. PMID: [20940707](#)

Article Published Date : Jun 01, 2004

Authors : Georgios Kallifatidis, Sabrina Labsch, Vanessa Rausch, Juergen Mattern, Jury Gladkikh, Gerhard Moldenhauer, Markus W Büchler, Alexei V Salnikov, Ingrid Herr

Study Type : Transgenic Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Curcumin augments gemcitabine cytotoxic effect on pancreatic cancer cell lines. - GMI Summary](#)

Pubmed Data : Cancer Invest. 2007 Sep;25(6):411-8. PMID: [17882652](#)

Article Published Date : Sep 01, 2007

Authors : Shahar Lev-Ari, Akiva Vexler, Alex Starr, Maia Ashkenazy-Voghera, Joel Greif, Dan Aderka, Rami Ben-Yosef

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agent](#) : CK(188) : AC(157), [Cyclooxygenase 2 Inhibitors](#) : CK(274) : AC(167)

Additional Keywords : [Drug: Gemcitabine](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin inhibits multi-drug resistant pancreatic cancer. - GMI Summary](#)

Pubmed Data : Cancer Chemother Pharmacol. 2010 Nov 30. Epub 2010 Nov 30. PMID: [21116627](#)

Article Published Date : Nov 30, 2010

Authors : Yan Li, Jezrael L Revalde, Glen Reid, James W Paxton

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157)

[Curcumin inhibits pancreatic cancer cell growth and acts as a chemosensitizing agent. - GMI Summary](#)

Pubmed Data : Mol Pharmacol. 2009 Jul;76(1):81-90. Epub 2009 Apr 24. PMID: [19395473](#)

Article Published Date : Jul 01, 2009

Authors : Jun Li, Yun Wang, Chaozhe Yang, Pengfei Wang, Denise K Oelschlager, Yong Zheng, De-An Tian, William E Grizzle, Donald J Buchsbaum, Mei Wan

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Synergy: Gemcitabine](#) : CK(10) : AC(8), [Drug: Gemcitabine](#) : CK(36) : AC(13)

Additional Keywords : [Chemotherapeutic Synergy: Gemcitabine](#) : CK(10) : AC(8), [Drug: Gemcitabine](#) : CK(36) : AC(13)

Curcumin synergistically potentiates the anti-cancer effects of celecoxib in pancreatic cancer cells. - GMI Summary

Pubmed Data : Biomed Pharmacother. 2005 Oct;59 Suppl 2:S276-80. PMID: [16507392](#)

Article Published Date : Oct 01, 2005

Authors : S Lev-Ari, H Zinger, D Kazanov, D Yona, R Ben-Yosef, A Starr, A Figer, N Arber

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Synergy: Gemcitabine](#) : CK(10) : AC(8), [Drug: Gemcitabine](#) : CK(36) : AC(13)

Additional Keywords : [Chemotherapeutic Synergy: Gemcitabine](#) : CK(10) : AC(8), [Drug: Gemcitabine](#) : CK(36) : AC(13)

Genistein acts as a chemosensitizer, augmenting the efficacy of cisplatin in pancreatic cancer. - GMI Summary

Pubmed Data : Int J Cancer. 2007 Feb 15;120(4):906-17. PMID: [17131310](#)

Article Published Date : Feb 15, 2007

Authors : Sanjeev Banerjee, Yuxiang Zhang, Zhiwei Wang, Mingxin Che, Paul J Chiao, James L Abbruzzese, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Synergy: Gemcitabine](#) : CK(10) : AC(8), [Drug: Gemcitabine](#) : CK(36) : AC(13)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin](#) : CK(4) : AC(3), [Drug: Cisplatin](#) : CK(31) : AC(11), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Genistein acts as a chemosensitizer, contributing to overcoming drug-resistance in prostate, breast, lung and pancreatic cancers. - GMI Summary

Pubmed Data : Cancer Res. 2005 Aug 1;65(15):6934-42. PMID: [16061678](#)

Article Published Date : Aug 01, 2005

Authors : Yiwei Li, Fakhara Ahmed, Shadan Ali, Philip A Philip, Omer Kucuk, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185), [Pancreatic Cancer](#) : CK(524) : AC(160), [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Quercetin may reduce chemotherapy resistance in human pancreatic cancer

cells. - GMI Summary

Pubmed Data : Molecules. 2010;15(2):857-70. Epub 2010 Feb 9. PMID: [20335952](#)

Article Published Date : Jan 01, 2010

Authors : Sylwia Borska, Mirosław Sopol, Magdalena Chmielewska, Maciej Zabel, Piotr Dziegieł

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin](#) : CK(312) : AC(140)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Pancreatic Cancer](#) : CK(524) : AC(160)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Resveratrol exhibits tumor chemosensitizing properties. - GMI Summary

Pubmed Data : Ann N Y Acad Sci. 2011 Jan;1215(1):150-60. PMID: [21261654](#)

Article Published Date : Jan 01, 2011

Authors : Subash C Gupta, Ramaswamy Kannappan, Simone Reuter, Ji Hye Kim, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Acute Myeloid Leukemia](#) : CK(51) : AC(21), [Lung Cancer](#) : CK(440) : AC(185), [Multiple Myeloma](#) : CK(125) : AC(50), [Pancreatic Cancer](#) : CK(524) : AC(160), [Promyelocytic leukemia](#) : CK(137) : AC(75), [Prostate Cancer](#) : CK(961) : AC(288), [Skin Cancer](#) : CK(438) : AC(174), [Tumors](#) : CK(179) : AC(107)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Astragalus (AC 2)

Astragalus may provide an ideal complementary treatment to chemotherapy. - GMI Summary

Pubmed Data : Food Chem Toxicol. 2008 Mar;46(3):1089-96. Epub 2007 Nov 17. PMID: [12592686](#)

Article Published Date : Mar 01, 2008

Authors : Ping Duan, Zai-mo Wang

Study Type : Human Study

Additional Links

Substances : [Astragalus](#) : CK(284) : AC(57)

Diseases : [Chemotherapy](#) : CK(65) : AC(16), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Astragalus stimulates hematopoiesis and may attenuate the myelosuppressive effects of anti-cancer chemotherapy. - GMI Summary

Pubmed Data : Zhong Yao Cai. 2005 Sep;28(9):791-3. PMID: [16447871](#)

Article Published Date : Sep 01, 2005

Authors : Yan Lv, Xuemei Feng, Bide Zhu

Study Type : In Vitro Study

Additional Links

Substances : [Astragalus](#) : CK(284) : AC(57)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Myelodysplastic Syndromes](#) : CK(189) : AC(17), [Myelotoxicity](#) : CK(31) : AC(8), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17)

Pharmacological Actions : [Hematopoietic](#) : CK(20) : AC(9)

Cannabis (AC 2)

Cannabis extract is safe and efficacious in reducing chemotherapy-induced nausea and vomiting. - GMI Summary

Pubmed Data : Br J Clin Pharmacol. 2010 Nov;70(5):656-63. PMID: [21039759](#)

Article Published Date : Nov 01, 2010

Authors : Marta Duran, Eulàlia Pérez, Sergio Abanades, Xavier Vidal, Cristina Saura, Margarita

Majem, Edurne Arriola, Manel Rabanal, Antoni Pastor, Magí Farré, Neus Rams, Joan-Ramon Laporte, Dolors Capellà

Study Type : Human Study

Additional Links

Substances : [Cannabis](#) : CK(702) : AC(133)

Diseases : [Chemotherapy](#) : CK(65) : AC(16), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186),

[Nausea](#) : [Chemotherapy-Induced](#) : CK(60) : AC(5)

Pharmacological Actions : [Antiemetics](#) : CK(40) : AC(4)

[A cannabinoid receptor 2 agonist attenuates cisplatin-induced apoptosis in auditory cells.](#) - GMI Summary

Pubmed Data : J Neurosci Res. 2007 Mar;85(4):896-905. PMID: [17183590](#)

Article Published Date : Mar 01, 2007

Authors : Hyun-Ja Jeong, Su-Jin Kim, Phil-Dong Moon, Na-Hyun Kim, Jung-Sun Kim, Rae-Kil Park, Min-Sun Kim, Byung-Rim Park, Sejin Jeong, Jae-Young Um, Hyung-Min Kim, Seung-Heon Hong

Study Type : In Vitro Study

Additional Links

Substances : [Cannabis](#) : CK(702) : AC(133)

Diseases : [Auditory Diseases](#) : CK(3) : AC(2), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Anti-Apoptotic](#) : CK(59) : AC(37)

Glutamine (AC 2)

[Oral glutamine supplementation protects lymphocytes and attenuates gut permeability in patients with esophageal cancer during radiochemotherapy.](#) - GMI Summary

Pubmed Data : Ann Surg. 1998 Apr;227(4):485-91. PMID: [9563534](#)

Article Published Date : Apr 01, 1998

Authors : S Yoshida, M Matsui, Y Shirouzu, H Fujita, H Yamana, K Shirouzu

Study Type : Human Study

Additional Links

Substances : [Glutamine](#) : CK(120) : AC(22)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Esophageal Cancer](#) : CK(293) : AC(54), [Radiation Induced Illness](#) : CK(994) : AC(245)

Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

[Glutamine prevents chemotherapy and radiation toxicity and may increase the efficacy of cancer treatment.](#) - GMI Summary

Pubmed Data : Cancer Treat Rev. 2003 Dec;29(6):501-13. PMID: [14585260](#)

Article Published Date : Dec 01, 2003

Authors : Diane M F Savarese, Gayle Savy, Linda Vahdat, Paul E Wischmeyer, Barbara Corey

Study Type : Review

Additional Links

Substances : [Glutamine](#) : CK(120) : AC(22)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Radiation Induced Illness](#) : CK(994) : AC(245)

Pharmacological Actions : [Radioprotective](#) : CK(453) : AC(180)

Leukopenia: Chemotherapy Induced (AC 2)

[Polysaccharides isolated from Echinacea purpurea herba cell cultures to counteract undesired effects of chemotherapy.](#) - GMI Summary

Pubmed Data : Phytother Res. 2002 Mar;16(2):138-42. PMID: [11933115](#)

Article Published Date : Mar 01, 2002

Authors : Dieter Melchart, Christof Clemm, Bernhard Weber, Thorsten Draczynski, Felege Worku,

Klaus Linde, Wolfgang Weidenhammer, Hildebert Wagner, Reinhard Saller

Study Type : Human Study

Additional Links

Substances : [Echinacea](#) : CK(469) : AC(90)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Gastric Cancer](#) : CK(360) : AC(108), [Leukopenia](#) : CK(43) : AC(7), [Leukopenia: Chemotherapy Induced](#) : CK(25) : AC(5)

Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23), [Plant Extracts](#) : CK(3297) : AC(1135)

Maitake enhances granulopoiesis and mobilization of granulocytes by increasing granulocyte colony-stimulating factor. - GMI Summary

Pubmed Data : Int Immunopharmacol. 2009 Jun 30. PMID: [19573626](#)

Article Published Date : Jun 30, 2009

Authors : Koichi Ito, Yuki Masuda, Yoshihiko Yamasaki, Yoshinobu Yokota, Hiroaki Nanba

Study Type : Commentary

Additional Links

Substances : [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Leukopenia: Chemotherapy Induced](#) : CK(25) : AC(5), [Neutropenia](#) : CK(90) : AC(22), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17), [Neutropenia: Cyclic](#) : CK(48) : AC(16)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\)](#) : CK(33) : AC(10)

Liver Cancer (AC 9)

Diosgenin, a compound isolated from fenugreek, has chemosensitizing activity against human liver cancer cells. - GMI Summary

Pubmed Data : Cancer Lett. 2010 Jan 4. Epub 2010 Jan 4. PMID: [20053498](#)

Article Published Date : Jan 04, 2010

Authors : Feng Li, Prasana Priscilla Fernandez, Peramaiyan Rajendran, Kam M Hui, Gautam Sethi

Study Type : Animal Study

Additional Links

Substances : [Diosgenin](#) : CK(2) : AC(1), [Fenugreek](#) : CK(71) : AC(28)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug: Paclitaxel](#) : CK(36) : AC(13), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Green tea catechins augment the antitumor activity of doxorubicin in an in vivo mouse model for chemoresistant liver cancer. - GMI Summary

Pubmed Data : Int J Oncol. 2010 Jul ;37(1):111-23. PMID: [20514403](#)

Article Published Date : Jul 01, 2010

Authors : Gang Liang, Anzhou Tang, Xiaozhen Lin, Li Li, Su Zhang, Zhiming Huang, Haihua Tang, Qingdi Quentin Li

Study Type : Animal Study

Additional Links

Substances : [Catechin](#) : CK(408) : AC(130), [Tea](#) : CK(951) : AC(226)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug Synergy](#) : CK(309) : AC(137)

Delta-tocotrienol acts as a chemosensitizing agent. - GMI Summary

Pubmed Data : Br J Pharmacol. 2010 Dec 30. Epub 2010 Dec 30. PMID: [21198544](#)

Article Published Date : Dec 30, 2010

Authors : [No authors listed]

Study Type : In Vitro Study

Additional Links

Substances : [Tocotrienol: Delta](#) : CK(7) : AC(7)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Liver Cancer : CK\(758\) : AC\(265\)](#)
Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)
Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Genistein potentiates the effect of arsenic trioxide against human hepatocellular carcinoma. - GMI Summary

Pubmed Data : Cancer Lett. 2011 Feb 1 ;301(1):75-84. PMID: [21078540](#)

Article Published Date : Feb 01, 2011

Authors : Yong Ma, Jizhou Wang, Lianxin Liu, Huaqiang Zhu, Xiaoning Chen, Shangha Pan, Xueying Sun, Hongchi Jiang

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Arsenic Trioxide : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Genistein synergizes with arsenic trioxide to suppress human hepatocellular carcinoma. - GMI Summary

Pubmed Data : Cancer Sci. 2010 Apr ;101(4):975-83. Epub 2009 Dec 9. PMID: [20219070](#)

Article Published Date : Apr 01, 2010

Authors : Hongchi Jiang, Yong Ma, Xiaoning Chen, Shangha Pan, Bei Sun, Geoffrey W Krissansen, Xueying Sun

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Arsenic Trioxide : CK\(1\) : AC\(1\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Lion's mane enhances doxorubicin-induced apoptosis in human hepatocellular carcinoma cells. - GMI Summary

Pubmed Data : Cancer Lett. 2010 Nov 28 ;297(2):144-54. PMID: [20554107](#)

Article Published Date : Nov 28, 2010

Authors : Jong Seok Lee, Eock Kee Hong

Study Type : In Vitro Study

Additional Links

Substances : [Lion's Mane \(Hericium Erinaceus\) : CK\(31\) : AC\(6\)](#)

Diseases : [Liver Cancer : CK\(758\) : AC\(265\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Reishi extract protects against radiation and chemotherapy associated toxicity. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2006 Oct;31(19):1618-22. PMID: [17165589](#)

Article Published Date : Oct 01, 2006

Authors : Dan-Hua Wang, Xin-Chu Weng

Study Type : In Vitro Study

Additional Links

Substances : [Reishi Mushroom : CK\(109\) : AC\(43\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Liver Cancer : CK\(758\) : AC\(265\)](#), [Radiation Disaster Associated Toxicity : CK\(942\) : AC\(268\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Radioprotective : CK\(453\) : AC\(180\)](#)

Ursolic acid induces doxorubicin-resistant liver cancer cell death. - GMI

Summary

Pubmed Data : Cancer Lett. 2010 Dec 1;298(1):128-38. Epub 2010 Jul 13. PMID: [20630652](#)

Article Published Date : Dec 01, 2010

Authors : Lu Yang, Xiaozhuo Liu, Zengbing Lu, Judy Yuet-Wa Chan, Linli Zhou, Kwok-Pui Fung, Ping Wu, Shihua Wu

Study Type : In Vitro Study

Additional Links

Substances : [Ursolic Acid](#) : CK(18) : AC(13)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Chemotherapeutic Agent](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Vitamin K2 augments 5-fluorouracil-induced growth inhibition of human hepatocellular carcinoma cells by inhibiting NF-κB activation. - GMI

Summary

Pubmed Data : Oncol Rep. 2011 Jan;25(1):159-66. PMID: [21109972](#)

Article Published Date : Jan 01, 2011

Authors : Hao Zhang, Iwata Ozaki, Hiroshi Hamajima, Shinji Iwane, Hirokazu Takahashi, Yasunori Kawaguchi, Yuichiro Eguchi, Kyosuke Yamamoto, Toshihiko Mizuta

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin K](#) : CK(540) : AC(64), [Vitamin K2](#) : CK(254) : AC(27)

Diseases : [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Chemotherapeutic Agent](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug: 5-fluorouracil](#) : CK(88) : AC(23), [Drug Synergy](#) : CK(309) : AC(137)

Neutropenia (AC 2)

A proprietary honey-based herbal formula reduces chemotherapy-induced neutropenia and the need for colony-stimulating factors. - GMI Summary

Pubmed Data : Med Oncol. 2006;23(4):549-52. PMID: [17303914](#)

Article Published Date : Jan 01, 2006

Authors : Jamal Zidan, Lika Shetver, Anthony Gershuny, Amira Abzah, Sigalit Tamam, Moshe Stein, Eitan Friedman

Study Type : Human Study

Additional Links

Substances : [Honey: Life Mel Proprietary Formula](#) : CK(205) : AC(31)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Neutropenia](#) : CK(90) : AC(22), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\)](#) : CK(33) : AC(10)

Maitake enhances granulopoiesis and mobilization of granulocytes by increasing granulocyte colony-stimulating factor. - GMI Summary

Pubmed Data : Int Immunopharmacol. 2009 Jun 30. PMID: [19573626](#)

Article Published Date : Jun 30, 2009

Authors : Koichi Ito, Yuki Masuda, Yoshihiko Yamasaki, Yoshinobu Yokota, Hiroaki Nanba

Study Type : Commentary

Additional Links

Substances : [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Leukopenia: Chemotherapy Induced](#) : CK(25) : AC(5), [Neutropenia](#) : CK(90) : AC(22), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17), [Neutropenia: Cyclic](#) : CK(48) : AC(16)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\)](#) : CK(33) : AC(10)

Reishi Mushroom (AC 2)

[A combination of geranium extract, Ganoderma lucidum, Codonopsis pilosula and Angelicae sinensis, improve the condition of cancer patients receiving chemotherapy/radiotherapy.](#) - GMI Summary

Pubmed Data : Phytother Res. 2009 Jun;23(6):785-90. PMID: [19145638](#)

Article Published Date : Jun 01, 2009

Authors : Shu-Ru Zhuang, Su-Lin Chen, Jih-Hsin Tsai, Chi-Chou Huang, Tzu-Chin Wu, Wen-Shan Liu, Hsien-Chun Tseng, Hong-Sen Lee, Min-Chang Huang, Guang-Tzu Shane, Cheng-Hua Yang, You-Cheng Shen, Yeong-Yu Yan, Chin-Kun Wang

Study Type : Human Study

Additional Links

Substances : [Angelica](#) : CK(73) : AC(28), [Codonopsis pilosula](#) : CK(23) : AC(4), [Geranium](#) : CK(16) : AC(8), [Reishi Mushroom](#) : CK(109) : AC(43)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Radiation Induced Illness](#) : CK(994) : AC(245)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Reishi extract protects against radiation and chemotherapy associated toxicity.](#) - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2006 Oct;31(19):1618-22. PMID: [17165589](#)

Article Published Date : Oct 01, 2006

Authors : Dan-Hua Wang, Xin-Chu Weng

Study Type : In Vitro Study

Additional Links

Substances : [Reishi Mushroom](#) : CK(109) : AC(43)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Liver Cancer](#) : CK(758) : AC(265), [Radiation Disaster Associated Toxicity](#) : CK(942) : AC(268)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Radioprotective](#) : CK(453) : AC(180)

Caffeine (AC 1)

[Caffeine potentiates chemotherapy for metastatic osteosarcoma.](#) - GMI Summary

Pubmed Data : J Orthop Sci. 2009 Sep;14(5):556-65. Epub 2009 Oct 3. PMID: [19802667](#)

Article Published Date : Sep 01, 2009

Authors : Hiroaki Kimura, Hiroyuki Tsuchiya, Toshiharu Shirai, Hideji Nishida, Katsuhiro Hayashi, Akihiko Takeuchi, Issei Ohnari, Katsuro Tomita

Study Type : Human Study

Additional Links

Substances : [Caffeine](#) : CK(99) : AC(17)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug Synergy](#) : CK(309) : AC(137)

Exercise (AC 1)

[Acute exercise protects against doxorubicin cardiotoxicity.](#) - GMI Summary

Pubmed Data : Integr Cancer Ther. 2008 Sep;7(3):147-54. PMID: [18815146](#)

Article Published Date : Sep 01, 2008

Authors : Karen Y Wonders, David S Hydock, Carole M Schneider, Reid Hayward

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity:](#)

[Doxorubicin : CK\(59\) : AC\(23\)](#), [Hypertension : CK\(2610\) : AC\(260\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Therapeutic Actions : [Exercise : CK\(451\) : AC\(61\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Folic Acid (AC 1)

[The decrease in neutrophil count caused by breast carcinoma chemotherapy was ameliorated by dietary supplementation with a multivitamin or vitamin E. - GMI Summary](#)

Pubmed Data : Cancer. 2004 Sep 1;101(5):1058-64. PMID: [15329916](#)

Article Published Date : Sep 01, 2004

Authors : Richard F Branda, Shelly J Naud, Elice M Brooks, Zhuan Chen, Hyman Muss

Study Type : Human Study

Additional Links

Substances : [Folic Acid : CK\(572\) : AC\(79\)](#), [Vitamin B-12 : CK\(752\) : AC\(98\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Mucositis : CK\(49\) : AC\(10\)](#), [Neutropenia: Chemotherapy Induced : CK\(82\) : AC\(17\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Hypertension (AC 1)

[Acute exercise protects against doxorubicin cardiotoxicity. - GMI Summary](#)

Pubmed Data : Integr Cancer Ther. 2008 Sep;7(3):147-54. PMID: [18815146](#)

Article Published Date : Sep 01, 2008

Authors : Karen Y Wonders, David S Hydock, Carole M Schneider, Reid Hayward

Study Type : Human Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [Hypertension : CK\(2610\) : AC\(260\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Therapeutic Actions : [Exercise : CK\(451\) : AC\(61\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#)

Prostate Cancer (AC 8)

[Resveratrol enhances antitumor activity of TRAIL in prostate cancer xenografts. - GMI Summary](#)

Pubmed Data : PLoS One. 2010;5(12):e15627. Epub 2010 Dec 28. PMID: [21209944](#)

Article Published Date : Jan 01, 2010

Authors : Suthakar Ganapathy, Qinghe Chen, Karan P Singh, Sharmila Shankar, Rakesh K Srivastava

Study Type : Transgenic Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Vascular Endothelial Growth Factor Regulator : CK\(28\) : AC\(13\)](#)

[Curcumin has anticancer, chemosensitization and radiosensitization effects in prostate cancer. - GMI Summary](#)

Pubmed Data : Cancer Res. 2007 Mar 1;67(5):1988-96. PMID: [17332326](#)

Article Published Date : Mar 01, 2007

Authors : Mao Li, Zhuo Zhang, Donald L Hill, Hui Wang, Ruiwen Zhang

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Chemotherapeutic Agents](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Gemcitabine](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

Curcumin chemosensitizes prostate cancer cells to TRAIL-induce programmed cell death. - GMI Summary

Pubmed Data : J Exp Ther Oncol. 2005;5(2):81-91. PMID: [16471035](#)

Article Published Date : Jan 01, 2005

Authors : Dorrah D Deeb, Hao Jiang, Xiaohua Gao, George Divine, Scott A Dulchavsky, Subhash C Gautam

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemotherapeutic Agents](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1005) : AC(351)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

Curcumin enhances chemotherapeutic agents in prostate cancer cells. - GMI Summary

Pubmed Data : Prostate. 2002 May 15;51(3):211-8. PMID: [11967955](#)

Article Published Date : May 15, 2002

Authors : Tzyh-Chyuan Hour, Jun Chen, Chao-Yuan Huang, Jing-Yi Guan, Shiu-Hui Lu, Yeong-Shiau Pu

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemotherapeutic Agents](#) : CK(188) : AC(157), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

EGCG, a green tea polyphenol, encourages programmed cell death in prostate cancer cells. - GMI Summary

Pubmed Data : Oncogene. 2008 Mar 27;27(14):2055-63. Epub 2007 Nov 12. PMID: [17998943](#)

Article Published Date : Mar 27, 2008

Authors : I A Siddiqui, A Malik, V M Adhami, M Asim, B B Hafeez, S Sarfaraz, H Mukhtar

Study Type : In Vitro Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\)](#) : CK(176) : AC(115)

Diseases : [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemotherapeutic Agents](#) : CK(188) : AC(157)

Genistein acts as a chemosensitizer, contributing to overcoming drug-resistance in prostate, breast, lung and pancreatic cancers. - GMI Summary

Pubmed Data : Cancer Res. 2005 Aug 1;65(15):6934-42. PMID: [16061678](#)

Article Published Date : Aug 01, 2005

Authors : Yiwei Li, Fakhara Ahmed, Shadan Ali, Philip A Philip, Omer Kucuk, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185),

[Pancreatic Cancer : CK\(524\) : AC\(160\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Drug: Doxorubicin : CK\(140\) : AC\(54\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Curcumin may work synergistically with taxane chemotherapy for hormone-refractory prostate cancer treatment. - GMI Summary

Pubmed Data : Nutr Cancer. 2010;62(2):148-53. PMID: [20099188](#)

Article Published Date : Jan 01, 2010

Authors : Aurelie Cabrespine-Faugeras, Mathilde Bayet-Robert, Jacques-Olivier Bay, Philippe Chollet, Chantal Barthomeuf

Study Type : Review

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy : CK\(65\) : AC\(16\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Taxane : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Resveratrol exhibits tumor chemosensitizing properties. - GMI Summary

Pubmed Data : Ann N Y Acad Sci. 2011 Jan;1215(1):150-60. PMID: [21261654](#)

Article Published Date : Jan 01, 2011

Authors : Subash C Gupta, Ramaswamy Kannappan, Simone Reuter, Ji Hye Kim, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Acute Myeloid Leukemia : CK\(51\) : AC\(21\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#), [Multiple Myeloma : CK\(125\) : AC\(50\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#), [Promyelocytic Leukemia : CK\(137\) : AC\(75\)](#), [Prostate Cancer : CK\(961\) : AC\(288\)](#), [Skin Cancer : CK\(438\) : AC\(174\)](#), [Tumors : CK\(179\) : AC\(107\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Vitamin B-12 (AC 1)

The decrease in neutrophil count caused by breast carcinoma chemotherapy was ameliorated by dietary supplementation with a multivitamin or vitamin E. - GMI Summary

Pubmed Data : Cancer. 2004 Sep 1;101(5):1058-64. PMID: [15329916](#)

Article Published Date : Sep 01, 2004

Authors : Richard F Branda, Shelly J Naud, Elice M Brooks, Zhuan Chen, Hyman Muss

Study Type : Human Study

Additional Links

Substances : [Folic Acid : CK\(572\) : AC\(79\)](#), [Vitamin B-12 : CK\(752\) : AC\(98\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Mucositis : CK\(49\) : AC\(10\)](#), [Neutropenia: Chemotherapy Induced : CK\(82\) : AC\(17\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Wheat Grass (AC 1)

Wheat grass juice may reduce myelotoxicity and need for granulocyte colony-stimulating factors in breast cancer patients receiving chemotherapy. - GMI Summary

Pubmed Data : Nutr Cancer. 2007;58(1):43-8. PMID: [17571966](#)

Article Published Date : Jan 01, 2007

Authors : Gil Bar-Sela, Medy Tsalic, Getta Fried, Hadassah Goldberg

Study Type : Human Study

Additional Links

Substances : [Wheat Grass](#) : CK(182) : AC(11)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Myelotoxicity](#) : CK(31) : AC(8)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Enzyme Inhibitors (AC 7)

[L-arginine has a protective effect against cisplatin-induced renal oxidative stress and toxicity.](#) - GMI Summary

Pubmed Data : Basic Clin Pharmacol Toxicol. 2005 Aug;97(2):91-7. PMID: [15998355](#)

Article Published Date : Aug 01, 2005

Authors : Samira Saleh, Ebtehal El-Demerdash

Study Type : Animal Study

Additional Links

Substances : [Arginine](#) : CK(960) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293), [Enzyme Inhibitors](#) : CK(385) : AC(210), [Nitric Oxide Enhancer](#) : CK(127) : AC(33)

[Pre-treatment with curcumin enhances oral bioavailability of docetaxel in rats.](#) - GMI Summary

Pubmed Data : Int J Pharm. 2010 Oct 31;399(1-2):116-20. Epub 2010 Aug 18. PMID: [20727390](#)

Article Published Date : Oct 31, 2010

Authors : Yi-Dong Yan, Dae Hwan Kim, Jun Ho Sung, Chul Soon Yong, Han Gon Choi

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy](#) : CK(65) : AC(16)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157), [Enzyme Inhibitors](#) : CK(385) : AC(210)

Additional Keywords : [Chemotherapeutic Synergy: Docetaxel](#) : CK(3) : AC(2), [Drug: Docetaxel](#) : CK(2) : AC(1)

[Aloe emodin may decrease the anticancer activity of the chemo-agent cisplatin.](#) - GMI Summary

Pubmed Data : Cell Mol Life Sci. 2005 Jun ;62(11):1275-82. PMID: [15905960](#)

Article Published Date : Jun 01, 2005

Authors : S Mijatovic, D Maksimovic-Ivanic, J Radovic, D Miljkovic, G N Kaludjerovic, T J Sabo, V Trajkovic

Study Type : In Vitro Study

Additional Links

Substances : [Aloe Vera](#) : CK(191) : AC(44), [Emodin](#) : CK(30) : AC(19)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Enzyme Inhibitors](#) : CK(385) : AC(210)

Problem Substances : [Cisplatin](#) : CK(15) : AC(2)

[Capsaicin potentiates the vitamin D3-induced and all-trans retinoic acid-induced differentiation of human promyelocytic leukemia cells.](#) - GMI Summary

Pubmed Data : Eur J Pharmacol. 2001 May 25;420(2-3):83-90. PMID: [11408028](#)

Article Published Date : May 25, 2001

Authors : S N Kang, S W Chung, T S Kim

Study Type : In Vitro Study

Additional Links

Substances : [Capsaicin : CK\(47\) : AC\(25\)](#), [Vitamin D : CK\(1493\) : AC\(220\)](#)

Diseases : [Promyelocytic leukemia : CK\(137\) : AC\(75\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#), [Natural Substance Synergy : CK\(127\) : AC\(77\)](#)

Curcumin induces programmed cell death in human melanoma cells. - GMI Summary

Pubmed Data : Exp Cell Res. 2001 Dec 10;271(2):305-14. PMID: [11716543](#)

Article Published Date : Dec 10, 2001

Authors : J A Bush, K J Cheung, G Li

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Melanoma : CK\(169\) : AC\(87\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Curcumin may improve outcome in chemotherapy-refractory Natural killer/T-cell lymphoma (NKTL). - GMI Summary

Pubmed Data : Br J Haematol. 2005 Oct;131(1):59-66. PMID: [16173963](#)

Article Published Date : Oct 01, 2005

Authors : Kihyun Kim, Kyoungju Ryu, Younghyeh Ko, Chaehwa Park

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Lymphoma : CK\(211\) : AC\(68\)](#), [Natural killer/T-cell lymphoma \(NKTL\) : CK\(1\) : AC\(1\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Sulforaphane protects against cisplatin-induced mitochondrial alterations associated with renal damage. - GMI Summary

Pubmed Data : Toxicol Lett. 2010 Nov 10;199(1):80-92. Epub 2010 Aug 21. PMID: [20732396](#)

Article Published Date : Nov 10, 2010

Authors : Carlos Enrique Guerrero-Beltrán, Mariel Calderón-Oliver, Eduardo Martínez-Abundis, Edilia Tapia, Guillermo Zarco-Márquez, Cecilia Zazueta, José Pedraza-Chaverri

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Mitochondrial Diseases : CK\(145\) : AC\(50\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

EGCG (Epigallocatechin gallate) (AC 6)

EGCG exhibits anti-fibrotic effects in a rat model of pulmonary fibrosis. - GMI Summary

Pubmed Data : Chem Biol Interact. 2009 Jul 15;180(2):271-80. Epub 2009 Mar 20. PMID: [19497426](#)

Article Published Date : Jul 15, 2009

Authors : Narayanan Sriram, Srinivasan Kalayarasan, Ganapasam Sudhandiran

Study Type : Animal Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\) : CK\(176\) : AC\(115\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

EGCG sensitizes breast cancer cells to paclitaxel in a mouse model of breast carcinoma. - GMI Summary

Pubmed Data : Breast Cancer Res. 2010 Jan 15;12(1):R8. Epub 2010 Jan 15. PMID: [20078855](#)

Article Published Date : Jan 15, 2010

Authors : Ting Luo, Jiao Wang, Yancun Yin, Hui Hua, Jing Jing, Xiangming Sun, Minjing Li, You Zhang, Yangfu Jiang

Study Type : Animal Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\) : CK\(176\) : AC\(115\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Paclitaxel : CK\(36\) : AC\(13\)](#)

EGCG has anti-leukemia activity and enhances imatinib-induced cell death. - GMI Summary

Pubmed Data : Cancer Sci. 2009 Feb;100(2):349-56. PMID: [19200260](#)

Article Published Date : Feb 01, 2009

Authors : Reo Iwasaki, Kinji Ito, Takaomi Ishida, Makoto Hamanoue, Souichi Adachi, Toshiki Watanabe, Yuko Sato

Study Type : In Vitro Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\) : CK\(176\) : AC\(115\)](#)

Diseases : [Leukemia: Chronic myelogenous leukemia \(CML\) : CK\(28\) : AC\(17\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

EGCG may act as a chemosensitizing agent in tamoxifen-resistant breast cancer cells. - GMI Summary

Pubmed Data : Mutat Res. 2002 Jun 27;518(1):71-84. PMID: [20149610](#)

Article Published Date : Jun 27, 2002

Authors :

F Farabegoli, A Papi, G Bartolini, R Ostan, M Orlandi

Study Type : In Vitro Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\) : CK\(176\) : AC\(115\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Drug synergy : CK\(51\) : AC\(14\)](#)

Additional Keywords : [Tamoxifen Resistance : CK\(3\) : AC\(3\)](#)

EGCG sensitizes human cholangiocarcinoma cells to chemotherapy-induced programmed cell death. - GMI Summary

Pubmed Data : Liver Int. 2009 May;29(5):670-7. Epub 2009 Feb 17. PMID: [19226332](#)

Article Published Date : May 01, 2009

Authors : Molly Lang, Roger Henson, Chiara Braconi, Tushar Patel

Study Type : In Vitro Study

Additional Links

Substances : [Catechin : CK\(408\) : AC\(130\)](#), [EGCG \(Epigallocatechin gallate\) : CK\(176\) : AC\(115\)](#)

Diseases : [Cholangiocarcinoma : CK\(23\) : AC\(11\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Apoptotic : CK\(1419\) :](#)

[AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: 5-flourouracil : CK\(88\) : AC\(23\)](#), [Drug: Mitomycin : CK\(4\) : AC\(3\)](#), [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

EGCG, a green tea polyphenol, encourages programmed cell death in prostate cancer cells. - GMI Summary

Pubmed Data : Oncogene. 2008 Mar 27;27(14):2055-63. Epub 2007 Nov 12. PMID: [17998943](#)

Article Published Date : Mar 27, 2008

Authors : I A Siddiqui, A Malik, V M Adhami, M Asim, B B Hafeez, S Sarfaraz, H Mukhtar

Study Type : In Vitro Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\) : CK\(176\) : AC\(115\)](#)

Diseases : [Prostate Cancer : CK\(961\) : AC\(288\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Quercetin (AC 8)

Curcumin inhibits growth and sensitizes ovarian cancer cells to cisplatin-mediated killing. - GMI Summary

Pubmed Data : Carcinogenesis. 1982;3(11):1331-8. PMID: [12447990](#)

Article Published Date : Jan 01, 1982

Authors : Marion M Chan, Dunne Fong, Kenneth J Soprano, William F Holmes, Harry Heverling

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Interleukin-6 Downregulation : CK\(497\) : AC\(133\)](#)

Flavanoid rich honey may act as chemosensitizers in multidrug resistant cancers. - GMI Summary

Pubmed Data : Med Hypotheses. 2011 Jan 17. Epub 2011 Jan 17. PMID: [21247706](#)

Article Published Date : Jan 17, 2011

Authors : Saravana Kumar Jaganathan

Study Type : In Vitro Study

Additional Links

Substances : [Biochanin A : CK\(9\) : AC\(7\)](#), [Chrysin : CK\(15\) : AC\(13\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Genistein : CK\(457\) : AC\(176\)](#), [Honey : CK\(205\) : AC\(42\)](#), [Kaempferol : CK\(27\) : AC\(22\)](#), [Naringenin : CK\(17\) : AC\(12\)](#), [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Quercetin abrogates chemoresistance in melanoma cells. - GMI Summary

Pubmed Data : BMC Cancer. 2010;10:282. Epub 2010 Jun 11. PMID: [20540768](#)

Article Published Date : Jan 01, 2010

Authors : Thilakavathy Thangasamy, Sivanandane Sittadjody, Geoffrey C Mitchell, Erin E Mendoza, Vijayababu M Radhakrishnan, Kirsten H Limesand, Randy Burd

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [DNA damage : CK\(687\) : AC\(287\)](#), [Melanoma : CK\(169\) : AC\(87\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Tumor Suppressor Protein p53 Upregulation : CK\(119\) : AC\(96\)](#)

Quercetin acts as a chemosensitizing agent in daunorubicin multidrug resistant leukemia cell lines. - GMI Summary

Pubmed Data : Ai Zheng. 2004 Dec;23(12):1611-5. PMID: [15601547](#)

Article Published Date : Dec 01, 2004

Authors : Xun Cai, Fang-Yuan Chen, Jie-Ying Han, Chun-Hong Gu, Hua Zhong, Ren-Rong Ouyang

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Leukemia : CK\(694\) : AC\(270\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Daunorubicin : CK\(1\) : AC\(1\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Quercetin may overcome chemotherapy-resistance in chronic lymphocytic leukemia patients. - GMI Summary

Pubmed Data : Br J Cancer. 2010 Aug 24;103(5):642-8. Epub 2010 Jul 20. PMID: [20648016](#)

Article Published Date : Aug 24, 2010

Authors : M Russo, C Spagnuolo, S Volpe, A Mupo, I Tedesco, G-L Russo

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Leukemia: Chronic Lymphocytic Leukemia \(CLL\) : CK\(52\) : AC\(24\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Quercetin may reduce chemotherapy resistance in human pancreatic cancer cells. - GMI Summary

Pubmed Data : Molecules. 2010;15(2):857-70. Epub 2010 Feb 9. PMID: [20335952](#)

Article Published Date : Jan 01, 2010

Authors : Sylwia Borska, Mirosław Sopol, Magdalena Chmielewska, Maciej Zabel, Piotr Dziegiel

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Quercetin pretreatment sensitizes human cervical cells to cisplatin-induced programmed cell death. - GMI Summary

Pubmed Data : Biochem Pharmacol. 2005 May 1;69(9):1343-50. PMID: [15826605](#)

Article Published Date : May 01, 2005

Authors : J Jakubowicz-Gil, R Paduch, T Piersiak, K Główniak, A Gawron, M Kandefer-Szerszeń

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin : CK\(312\) : AC\(140\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cervical Cancer : CK\(322\) : AC\(65\)](#),

[Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Quercetin reverses multi-drug resistance of adriamycin resistant promyelocytic leukemia cells. - GMI Summary

Pubmed Data : Zhonghua Zhong Liu Za Zhi. 2005 Jun;27(6):326-9. PMID: [16117892](#)

Article Published Date : Jun 01, 2005

Authors : Xun Cai, Fang-yuan Chen, Jie-ying Han, Chun-hong Gu, Hua Zhong, Ye Teng, Ren-rong Ouyang

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin](#) : CK(312) : AC(140)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Promyelocytic leukemia](#) : CK(137) : AC(75)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Adriamycin](#) : CK(2) : AC(2), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Radiosensitizer (AC 7)

[Curcumin has anticancer, chemosensitization and radiosensitization effects in prostate cancer.](#) - GMI Summary

Pubmed Data : Cancer Res. 2007 Mar 1;67(5):1988-96. PMID: [17332326](#)

Article Published Date : Mar 01, 2007

Authors : Mao Li, Zhuo Zhang, Donald L Hill, Hui Wang, Ruiwen Zhang

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Prostate Cancer](#) : CK(961) : AC(288)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug: Gemcitabine](#) : CK(36) : AC(13), [Drug Synergy](#) : CK(309) : AC(137)

[Curcumin induces chemo/radio-sensitization in ovarian cancer cells and curcumin nanoparticles inhibit ovarian cancer cell growth.](#) - GMI Summary

Pubmed Data : J Ovarian Res. 2010;3:11. Epub 2010 Apr 29. PMID: [20429876](#)

Article Published Date : Jan 01, 2010

Authors : Murali M Yallapu, Diane M Maher, Vasudha Sundram, Maria C Bell, Meena Jaggi, Subhash C Chauhan

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

[Genistein acts as a radiosensitizing and chemosensitizing agent against the breast cancer cell line MCF-7.](#) - GMI Summary

Pubmed Data : Anticancer Res. 2009 Aug;29(8):3179-83. PMID: [19661332](#)

Article Published Date : Aug 01, 2009

Authors : Johannes Hartmann, Nikola Getoff

Study Type : In Vitro Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Vitamin C \(dehydroascorbic acid\) and mixtures of vitamin E and beta-carotene possess antitumor properties upon radiation and increase the chemotherapeutic activity of mitomycin C.](#) - GMI Summary

Pubmed Data : In Vivo. 2004 Nov-Dec;18(6):795-8. PMID: [15646822](#)

Article Published Date : Nov 01, 2004

Authors : Cornelia Kammerer, Nikola Getoff

Study Type : In Vitro Study

Additional Links

Substances : [beta-Carotene](#) : CK(201) : AC(31), [Vitamin C](#) : CK(1208) : AC(238), [Vitamin E](#) : CK(1288) : AC(227)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Tumors](#) : CK(179) : AC(107)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

A number of plant polyphenols have chemosensitizing and radiosensitizing activity. - GMI Summary

Pubmed Data : Antioxid Redox Signal. 2005 Nov-Dec;7(11-12):1630-47. PMID: [16356126](#)

Article Published Date : Nov 01, 2005

Authors : Amit K Garg, Thomas A Buchholz, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Betulinic acid](#) : CK(6) : AC(6), [Caffeic acid phenethyl ester](#) : CK(15) : AC(8), [Curcumin](#) : CK(2870) : AC(1475), [Emodin](#) : CK(30) : AC(19), [Flavonoids](#) : CK(887) : AC(289), [Genistein](#) : CK(457) : AC(176), [Green Tea](#) : CK(931) : AC(279), [Polyphenols](#) : CK(417) : AC(171), [Resveratrol](#) : CK(963) : AC(600), [Silymarin](#) : CK(36) : AC(6), [Ursolic Acid](#) : CK(18) : AC(13)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

A variety of natural substances may function as novel anticancer agents, proteasome inhibitors and chemosensitizers. - GMI Summary

Pubmed Data : Drug Resist Updat. 2006 Dec;9(6):263-73. Epub 2007 Jan 2. PMID: [17197231](#)

Article Published Date : Dec 01, 2006

Authors : Kristin R Landis-Piowar, Vesna Milacic, Di Chen, Huanjie Yang, Yunfeng Zhao, Tak Hang Chan, Bing Yan, Q Ping Dou

Study Type : Review

Additional Links

Substances : [Catechin](#) : CK(408) : AC(130), [Curcumin](#) : CK(2870) : AC(1475), [Genistein](#) : CK(457) : AC(176), [Resveratrol](#) : CK(963) : AC(600)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157), [Proteasome Inhibitors](#) : CK(39) : AC(25), [Radiosensitizer](#) : CK(50) : AC(28)

Additional Keywords : [Stilbenes](#) : CK(414) : AC(245)

Curcumin has radiosensitizing and chemosensitizing effects on tumors while protecting healthy tissue from damage. - GMI Summary

Pubmed Data : Nutr Cancer. 2010 Oct;62(7):919-30. PMID: [20924967](#)

Article Published Date : Oct 01, 2010

Authors : Ajay Goel, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Radiation Induced Illness](#) : CK(994) : AC(245), [Tumors](#) : CK(179) : AC(107)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

Flavonoids (AC 6)

Galangin, a compound found within Alpinia galanga, acts as a chemosensitizer in drug-resistant leukemia cells. - GMI Summary

Pubmed Data : Cancer Lett. 2008 Jul 8;265(2):289-97. Epub 2008 Apr 18. PMID: [18374481](#)

Article Published Date : Jul 08, 2008

Authors : Manlio Tolomeo, Stefania Grimaudo, Antonietta Di Cristina, Rosaria M Pipitone, Luisa Dusonchet, Maria Meli, Lucia Crosta, Nicola Gebbia, Francesco Paolo Invidiata, Lucina Titone, Daniele Simoni

Study Type : Animal Study

Additional Links

Substances : [Alpinia galanga](#) : CK(5) : AC(4), [Flavonoids](#) : CK(887) : AC(289)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Leukemia: Acute myelogenous leukemia \(AML\)](#) : CK(96) : AC(28), [Leukemia: Chronic myelogenous leukemia \(CML\)](#) : CK(28) : AC(17)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Curcumin inhibits growth and sensitizes ovarian cancer cells to cisplatin-mediated killing. - GMI Summary

Pubmed Data : Carcinogenesis. 1982;3(11):1331-8. PMID: [12447990](#)

Article Published Date : Jan 01, 1982

Authors : Marion M Chan, Dunne Fong, Kenneth J Soprano, William F Holmes, Harry Heverling

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475), [Flavonoids](#) : CK(887) : AC(289), [Quercetin](#) : CK(312) : AC(140)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Interleukin-6 Downregulation](#) : CK(497) : AC(133)

Flavanoid rich honey may act as chemosensitizers in multidrug resistant cancers. - GMI Summary

Pubmed Data : Med Hypotheses. 2011 Jan 17. Epub 2011 Jan 17. PMID: [21247706](#)

Article Published Date : Jan 17, 2011

Authors : Saravana Kumar Jaganathan

Study Type : In Vitro Study

Additional Links

Substances : [Biochanin A](#) : CK(9) : AC(7), [Chrysin](#) : CK(15) : AC(13), [Flavonoids](#) : CK(887) : AC(289), [Genistein](#) : CK(457) : AC(176), [Honey](#) : CK(205) : AC(42), [Kaempferol](#) : CK(27) : AC(22), [Naringenin](#) : CK(17) : AC(12), [Quercetin](#) : CK(312) : AC(140)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Loquat contains a compound which may have chemosensitizing properties. - GMI Summary

Pubmed Data : Bioorg Med Chem. 2011 Jan 15;19(2):1002-9. Epub 2010 Oct 25. PMID: [21087868](#)

Article Published Date : Jan 15, 2011

Authors : Petra H Pfisterer, Chenxi Shen, Zaneta Nikolovska-Coleska, Lilianna Schyschka, Daniela Schuster, Anita Rudy, Gerhard Wolber, Angelika M Vollmar, Judith M Rollinger, Hermann Stuppner

Study Type : In Vitro Study

Additional Links

Substances : [Flavonoids](#) : CK(887) : AC(289), [Loquat](#) : CK(65) : AC(31)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Various carotenoids and flavonoids from plants may contribute to the reversal of multidrug resistance. - GMI Summary

Pubmed Data : Curr Top Med Chem. 2010;10(17):1757-68. PMID: [20645919](#)

Article Published Date : Jan 01, 2010

Authors : J Molnár, H Engi, J Hohmann, P Molnár, J Deli, O Wesolowska, K Michalak, Q Wang

Study Type : In Vitro Study

Additional Links

Substances : [Antheraxanthin](#) : CK(1) : AC(1), [Capsaicin](#) : CK(47) : AC(25), [Capsorubin](#) : CK(1) : AC(1), [Carotenoids](#) : CK(1041) : AC(114), [Chrysin](#) : CK(15) : AC(13), [Flavonoids](#) : CK(887) : AC(289), [Lutein](#) : CK(123) : AC(21), [Lycopene](#) : CK(175) : AC(32), [Paprika](#) : CK(8) : AC(6), [Phloretin](#) : CK(4) : AC(4), [Sakuranetin](#) : CK(1) : AC(1)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)
Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [P-glycoprotein Inhibitors : CK\(1\) : AC\(1\)](#)

A number of plant polyphenols have chemosensitizing and radiosensitizing activity. - GMI Summary

Pubmed Data : Antioxid Redox Signal. 2005 Nov-Dec;7(11-12):1630-47. PMID: [16356126](#)

Article Published Date : Nov 01, 2005

Authors : Amit K Garg, Thomas A Buchholz, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Betulinic acid : CK\(6\) : AC\(6\)](#), [Caffeic acid phenethyl ester : CK\(15\) : AC\(8\)](#), [Curcumin : CK\(2870\) : AC\(1475\)](#), [Emodin : CK\(30\) : AC\(19\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Genistein : CK\(457\) : AC\(176\)](#), [Green Tea : CK\(931\) : AC\(279\)](#), [Polyphenols : CK\(417\) : AC\(171\)](#), [Resveratrol : CK\(963\) : AC\(600\)](#), [Silymarin : CK\(36\) : AC\(6\)](#), [Ursolic Acid : CK\(18\) : AC\(13\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

Superiority of Natural Substances versus Drugs (AC 4)

A Chinese herbal formula containing Red Sage, Cordyceps and Peach kernel is superior to methylprednisone against experimental pulmonary fibrosis. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2007 May;32(9):835-9. PMID: [17639988](#)

Article Published Date : May 01, 2007

Authors : Shan-Zhong Tan, Cheng-Hai Liu, Wei Zhang, Xiong Lu, Wei-Cheng Ye, Zhen-Zhen Cai, Ping Liu

Study Type : Animal Study

Additional Links

Substances : [Red Sage : CK\(134\) : AC\(40\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#)

Pharmacological Actions : [Matrix metalloproteinase-2 \(MMP-2\) inhibitor : CK\(141\) : AC\(68\)](#)

Additional Keywords : [Superiority of Natural Substances versus Drugs : CK\(897\) : AC\(173\)](#)

Curcumin has a similar effect to hydrocortisone in preventing bleomycin-induced pulmonary fibrosis. - GMI Summary

Pubmed Data : J Ethnopharmacol. 2007 Jun 13;112(2):292-9. Epub 2007 Mar 13. PMID: [17434272](#)

Article Published Date : Jun 13, 2007

Authors : Min Xu, Bin Deng, Yeuk-Lung Chow, Zhong-Zhen Zhao, Bin Hu

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

Additional Keywords : [Superiority of Natural Substances versus Drugs : CK\(897\) : AC\(173\)](#)

Curcumin is more effective than prednisone at suppressing bleomycin-induced pulmonary fibrosis in rats. - GMI Summary

Pubmed Data : Zhonghua Lao Dong Wei Sheng Zhi Ye Bing Za Zhi. 2008 May;26(5):257-61. PMID: [18727865](#)

Article Published Date : May 01, 2008

Authors : Bi Chen, De-Ping Zhang, Wei Gao

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin : CK\(50\) : AC\(21\)](#), [Pulmonary Fibrosis : CK\(149\) : AC\(49\)](#)

Pharmacological Actions : [Transforming growth factor beta \(TGF-β\) inhibitor : CK\(32\) : AC\(9\)](#)

Additional Keywords : [Superiority of Natural Substances versus Drugs : CK\(897\) : AC\(173\)](#)

A cannabinoid quinone has cancer-destroying activity superior to doxorubicin without cardiotoxicity, in vitro. - GMI Summary

Pubmed Data : Expert Opin Investig Drugs. 2007 Sep;16(9):1405-13. PMID: [17714026](#)

Article Published Date : Sep 01, 2007

Authors : Maximilian Peters, Natalya M Kogan

Study Type : In Vitro Study

Additional Links

Substances : [Marihuana : CK\(702\) : AC\(133\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Additional Keywords : [Superiority of Natural Substances versus Drugs : CK\(897\) : AC\(173\)](#)

Drug: Oxaliplatin (AC 4)

Curcumin ameliorates oxaliplatin-induced chemoresistance in HCT116 colorectal cancer cells in vitro and in vivo. - GMI Summary

Pubmed Data : Int J Cancer. 2010 Sep 13. Epub 2010 Sep 13. PMID: [20839263](#)

Article Published Date : Sep 13, 2010

Authors : Lynne M Howells, Stewart Sale, Sathya Neelature Sriramareddy, Glen R B Irving, Donald J L Jones, Christopher J Ottley, D Graham Pearson, Christopher D Mann, Margaret M Manson, David P Berry, Andreas Gescher, William P Steward, Karen Brown

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy : CK\(65\) : AC\(16\)](#), [Colorectal Cancer : CK\(768\) : AC\(299\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Oxaliplatin : CK\(6\) : AC\(5\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Curcumin may contribute to overcoming chemoresistance of FOLFOX.- surviving colon cancer cells. - GMI Summary

Pubmed Data : Vet Med (Praha). 1989 Aug;34(8):467-74. PMID: [20332435](#)

Article Published Date : Aug 01, 1989

Authors : Bhaumik B Patel, Deepshika Gupta, Althea A Elliott, Vivek Sengupta, Yingjie Yu, Adhip P N Majumdar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Colon Cancer : CK\(375\) : AC\(230\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: 5-fluorouracil : CK\(88\) : AC\(23\)](#), [Drug: Oxaliplatin : CK\(6\) : AC\(5\)](#)

Curcumin may have chemosensitizing properties in the treatment of human ovarian cancer. - GMI Summary

Pubmed Data : Cell Prolif. 2009 Apr;42(2):195-206. Epub 2009 Feb 18. PMID: [19236381](#)

Article Published Date : Apr 01, 2009

Authors : M Montopoli, E Ragazzi, G Foldi, L Caparrotta

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) :](#)

[AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)
Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug: Oxaliplatin : CK\(6\) : AC\(5\)](#)

Sulforaphane potentiates oxaliplatin-induced cell growth inhibition in colorectal cancer cells. - GMI Summary

Pubmed Data : Cancer Chemother Pharmacol. 2010 Aug 6. Epub 2010 Aug 6. PMID: [20689952](#)

Article Published Date : Aug 06, 2010

Authors : Bettina M Kaminski, Andreas Weigert, Bernhard Brüne, Marco Schumacher, Uwe Wenzel, Dieter Steinhilber, Jürgen Stein, Sandra Ulrich

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane : CK\(294\) : AC\(168\)](#)

Diseases : [Colon Cancer : CK\(375\) : AC\(230\)](#), [Colorectal Cancer : CK\(768\) : AC\(299\)](#), [Colorectal Tumors : CK\(15\) : AC\(4\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Oxaliplatin : CK\(6\) : AC\(5\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Ginsenosides (AC 3)

Ginsenoside-Rd, a compound found within Ginseng, has a protective effect in cisplatin-induced acute renal failure. - GMI Summary

Pubmed Data : Ren Fail. 2000 Mar;22(2):115-27. PMID: [10803758](#)

Article Published Date : Mar 01, 2000

Authors : T Yokozawa, Z W Liu

Study Type : Animal Study

Additional Links

Substances : [Ginsenosides : CK\(47\) : AC\(18\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Kidney Failure: Acute : CK\(39\) : AC\(9\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#)

Ginsenoside-Rd, a compound found within Ginseng, ameliorates cisplatin-induced renal injury. - GMI Summary

Pubmed Data : Nephron. 2001 Dec;89(4):433-8. PMID: [11721162](#)

Article Published Date : Dec 01, 2001

Authors : T Yokozawa, E Dong

Study Type : Animal Study

Additional Links

Substances : [Ginsenosides : CK\(47\) : AC\(18\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#)

Ginsenoside Rh(2) exhibits activity against adriamycin-resistant breast cancer cells. - GMI Summary

Pubmed Data : Talanta. 2012 Jan 15 ;88:345-51. Epub 2011 Nov 2. PMID: [22265509](#)

Article Published Date : Jan 15, 2012

Authors : Bei Zhou, Xiuli Xiao, Lili Xu, Lian Zhu, Liang Tan, Hao Tang, Youyu Zhang, Qingji Xie, Shouzhao Yao

Study Type : In Vitro Study

Additional Links

Substances : [Ginsenosides : CK\(47\) : AC\(18\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug: Adriamycin : CK\(2\) : AC\(2\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

Green Tea (AC 3)

[Green tea tannin eliminates oxidative stress and is beneficial to renal function in cisplatin-induced nephropathy in rats. - GMI Summary](#)

Pubmed Data : J Pharm Pharmacol. 1999 Nov;51(11):1325-31. PMID: [10632092](#)

Article Published Date : Nov 01, 1999

Authors : T Yokozawa, T Nakagawa, K I Lee, E J Cho, K Terasawa, S Takeuchi

Study Type : Animal Study

Additional Links

Substances : [Green Tea : CK\(931\) : AC\(279\)](#), [Tannic Acid : CK\(20\) : AC\(16\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#)

Additional Keywords : [Antineoplastic Agents : CK\(69\) : AC\(28\)](#)

[Royal jelly and green tea have a protective effect against cisplatin-induced nephrotoxicity in mice. - GMI Summary](#)

Pubmed Data : J Chromatogr B Analyt Technol Biomed Life Sci. 2004 Apr 25;803(2):225-31. PMID: [19857080](#)

Article Published Date : Apr 25, 2004

Authors : Kürşad Yapar, Kültiğın Cavuşoğlu, Ertan Oruç, Emine Yalçın

Study Type : Animal Study

Additional Links

Substances : [Green Tea : CK\(931\) : AC\(279\)](#), [Royal Jelly : CK\(59\) : AC\(32\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Kidney Damage: Drug-Induced : CK\(86\) : AC\(18\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

Additional Keywords : [Plant Extracts : CK\(3297\) : AC\(1135\)](#)

[A number of plant polyphenols have chemosensitizing and radiosensitizing activity. - GMI Summary](#)

Pubmed Data : Antioxid Redox Signal. 2005 Nov-Dec;7(11-12):1630-47. PMID: [16356126](#)

Article Published Date : Nov 01, 2005

Authors : Amit K Garg, Thomas A Buchholz, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Betulinic acid : CK\(6\) : AC\(6\)](#), [Caffeic acid phenethyl ester : CK\(15\) : AC\(8\)](#), [Curcumin : CK\(2870\) : AC\(1475\)](#), [Emodin : CK\(30\) : AC\(19\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Genistein : CK\(457\) : AC\(176\)](#), [Green Tea : CK\(931\) : AC\(279\)](#), [Polyphenols : CK\(417\) : AC\(171\)](#), [Resveratrol : CK\(963\) : AC\(600\)](#), [Silymarin : CK\(36\) : AC\(6\)](#), [Ursolic Acid : CK\(18\) : AC\(13\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Radiosensitizer : CK\(50\) : AC\(28\)](#)

Lycopene (AC 3)

[A variety of carotenoids induce reduce resistance to chemotherapy in multidrug resistant lymphoma and human breast cancer cell lines. - GMI Summary](#)

Pubmed Data : In Vivo. 2004 Mar-Apr;18(2):237-44. PMID: [15113052](#)

Article Published Date : Mar 01, 2004

Authors : Joseph Molnár, Nóra Gyémánt, Ilona Mucsi, Annamária Molnár, Margaret Szabó, Tamás Körtvélyesi, András Varga, Péter Molnár, Gyula Tóth

Study Type : Animal Study

Additional Links

Substances : [Carotenoids : CK\(1041\) : AC\(114\)](#), [Lycopene : CK\(175\) : AC\(32\)](#), [Paprika : CK\(8\) : AC\(6\)](#), [Zeaxanthin : CK\(67\) : AC\(10\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Lymphoma : CK\(211\) : AC\(68\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemotherapeutic : CK\(188\) : AC\(157\)](#)
Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Lycopene protects against cisplatin-induced kidney injury and oxidative stress in rats. - GMI Summary

Pubmed Data : Toxicology. 2005 Sep 1;212(2-3):116-23. PMID: [15946783](#)

Article Published Date : Sep 01, 2005

Authors : Ahmet Atessahin, Seval Yilmaz, Izzet Karahan, Ali Osman Ceribasi, Aziz Karaoglu

Study Type : Animal Study

Additional Links

Substances : [Lycopene : CK\(175\) : AC\(32\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Various carotenoids and flavonoids from plants may contribute to the reversal of multidrug resistance. - GMI Summary

Pubmed Data : Curr Top Med Chem. 2010;10(17):1757-68. PMID: [20645919](#)

Article Published Date : Jan 01, 2010

Authors : J Molnár, H Engi, J Hohmann, P Molnár, J Deli, O Wesolowska, K Michalak, Q Wang

Study Type : In Vitro Study

Additional Links

Substances : [Antheraxanthin : CK\(1\) : AC\(1\)](#), [Capsaicin : CK\(47\) : AC\(25\)](#), [Capsorubin : CK\(1\) : AC\(1\)](#), [Carotenoids : CK\(1041\) : AC\(114\)](#), [Chrysin : CK\(15\) : AC\(13\)](#), [Flavonoids : CK\(887\) : AC\(289\)](#), [Lutein : CK\(123\) : AC\(21\)](#), [Lycopene : CK\(175\) : AC\(32\)](#), [Paprika : CK\(8\) : AC\(6\)](#), [Phloretin : CK\(4\) : AC\(4\)](#), [Sakuranetin : CK\(1\) : AC\(1\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#), [P-glycoprotein Inhibitors : CK\(1\) : AC\(1\)](#)

Vitamin C (AC 4)

Ascorbic acid and vitamin E protect against cisplatin induced kidney injury in mice. - GMI Summary

Pubmed Data : Clin Chim Acta. 2007 Jan;375(1-2):82-6. Epub 2006 Jun 14. PMID: [16889761](#)

Article Published Date : Jan 01, 2007

Authors : T A Ajith, S Usha, V Nivitha

Study Type : Animal Study

Additional Links

Substances : [Vitamin C : CK\(1208\) : AC\(238\)](#), [Vitamin E : CK\(1288\) : AC\(227\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Vitamin C (ascorbic acid) reverses chemoresistance of human non-small lung-cancer cells. - GMI Summary

Pubmed Data : Biochem J. 1994 Aug 1;301 (Pt 3):759-64. PMID: [7914401](#)

Article Published Date : Aug 01, 1994

Authors : C D Chiang, E J Song, V C Yang, C C Chao

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin C : CK\(1208\) : AC\(238\)](#)

Diseases : [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#), [Lung Cancer : CK\(440\) : AC\(185\)](#)

Pharmacological Actions : [Chemotherapeutic : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Vitamin C (dehydroascorbic acid) and mixtures of vitamin E and beta-carotene possess antitumor properties upon radiation and increase the chemotherapeutic activity of mitomycin C. - GMI Summary

Pubmed Data : In Vivo. 2004 Nov-Dec;18(6):795-8. PMID: [15646822](#)

Article Published Date : Nov 01, 2004

Authors : Cornelia Kammerer, Nikola Getoff

Study Type : In Vitro Study

Additional Links

Substances : [beta-Carotene](#) : CK(201) : AC(31), [Vitamin C](#) : CK(1208) : AC(238), [Vitamin E](#) : CK(1288) : AC(227)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Tumors](#) : CK(179) : AC(107)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Vitamin C augments chemotherapeutic response of cervical carcinoma cells. - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2001 Mar 30;282(2):409-15. PMID: [11401473](#)

Article Published Date : Mar 30, 2001

Authors : V G Reddy, N Khanna, N Singh

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin C](#) : CK(1208) : AC(238)

Diseases : [Cervical Cancer](#) : CK(322) : AC(65), [Human Papillomavirus \(HPV\)](#) : CK(490) : AC(23)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Anti-Apoptotic (AC 3)

Silymarin, a compound found within milk thistle, has a protective effect against Doxorubicin-induced oxidative stress and liver damage. - GMI Summary

Pubmed Data : Toxicol Appl Pharmacol. 2010 Feb 5. Epub 2010 Feb 5. PMID: [20144634](#)

Article Published Date : Feb 05, 2010

Authors : Nirav Patel, Cecil Joseph, George B Corcoran, Sidhartha D Ray

Study Type : Animal Study

Additional Links

Substances : [Milk Thistle](#) : CK(226) : AC(55)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Anti-Apoptotic](#) : CK(59) : AC(37), [Antioxidants](#) : CK(3530) : AC(1293), [Hepatoprotective](#) : CK(528) : AC(257)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

A cannabinoid receptor 2 agonist attenuates cisplatin-induced apoptosis in auditory cells. - GMI Summary

Pubmed Data : J Neurosci Res. 2007 Mar;85(4):896-905. PMID: [17183590](#)

Article Published Date : Mar 01, 2007

Authors : Hyun-Ja Jeong, Su-Jin Kim, Phil-Dong Moon, Na-Hyun Kim, Jung-Sun Kim, Rae-Kil Park, Min-Sun Kim, Byung-Rim Park, Sejin Jeong, Jae-Young Um, Hyung-Min Kim, Seung-Heon Hong

Study Type : In Vitro Study

Additional Links

Substances : [Cannabis](#) : CK(702) : AC(133)

Diseases : [Auditory Diseases](#) : CK(3) : AC(2), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Anti-Apoptotic](#) : CK(59) : AC(37)

Luteolin suppresses cisplatin-induced cell death in auditory cells. - GMI Summary

Pubmed Data : J Med Food. 2008 Jun;11(2):230-6. PMID: [18598163](#)

Article Published Date : Jun 01, 2008

Authors : Byung-Min Choi, Dai-Won Lim, Ju-A Lee, Shang Shang Gao, Dae Young Kwon, Bok-Ryang Kim

Study Type : In Vitro Study

Additional Links

Substances : [Luteolin : CK\(61\) : AC\(51\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Anti-Apoptotic : CK\(59\) : AC\(37\)](#)

Arginine (AC 2)

[Dietary L-arginine supplementation alleviates immunosuppression induced by cyclophosphamide in weaned pigs. - GMI Summary](#)

Pubmed Data : Amino Acids. 2009 Oct;37(4):643-51. Epub 2008 Sep 28. PMID: [18821052](#)

Article Published Date : Oct 01, 2009

Authors : J Han, Y L Liu, W Fan, J Chao, Y Q Hou, Y L Yin, H L Zhu, G Q Meng, Z Q Che

Study Type : Animal Study

Additional Links

Substances : [Arginine : CK\(960\) : AC\(168\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide : CK\(25\) : AC\(9\)](#)

Pharmacological Actions : [Immunostimulatory : CK\(143\) : AC\(33\)](#)

[L-arginine has a protective effect against cisplatin-induced renal oxidative stress and toxicity. - GMI Summary](#)

Pubmed Data : Basic Clin Pharmacol Toxicol. 2005 Aug;97(2):91-7. PMID: [15998355](#)

Article Published Date : Aug 01, 2005

Authors : Samira Saleh, Ebtehal El-Demerdash

Study Type : Animal Study

Additional Links

Substances : [Arginine : CK\(960\) : AC\(168\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Enzyme Inhibitors : CK\(385\) : AC\(210\)](#), [Nitric Oxide Enhancer : CK\(127\) : AC\(33\)](#)

Cervical Cancer (AC 4)

[Curcumin displays chemosensitizing activity in combination with paclitaxel. - GMI Summary](#)

Pubmed Data : Int J Biochem Cell Biol. 2010 Sep 29. Epub 2010 Sep 29. PMID: [20883815](#)

Article Published Date : Sep 29, 2010

Authors : Smitha V Bava, Chanickal N Sreekanth, Arun Kumar T Thulasidasan, Nikhil P Anto, Vino T Cherian, Vineshkumar T Puliappadamba, Sajna G Menon, Santhosh D Ravichandran, Ruby John Anto

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: All : CK\(8323\) : AC\(2625\)](#), [Cervical Cancer : CK\(322\) : AC\(65\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

[Curcumin sensitizes cervical cancer cells to curcumin-induced programmed cell death. - GMI Summary](#)

Pubmed Data : J Biol Chem. 2005 Feb 25;280(8):6301-8. Epub 2004 Dec 7. PMID: [15590651](#)

Article Published Date : Feb 25, 2005

Authors : Smitha V Bava, Vineshkumar T Puliappadamba, Ayswaria Deepti, Asha Nair, Devarajan Karunagaran, Ruby John Anto

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cervical Cancer](#) : CK(322) : AC(65)
Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157),
[NF-kappaB Inhibitor](#) : CK(596) : AC(403)
Additional Keywords : [Drug: Taxol](#) : CK(2) : AC(2), [Drug Synergy](#) : CK(309) : AC(137)

Quercetin pretreatment sensitizes human cervical cells to cisplatin-induced programmed cell death. - GMI Summary

Pubmed Data : Biochem Pharmacol. 2005 May 1;69(9):1343-50. PMID: [15826605](#)

Article Published Date : May 01, 2005

Authors : J Jakubowicz-Gil, R Paduch, T Piersiak, K Głowniak, A Gawron, M Kandefer-Szerszeń

Study Type : In Vitro Study

Additional Links

Substances : [Quercetin](#) : CK(312) : AC(140)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Cervical Cancer](#) : CK(322) : AC(65),
[Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Vitamin C augments chemotherapeutic response of cervical carcinoma cells. - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2001 Mar 30;282(2):409-15. PMID: [11401473](#)

Article Published Date : Mar 30, 2001

Authors : V G Reddy, N Khanna, N Singh

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin C](#) : CK(1208) : AC(238)

Diseases : [Cervical Cancer](#) : CK(322) : AC(65), [Human Papillomavirus \(HPV\)](#) : CK(490) : AC(23)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311),
[Chemosensitizer](#) : CK(188) : AC(157), [Tumor Suppressor Protein p53 Upregulation](#) : CK(119) : AC(96)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Chemically-Induced Liver Damage (AC 2)

Curcumin protects against doxorubicin (adriamycin)-induced toxicity in rats. - GMI Summary

Pubmed Data : J Med Food. 2009 Apr;12(2):394-402. PMID: [19459743](#)

Article Published Date : Apr 01, 2009

Authors : Ragaa Hosny Mohamad, Amal Mohamad El-Bastawesy, Zekry Khalid Zekry, Hussain A Al-Mehdar, Mohamad Gamil Abdel Monaam Al-Said, Soaad Shaker Aly, Sabry Mohamed Sharawy, Mahmud M El-Merzabani

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Chemically-Induced Liver Damage](#) : CK(451) : AC(174), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug Side Effect Attenuation](#) : CK(252) : AC(50), [Plant Extracts](#) : CK(3297) : AC(1135)

Sulforaphane protects against cisplatin-induced liver and mitochondrial damage. - GMI Summary

Pubmed Data : Toxicology. 2011 Aug 15 ;286(1-3):20-7. Epub 2011 May 6. PMID: [21575670](#)

Article Published Date : Aug 15, 2011

Authors : Leobardo Gaona-Gaona, Eduardo Molina-Jijón, Edilia Tapia, Cecilia Zazueta, Rogelio Hernández-Pando, Mariel Calderón-Oliver, Guillermo Zarco-Márquez, Enrique Pinzón, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemically-Induced Liver Damage](#) : CK(451) : AC(174), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Antineoplastic Agents](#) : CK(750) : AC(434), [Antioxidants](#) : CK(3530) : AC(1293)

Problem Substances : [Cisplatin](#) : CK(15) : AC(2)

Adverse Pharmacological Actions : [Hepatotoxic](#) : CK(262) : AC(69)

Clove (AC 2)

[A combination of Bacopa, Amla \(E. officinalis\), Licorice \(G. glabra\), Indian mango \(M. indica\) and Clove \(S. aromaticum\) protect against experimentally-induced cardiac and renal damage.](#) - GMI Summary

Pubmed Data : Phytother Res. 2005 Mar;19(3):216-21. PMID: [15934019](#)

Article Published Date : Mar 01, 2005

Authors : P A Bafna, R Balaraman

Study Type : Animal Study

Additional Links

Substances : [Amla Fruit](#) : CK(59) : AC(28), [Bacopa](#) : CK(47) : AC(18), [Clove](#) : CK(91) : AC(46), [Licorice](#) : CK(254) : AC(79), [Mango](#) : CK(60) : AC(11)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Myocardial Infarction](#) : CK(888) : AC(116)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

[Clove postively modulates humoral and cell-mediated immune responses and prevents cyclophosphamide-induced immunosuppression in mice.](#) - GMI Summary

Pubmed Data : J Pharm Pharmacol. 2009 Jul;61(7):961-7. PMID: [19589240](#)

Article Published Date : Jul 01, 2009

Authors : Fábio Ricardo Carrasco, Gustavo Schmidt, Adriano Lopez Romero, Juliano Luiz Sartoretto, Silvana Martins Caparroz-Assef, Ciomar Aparecida Bersani-Amado, Roberto Kenji Nakamura Cuman

Study Type : Animal Study

Additional Links

Substances : [Clove](#) : CK(91) : AC(46)

Diseases : [Chemotherapy-Induced Toxicity: Cyclophosphamide](#) : CK(25) : AC(9)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Colon Cancer (AC 4)

[Curcumin may contribute to overcoming chemoresistance of FOLFOX.- surviving colon cancer cells.](#) - GMI Summary

Pubmed Data : Vet Med (Praha). 1989 Aug;34(8):467-74. PMID: [20332435](#)

Article Published Date : Aug 01, 1989

Authors : Bhaumik B Patel, Deepshika Gupta, Althea A Elliott, Vivek Sengupta, Yingjie Yu, Adhip P N Majumdar

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Colon Cancer](#) : CK(375) : AC(230)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23), [Drug: Oxaliplatin](#) : CK(6) : AC(5)

[DHA may induce cell death in chemotherapy resistant colon cancer cells.](#) - GMI Summary

Pubmed Data : Nutr Cancer. 2010 Jul;62(5):611-21. PMID: [20574922](#)

Article Published Date : Jul 01, 2010

Authors : Jens E Slagsvold, Caroline H H Pettersen, Gro L Størvold, Turid Follestad, Hans E Krokan, Svanhild A Schønberg

Study Type : In Vitro Study

Additional Links

Substances : [DHA \(Docosahexaenoic Acid\)](#) : CK(603) : AC(100)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Colon Cancer](#) : CK(375) : AC(230)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemotherapeutic](#) : CK(188) : AC(157)

Gold exhibits antitumor effects by growth suppression of cultured cancer cells. Gold is less toxic than cisplatin. - GMI Summary

Pubmed Data : Cancer Biother Radiopharm. 1998 Jun;13(3):189-92. PMID: [10850355](#)

Article Published Date : Jun 01, 1998

Authors : T Koide, T Kojima, H Kamei

Study Type : In Vitro Study

Additional Links

Substances : [Gold](#) : CK(3) : AC(2)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Colon Cancer](#) : CK(375) : AC(230), [Lymphoma](#) : CK(211) : AC(68)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Cell cycle arrest](#) : CK(371) : AC(311)

Additional Keywords : [Natural Substances Versus Drugs](#) : CK(1003) : AC(167)

Sulforaphane potentiates oxaliplatin-induced cell growth inhibition in colorectal cancer cells. - GMI Summary

Pubmed Data : Cancer Chemother Pharmacol. 2010 Aug 6. Epub 2010 Aug 6. PMID: [20689952](#)

Article Published Date : Aug 06, 2010

Authors : Bettina M Kaminski, Andreas Weigert, Bernhard Brüne, Marco Schumacher, Uwe Wenzel, Dieter Steinhilber, Jürgen Stein, Sandra Ulrich

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Colon Cancer](#) : CK(375) : AC(230), [Colorectal Cancer](#) : CK(768) : AC(299), [Colorectal Tumors](#) : CK(15) : AC(4)

Pharmacological Actions : [Chemotherapeutic](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Oxaliplatin](#) : CK(6) : AC(5), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Drug: Tamoxifen (AC 3)

Soy phytochemicals synergistically enhance the preventive effect of tamoxifen on the growth of estrogen-dependent human breast carcinoma in mice. - GMI Summary

Pubmed Data : Carcinogenesis. 2007 Jun;28(6):1217-23. Epub 2007 Jan 18. PMID: [17234721](#)

Article Published Date : Jun 01, 2007

Authors : Zhiming Mai, George L Blackburn, Jin-Rong Zhou

Study Type : Animal Study

Additional Links

Substances : [Genistein](#) : CK(457) : AC(176), [Soy](#) : CK(1697) : AC(340)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Chemotherapeutic](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Tamoxifen](#) : CK(367) : AC(53), [Drug Synergy](#) : CK(309) : AC(137)

Curcumin reduces NF-kappa B factor activation associated with anticancer drugs. - GMI Summary

Pubmed Data : Endocr Relat Cancer. 2009 Dec;16(4):1339-50. Epub 2009 Sep 2. PMID: [12007574](#)
Article Published Date : Dec 01, 2009
Authors : Shuang En Chuang, Pei Yen Yeh, Yen Shen Lu, Gi Ming Lai, Chao Ming Liao, Ming Gao, Ann Lii Cheng
Study Type : In Vitro Study
Additional Links
Substances : [Curcumin](#) : CK(2870) : AC(1475)
Diseases : [Chemotherapy](#) : CK(65) : AC(16), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)
Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [NF-kappaB Inhibitor](#) : CK(596) : AC(403)
Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Drug: Tamoxifen](#) : CK(367) : AC(53)

Genistein sensitizes inhibitory effect of tamoxifen on the growth of estrogen receptor-positive and HER2-overexpressing human breast cancer cells. - GMI Summary

Pubmed Data : Mol Carcinog. 2007 Jul;46(7):534-42. PMID: [17295235](#)
Article Published Date : Jul 01, 2007
Authors : Zhiming Mai, George L Blackburn, Jin-Rong Zhou
Study Type : In Vitro Study
Additional Links
Substances : [Genistein](#) : CK(457) : AC(176)
Diseases : [Breast Cancer](#) : CK(2047) : AC(556)
Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Drug synergy](#) : CK(51) : AC(14)
Additional Keywords : [Drug: Tamoxifen](#) : CK(367) : AC(53), [Drug Synergy](#) : CK(309) : AC(137)

Mangosteen (AC 2)

A compound in mangosteen prevents cisplatin-induced toxicity to the kidneys of rats. - GMI Summary

Pubmed Data : Chem Biol Interact. 2010 Oct 6;188(1):144-50. PMID: [20603111](#)
Article Published Date : Oct 06, 2010
Authors : Yesennia Sánchez-Pérez, Rocío Morales-Bárcenas, Claudia M García-Cuellar, Rebeca López-Marure, Mariel Calderon-Oliver, José Pedraza-Chaverri, Yolanda I Chirino
Study Type : Animal Study
Additional Links
Substances : [Mangosteen](#) : CK(43) : AC(21)
Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)
Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)
Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Mangosteen protects against cisplatin-induced kidney toxicity. - GMI Summary

Pubmed Data : Free Radic Res. 2009;43(11):1122-32. PMID: [19863372](#)
Article Published Date : Jan 01, 2009
Authors : Jazmin M Pérez-Rojas, Cristino Cruz, Patricia García-López, Dolores J Sánchez-González, Claudia M Martínez-Martínez, Gisela Ceballos, Magali Espinosa, Jorge Meléndez-Zajgla, José Pedraza-Chaverri
Study Type : Animal Study
Additional Links
Substances : [Mangosteen](#) : CK(43) : AC(21)
Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage](#) : CK(118) : AC(41)
Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Nephropathy (AC 2)

Loquat seed inhibits oxidative stress associated with adriamycin-induced nephropathy. - GMI Summary

Pubmed Data : Biol Pharm Bull. 2004 Dec;27(12):1961-4. PMID: [15577213](#)

Article Published Date : Dec 01, 2004

Authors : Atsuhide Hamada, Saburo Yoshioka, Daisuke Takuma, Junko Yokota, Tailine Cui, Masahiko Kusunose, Mitsuhiko Miyamura, Shojiro Kyotani, Yutaka Nishioka

Study Type : Animal Study

Additional Links

Substances : [Loquat Seeds](#) : CK(11) : AC(6)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10), [Lipid Peroxidation](#) : CK(333) : AC(125), [Nephropathy](#) : CK(161) : AC(29), [Oxidative Stress](#) : CK(1858) : AC(703)

Pharmacological Actions : [Glutathione Upregulation](#) : CK(152) : AC(47), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54), [Plant Extracts](#) : CK(3297) : AC(1135)

Sulforaphane prevents cell death and inflammation in nephropathy. - GMI Summary

Pubmed Data : J Nutr Biochem. 2011 Jun 16. Epub 2011 Jun 16. PMID: [21684138](#)

Article Published Date : Jun 16, 2011

Authors : Carlos Enrique Guerrero-Beltrán, Partha Mukhopadhyay, Béla Horváth, Mohanraj Rajesh, Edilia Tapia, Itzhel García-Torres, José Pedraza-Chaverri, Pál Pacher

Study Type : Animal Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Nephropathy](#) : CK(161) : AC(29)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Problem Substances : [Cisplatin](#) : CK(15) : AC(2)

Adverse Pharmacological Actions : [Nephrotoxic](#) : CK(143) : AC(33)

Red Sage (AC 2)

A Chinese herbal formula containing Red Sage, Cordyceps and Peach kernel is superior to methylprednisone against experimental pulmonary fibrosis. - GMI Summary

Pubmed Data : Zhongguo Zhong Yao Za Zhi. 2007 May;32(9):835-9. PMID: [17639988](#)

Article Published Date : May 01, 2007

Authors : Shan-Zhong Tan, Cheng-Hai Liu, Wei Zhang, Xiong Lu, Wei-Cheng Ye, Zhen-Zhen Cai, Ping Liu

Study Type : Animal Study

Additional Links

Substances : [Red Sage](#) : CK(134) : AC(40)

Diseases : [Chemotherapy-Induced Toxicity: Bleomycin](#) : CK(50) : AC(21)

Pharmacological Actions : [Matrix metalloproteinase-2 \(MMP-2\) inhibitor](#) : CK(141) : AC(68)

Additional Keywords : [Superiority of Natural Substances versus Drugs](#) : CK(897) : AC(173)

Red sage (S. miltiorrhiza) has a protective effect on adriamycin-induced cardiac and liver toxicity in rats. - GMI Summary

Pubmed Data : Phytother Res. 2007 Dec;21(12):1146-52. PMID: [17639557](#)

Article Published Date : Dec 01, 2007

Authors : Jyh-Sheng You, Tai-Long Pan, Ying-Shiung Lee

Study Type : Animal Study

Additional Links

Substances : [Red Sage](#) : CK(134) : AC(40)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin](#) : CK(17) : AC(10)

Royal Jelly (AC 2)

Royal jelly and green tea have a protective effect against cisplatin-induced nephrotoxicity in mice. - GMI Summary

Pubmed Data : J Chromatogr B Analyt Technol Biomed Life Sci. 2004 Apr 25;803(2):225-31. PMID: [19857080](#)

Article Published Date : Apr 25, 2004

Authors : Kürşad Yapar, Kültiğın Cavuşoğlu, Ertan Oruç, Emine Yalçın

Study Type : Animal Study

Additional Links

Substances : [Green Tea](#) : CK(931) : AC(279), [Royal Jelly](#) : CK(59) : AC(32)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage: Drug-Induced](#) : CK(86) : AC(18)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293), [Renoprotective](#) : CK(179) : AC(84)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Royal jelly has a healing effect for 5-fluorouracil-induced experimental oral mucositis in hamsters. - GMI Summary

Pubmed Data : Methods Find Exp Clin Pharmacol. 2008 Mar;30(2):103-6. PMID: [18560624](#)

Article Published Date : Mar 01, 2008

Authors : K Suemaru, R Cui, B Li, S Watanabe, K Okihara, K Hashimoto, H Yamada, H Araki

Study Type : Animal Study

Additional Links

Substances : [Royal Jelly](#) : CK(59) : AC(32)

Diseases : [Chemotherapy-Induced Toxicity: 5-fluorouracil](#) : CK(2) : AC(1), [Oral Mucositis](#) : CK(2) : AC(1)

Anti-metastatic (AC 2)

Curcumin inhibits lung cancer cell metastasis. - GMI Summary

Pubmed Data : Clin Exp Metastasis. 2000;18(7):539-45. PMID: [11688958](#)

Article Published Date : Jan 01, 2000

Authors : K Ichiki, N Mitani, Y Doki, H Hara, T Misaki, I Saiki

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancer Metastasis](#) : CK(283) : AC(132), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Anti-metastatic](#) : CK(172) : AC(95), [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711)

Sulforaphane works synergistically with 5-fluorouracil to inhibit high and low metastasis cell lines of salivary gland adenoid cystic carcinoma. - GMI Summary

Pubmed Data : Cancer Chemother Pharmacol. 2001 Jul;47 Suppl:S38-44. PMID: [18844240](#)

Article Published Date : Jul 01, 2001

Authors : Xiao-Feng Wang, Dong-Mei Wu, Bao-Xin Li, Yan-Jie Lu, Bao-Feng Yang

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Cancer Metastasis](#) : CK(283) : AC(132), [Salivary Gland Adenoid Cystic Carcinoma](#) : CK(3) : AC(3), [Salivary Gland Diseases](#) : CK(34) : AC(6)

Pharmacological Actions : [Anti-metastatic](#) : CK(172) : AC(95), [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-fluorouracil](#) : CK(88) : AC(23), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Cancer Metastasis (AC 2)

Curcumin inhibits lung cancer cell metastasis. - GMI Summary

Pubmed Data : Clin Exp Metastasis. 2000;18(7):539-45. PMID: [11688958](#)

Article Published Date : Jan 01, 2000

Authors : K Ichiki, N Mitani, Y Doki, H Hara, T Misaki, I Saiki

Study Type : Animal Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancer Metastasis](#) : CK(283) : AC(132), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Anti-metastatic](#) : CK(172) : AC(95), [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711)

Sulforaphane works synergistically with 5-fluorouracil to inhibit high and low metastasis cell lines of salivary gland adenoid cystic carcinoma. - GMI Summary

Pubmed Data : Cancer Chemother Pharmacol. 2001 Jul;47 Suppl:S38-44. PMID: [18844240](#)

Article Published Date : Jul 01, 2001

Authors : Xiao-Feng Wang, Dong-Mei Wu, Bao-Xin Li, Yan-Jie Lu, Bao-Feng Yang

Study Type : In Vitro Study

Additional Links

Substances : [Sulforaphane](#) : CK(294) : AC(168)

Diseases : [Cancer Metastasis](#) : CK(283) : AC(132), [Salivary Gland Adenoid Cystic Carcinoma.](#) : CK(3) : AC(3), [Salivary Gland Diseases](#) : CK(34) : AC(6)

Pharmacological Actions : [Anti-metastatic](#) : CK(172) : AC(95), [Anticarcinogenic Agents](#) : CK(494) : AC(265), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-fluorouracil](#) : CK(88) : AC(23), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Doxorubicin (AC 2)

"Impaired cognitive function and hippocampal neurogenesis following cancer chemotherapy." - GMI Summary

Pubmed Data : Clin Cancer Res. 2012 Feb 14. Epub 2012 Feb 14. PMID: [22338017](#)

Article Published Date : Feb 14, 2012

Authors : Lori-Ann Christie, Munjal M Acharya, Vipin K Parihar, Anna Nguyen, Vahan Martirosian, Charles L Limoli

Study Type : Animal Study

Additional Links

Diseases : [Brain Injury: Hippocampal Damage](#) : CK(35) : AC(12), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Cognitive Decline/Dysfunction](#) : CK(500) : AC(80)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33)

Problem Substances : [Cyclophosphamide](#) : CK(2) : AC(1), [Doxorubicin](#) : CK(2) : AC(1)

Adverse Pharmacological Actions : [Neurotoxic](#) : CK(976) : AC(155)

MRP-1 with efflux activity has been discovered in human mitochondria and may be up-regulated through exposure to non-lethal doses of the chemoagent doxorubicin. - GMI Summary

Pubmed Data : Br J Cancer. 2012 Feb 21. Epub 2012 Feb 21. PMID: [22353810](#)

Article Published Date : Feb 21, 2012

Authors : E A Roundhill, S A Burchill

Study Type : In Vitro Study

Additional Links

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Additional Keywords : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186)

Drug synergy (AC 3)

[EGCG may act as a chemosensitizing agent in tamoxifen-resistant breast cancer cells.](#) - GMI Summary

Pubmed Data : Mutat Res. 2002 Jun 27;518(1):71-84. PMID: [20149610](#)

Article Published Date : Jun 27, 2002

Authors :

F Farabegoli, A Papi, G Bartolini, R Ostan, M Orlandi

Study Type : In Vitro Study

Additional Links

Substances : [EGCG \(Epigallocatechin gallate\) : CK\(176\) : AC\(115\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#), [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Drug synergy : CK\(51\) : AC\(14\)](#)

Additional Keywords : [Tamoxifen Resistance : CK\(3\) : AC\(3\)](#)

[Genistein sensitizes inhibitory effect of tamoxifen on the growth of estrogen receptor-positive and HER2-overexpressing human breast cancer cells.](#) - GMI Summary

Pubmed Data : Mol Carcinog. 2007 Jul;46(7):534-42. PMID: [17295235](#)

Article Published Date : Jul 01, 2007

Authors : Zhiming Mai, George L Blackburn, Jin-Rong Zhou

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Breast Cancer : CK\(2047\) : AC\(556\)](#)

Pharmacological Actions : [Antiproliferative : CK\(957\) : AC\(711\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Drug synergy : CK\(51\) : AC\(14\)](#)

Additional Keywords : [Drug: Tamoxifen : CK\(367\) : AC\(53\)](#), [Drug Synergy : CK\(309\) : AC\(137\)](#)

[Melatonin decreases the toxicity and increases the efficacy of chemotherapy in patients with metastatic solid tumors and poor clinical status.](#) - GMI Summary

Pubmed Data : Eur J Cancer. 1999 Nov;35(12):1688-92. PMID: [10674014](#)

Article Published Date : Nov 01, 1999

Authors : P Lissoni, S Barni, M Mandalà, A Ardizzoia, F Paolorossi, M Vaghi, R Longarini, F Malugani, G Tancini

Study Type : In Vitro Study

Additional Links

Substances : [Melatonin : CK\(454\) : AC\(115\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#)

Pharmacological Actions : [Drug synergy : CK\(51\) : AC\(14\)](#)

Emodin (AC 3)

[Aloe emodin may decrease the anticancer activity of the chemo-agent cisplatin.](#) - GMI Summary

Pubmed Data : Cell Mol Life Sci. 2005 Jun ;62(11):1275-82. PMID: [15905960](#)

Article Published Date : Jun 01, 2005

Authors : S Mijatovic, D Maksimovic-Ivanic, J Radovic, D Miljkovic, G N Kaludjerovic, T J Sabo, V Trajkovic

Study Type : In Vitro Study

Additional Links

Substances : [Aloe Vera : CK\(191\) : AC\(44\)](#), [Emodin : CK\(30\) : AC\(19\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)
Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Enzyme Inhibitors](#) : CK(385) : AC(210)
Problem Substances : [Cisplatin](#) : CK(15) : AC(2)

Emodin enhances sensitivity of gallbladder cancer cells to chemotherapy. - GMI Summary

Pubmed Data : Biochem Pharmacol. 2010 Apr 15;79(8):1134-40. Epub 2009 Dec 11. PMID: [20005210](#)

Article Published Date : Apr 15, 2010

Authors : Wei Wang, Yue-ping Sun, Xin-zhi Huang, Min He, Yu-ying Chen, Gui-ying Shi, Hui Li, Jing Yi, Jian Wang

Study Type : In Vitro Study

Additional Links

Substances : [Emodin](#) : CK(30) : AC(19)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Gallbladder Cancer](#) : CK(56) : AC(10)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

A number of plant polyphenols have chemosensitizing and radiosensitizing activity. - GMI Summary

Pubmed Data : Antioxid Redox Signal. 2005 Nov-Dec;7(11-12):1630-47. PMID: [16356126](#)

Article Published Date : Nov 01, 2005

Authors : Amit K Garg, Thomas A Buchholz, Bharat B Aggarwal

Study Type : Review

Additional Links

Substances : [Betulinic acid](#) : CK(6) : AC(6), [Caffeic acid phenethyl ester](#) : CK(15) : AC(8), [Curcumin](#) : CK(2870) : AC(1475), [Emodin](#) : CK(30) : AC(19), [Flavonoids](#) : CK(887) : AC(289), [Genistein](#) : CK(457) : AC(176), [Green Tea](#) : CK(931) : AC(279), [Polyphenols](#) : CK(417) : AC(171), [Resveratrol](#) : CK(963) : AC(600), [Silymarin](#) : CK(36) : AC(6), [Ursolic Acid](#) : CK(18) : AC(13)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157), [Radiosensitizer](#) : CK(50) : AC(28)

Licorice (AC 2)

A combination of Bacopa, Amla (E. officinalis), Licorice (G. glabra), Indian mango (M. indica) and Clove (S. aromaticum) protect against experimentally-induced cardiac and renal damage. - GMI Summary

Pubmed Data : Phytother Res. 2005 Mar;19(3):216-21. PMID: [15934019](#)

Article Published Date : Mar 01, 2005

Authors : P A Bafna, R Balaraman

Study Type : Animal Study

Additional Links

Substances : [Amla Fruit](#) : CK(59) : AC(28), [Bacopa](#) : CK(47) : AC(18), [Clove](#) : CK(91) : AC(46), [Licorice](#) : CK(254) : AC(79), [Mango](#) : CK(60) : AC(11)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Myocardial Infarction](#) : CK(888) : AC(116)

Pharmacological Actions : [Antioxidants](#) : CK(3530) : AC(1293)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Licorice alleviates Doxorubicin induced-toxicity. - GMI Summary

Pubmed Data : J Food Prot. 2002 Oct;65(10):1610-3. PMID: [18849542](#)

Article Published Date : Oct 01, 2002

Authors : Hyun Ju Choi, Mi Ra Seon, Soon Sung Lim, Jong-Sang Kim, Hyang Sook Chun, Jung Han Yoon Park

Study Type : In Vitro Study

Additional Links

Substances : [Licorice : CK\(254\) : AC\(79\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Stilbenes (AC 2)

[Resveratrol exhibits chemosensitizing and chemopreventive properties.](#) - GMI Summary

Pubmed Data : Chemotherapy. 2010;56(1):60-5. Epub 2010 Mar 19. PMID: [20299793](#)

Article Published Date : Jan 01, 2010

Authors : A M El-Mowafy, M E El-Mesery, H A Salem, M M Al-Gayyar, M M Darweish

Study Type : Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#), [Stilbenes : CK\(123\) : AC\(88\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Anticarcinogenic Agents : CK\(494\) : AC\(265\)](#), [Chemopreventive : CK\(1254\) : AC\(342\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Malondialdehyde Down-regulation : CK\(68\) : AC\(18\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Additional Keywords : [Drug: Cisplatin : CK\(31\) : AC\(11\)](#)

[Resveratrol down-regulates survivin and induces programmed cell death in human multidrug-resistant cells.](#) - GMI Summary

Pubmed Data : Oncol Rep. 2010 Jan;23(1):279-86. PMID: [19956893](#)

Article Published Date : Jan 01, 2010

Authors : Weiguo Zhao, Pengtao Bao, Haowen Qi, Houcheng You

Study Type : In Vitro Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#), [Stilbenes : CK\(123\) : AC\(88\)](#)

Diseases : [Cancers: Drug Resistant : CK\(210\) : AC\(130\)](#), [Cancers: Multi-Drug Resistant : CK\(87\) : AC\(72\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Cell cycle arrest : CK\(371\) : AC\(311\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Survivin Down-Regulation : CK\(1\) : AC\(1\)](#)

Uterine Cancer (AC 2)

[Resveratrol adds to the growth inhibitory/anticancer activity of cisplatin and doxorubicin in vitro and protects against doxorubicin-induced cardiac toxicity both in vitro and in mice.](#) - GMI Summary

Pubmed Data : Am J Obstet Gynecol. 2006 May;194(5):e23-6. Epub 2006 Apr 21. PMID: [16647892](#)

Article Published Date : May 01, 2006

Authors : Youssef A Rezk, Sujata S Balulad, Rebecca S Keller, James A Bennett

Study Type : Animal Study

Additional Links

Substances : [Resveratrol : CK\(963\) : AC\(600\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#), [Ovarian Cancer : CK\(117\) : AC\(50\)](#), [Uterine Cancer : CK\(24\) : AC\(10\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Antiproliferative : CK\(957\) : AC\(711\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

[Curcumin reduces multi-drug resistance in uterine cancer cells.](#) - GMI Summary

Pubmed Data : Oncol Rep. 2008 Oct;20(4):731-5. PMID: [18813811](#)

Article Published Date : Oct 01, 2008

Authors : Antonio Angelini, Manuela Iezzi, Concetta Di Febbo, Carmine Di Ilio, Franco Cuccurullo,

Ettore Porreca

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Multi-Drug Resistant](#) : CK(87) : AC(72), [Uterine Cancer](#) : CK(24) : AC(10)

Pharmacological Actions : [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Bile salts (AC 1)

[Bile acid conjugate prevents Oxaliplatin chemotherapy-induced fatty liver.](#) - GMI Summary

Pubmed Data : Cancer. 2010 Jan 1;116(1):251-5. PMID: [19890960](#)

Article Published Date : Jan 01, 2010

Authors : Daniel Keizman, Natalie Maimon, Maya Ish-Shalom, Dana Buchbut, Moshe Inbar, Baruch Klein, Joelle Bernheim, Ilana Goldiner, Alicia Leikin-Frenkel, Fred Konikoff

Study Type : Animal Study

Additional Links

Substances : [Bile salts](#) : CK(5) : AC(3)

Diseases : [Chemotherapy-Induced Liver Toxicity](#) : CK(14) : AC(8), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Oxaliplatin](#) : CK(2) : AC(1), [Fatty Liver](#) : CK(486) : AC(116)

Brain Injury: Hippocampal Damage (AC 1)

["Impaired cognitive function and hippocampal neurogenesis following cancer chemotherapy."](#) - GMI Summary

Pubmed Data : Clin Cancer Res. 2012 Feb 14. Epub 2012 Feb 14. PMID: [22338017](#)

Article Published Date : Feb 14, 2012

Authors : Lori-Ann Christie, Munjal M Acharya, Vipin K Parihar, Anna Nguyen, Vahan Martirosian, Charles L Limoli

Study Type : Animal Study

Additional Links

Diseases : [Brain Injury: Hippocampal Damage](#) : CK(35) : AC(12), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Cognitive Decline/Dysfunction](#) : CK(500) : AC(80)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33)

Problem Substances : [Cyclophosphamide](#) : CK(2) : AC(1), [Doxorubicin](#) : CK(2) : AC(1)

Adverse Pharmacological Actions : [Neurotoxic](#) : CK(976) : AC(155)

Chemotherapeutic Synergy: Cisplatin (AC 2)

[Curcumin promotes programmed cell death of cisplatin-resistant human lung carcinoma cells.](#) - GMI Summary

Pubmed Data : Zhongguo Fei Ai Za Zhi. 2010 Apr;13(4):301-6. PMID: [20677554](#)

Article Published Date : Apr 01, 2010

Authors : Ni Tang, Jian Zhang, Yongping Du

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Lung Cancer](#) : CK(440) : AC(185)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin](#) : CK(4) : AC(3), [Drug: Cisplatin](#) : CK(31) : AC(11)

Genistein acts as a chemosensitizer, augmenting the efficacy of cisplatin in pancreatic cancer. - GMI Summary

Pubmed Data : Int J Cancer. 2007 Feb 15;120(4):906-17. PMID: [17131310](#)

Article Published Date : Feb 15, 2007

Authors : Sanjeev Banerjee, Yuxiang Zhang, Zhiwei Wang, Mingxin Che, Paul J Chiao, James L Abbruzzese, Fazlul H Sarkar

Study Type : In Vitro Study

Additional Links

Substances : [Genistein : CK\(457\) : AC\(176\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Pancreatic Cancer : CK\(524\) : AC\(160\)](#)

Pharmacological Actions : [Apoptotic : CK\(1419\) : AC\(1087\)](#), [Chemosensitizer : CK\(188\) : AC\(157\)](#), [Matrix metalloproteinase-2 \(MMP-2\) inhibitor : CK\(141\) : AC\(68\)](#), [NF-kappaB Inhibitor : CK\(596\) : AC\(403\)](#)

Additional Keywords : [Chemotherapeutic Synergy: Cisplatin : CK\(4\) : AC\(3\)](#), [Drug: Cisplatin : CK\(31\) : AC\(11\)](#), [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Chemotherapy-Induced Toxicity: Oxaliplatin (AC 1)

Bile acid conjugate prevents Oxaliplatin chemotherapy-induced fatty liver. - GMI Summary

Pubmed Data : Cancer. 2010 Jan 1;116(1):251-5. PMID: [19890960](#)

Article Published Date : Jan 01, 2010

Authors : Daniel Keizman, Natalie Maimon, Maya Ish-Shalom, Dana Buchbut, Moshe Inbar, Baruch Klein, Joelle Bernheim, Ilana Goldiner, Alicia Leikin-Frenkel, Fred Konikoff

Study Type : Animal Study

Additional Links

Substances : [Bile salts : CK\(5\) : AC\(3\)](#)

Diseases : [Chemotherapy-Induced Liver Toxicity : CK\(14\) : AC\(8\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Oxaliplatin : CK\(2\) : AC\(1\)](#), [Fatty Liver : CK\(486\) : AC\(116\)](#)

Coenzyme Q10 (AC 1)

Coenzyme Q10 treatment ameliorates acute cisplatin nephrotoxicity in mice. - GMI Summary

Pubmed Data : Toxicology. 2010 Jul-Aug;274(1-3):49-56. Epub 2010 May 25. PMID: [20510337](#)

Article Published Date : Jul 01, 2010

Authors : Amr A Fouad, Ali Ibrahim Al-Sultan, Shereen M Refaie, Mohamed T Yacoubi

Study Type : Animal Study

Additional Links

Substances : [Coenzyme Q10 : CK\(667\) : AC\(103\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Oxidative Stress : CK\(1858\) : AC\(703\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1005\) : AC\(351\)](#)

Cognitive Decline/Dysfunction (AC 1)

"Impaired cognitive function and hippocampal neurogenesis following cancer chemotherapy." - GMI Summary

Pubmed Data : Clin Cancer Res. 2012 Feb 14. Epub 2012 Feb 14. PMID: [22338017](#)

Article Published Date : Feb 14, 2012

Authors : Lori-Ann Christie, Munjal M Acharya, Vipin K Parihar, Anna Nguyen, Vahan Martirosian, Charles L Limoli

Study Type : Animal Study

Additional Links

Diseases : [Brain Injury: Hippocampal Damage](#) : CK(35) : AC(12), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Cognitive Decline/Dysfunction](#) : CK(500) : AC(80)
Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)
Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33)
Problem Substances : [Cyclophosphamide](#) : CK(2) : AC(1), [Doxorubicin](#) : CK(2) : AC(1)
Adverse Pharmacological Actions : [Neurotoxic](#) : CK(976) : AC(155)

Cyclophosphamide (AC 1)

["Impaired cognitive function and hippocampal neurogenesis following cancer chemotherapy."](#) - GMI Summary

Pubmed Data : Clin Cancer Res. 2012 Feb 14. Epub 2012 Feb 14. PMID: [22338017](#)

Article Published Date : Feb 14, 2012

Authors : Lori-Ann Christie, Munjal M Acharya, Vipin K Parihar, Anna Nguyen, Vahan Martirosian, Charles L Limoli

Study Type : Animal Study

Additional Links

Diseases : [Brain Injury: Hippocampal Damage](#) : CK(35) : AC(12), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23), [Cognitive Decline/Dysfunction](#) : CK(500) : AC(80)

Additional Keywords : [Drug: Doxorubicin](#) : CK(140) : AC(54)

Anti Therapeutic Actions : [Chemotherapy](#) : CK(250) : AC(33)

Problem Substances : [Cyclophosphamide](#) : CK(2) : AC(1), [Doxorubicin](#) : CK(2) : AC(1)

Adverse Pharmacological Actions : [Neurotoxic](#) : CK(976) : AC(155)

Drug: Epirubicin (AC 1)

[L-carnitine may reduce cardiotoxicities associated with epirubicin toxicity.](#) - GMI Summary

Pubmed Data : Cancer Lett. 2007 Jul 18;252(2):195-207. Epub 2007 Feb 2. PMID: [17275999](#)

Article Published Date : Jul 18, 2007

Authors : Christie E Delaney, Sean P Hopkins, Christina L Addison

Study Type : Animal Study

Additional Links

Substances : [Carnitine](#) : CK(650) : AC(67)

Diseases : [Breast Cancer](#) : CK(2047) : AC(556), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Epirubicin](#) : CK(2) : AC(1)

Additional Keywords : [Drug: Epirubicin](#) : CK(2) : AC(1), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Fatty Liver (AC 1)

[Bile acid conjugate prevents Oxaliplatin chemotherapy-induced fatty liver.](#) - GMI Summary

Pubmed Data : Cancer. 2010 Jan 1;116(1):251-5. PMID: [19890960](#)

Article Published Date : Jan 01, 2010

Authors : Daniel Keizman, Natalie Maimon, Maya Ish-Shalom, Dana Buchbut, Moshe Inbar, Baruch Klein, Joelle Bernheim, Ilana Goldiner, Alicia Leikin-Frenkel, Fred Konikoff

Study Type : Animal Study

Additional Links

Substances : [Bile salts](#) : CK(5) : AC(3)

Diseases : [Chemotherapy-Induced Liver Toxicity](#) : CK(14) : AC(8), [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Oxaliplatin](#) : CK(2) : AC(1), [Fatty Liver](#) : CK(486) : AC(116)

Fibrosarcoma (AC 1)

Curcumin has a synergistic effect with cisplatin against fibrosarcoma. - GMI Summary

Pubmed Data : Pharmacol Res. 1999 Mar;39(3):175-9. PMID: [10094841](#)

Article Published Date : Mar 01, 1999

Authors : I Navis, P Sriganth, B Premalatha

Study Type : Animal Study

Additional Links

Substances : [Curcumin : CK\(2870\) : AC\(1475\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Fibrosarcoma : CK\(10\) : AC\(7\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug Synergy : CK\(309\) : AC\(137\)](#)

Glutathione S-transferase Inhibitor (AC 1)

Pomegranate seed extract attenuates chemotherapy-induced acute nephrotoxicity and hepatotoxicity. - GMI Summary

Pubmed Data : J Med Food. 2011 May 6. Epub 2011 May 6. PMID: [21548807](#)

Article Published Date : May 06, 2011

Authors : Kerim Cayir, Ali Karadeniz, Nejdett Simsek, Serap Yildirim, Emre Karakus, Adem Kara, Hurrem Turan Akkoyun, Emin Sengul

Study Type : Animal Study

Additional Links

Substances : [Pomegranate Seed : CK\(2\) : AC\(1\)](#)

Diseases : [Chemotherapy-Induced Liver Toxicity : CK\(14\) : AC\(8\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Glutathione S-transferase Inhibitor : CK\(3\) : AC\(2\)](#), [Hepatoprotective : CK\(528\) : AC\(257\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

Hematopoietic (AC 2)

Astragalus stimulates hematopoiesis and may attenuate the myelosuppressive effects of anti-cancer chemotherapy. - GMI Summary

Pubmed Data : Zhong Yao Cai. 2005 Sep;28(9):791-3. PMID: [16447871](#)

Article Published Date : Sep 01, 2005

Authors : Yan Lv, Xuemei Feng, Bide Zhu

Study Type : In Vitro Study

Additional Links

Substances : [Astragalus : CK\(284\) : AC\(57\)](#)

Diseases : [Chemotherapy Induced Myelotoxicity : CK\(48\) : AC\(13\)](#), [Myelodysplastic Syndromes : CK\(189\) : AC\(17\)](#), [Myelotoxicity : CK\(31\) : AC\(8\)](#), [Neutropenia: Chemotherapy Induced : CK\(82\) : AC\(17\)](#)

Pharmacological Actions : [Hematopoietic : CK\(20\) : AC\(9\)](#)

Maitake beta-glucan MD-fraction enhances bone marrow colony formation and reduces doxorubicin toxicity in vitro. - GMI Summary

Pubmed Data : Int Immunopharmacol. 2004 Jan;4(1):91-9. PMID: [14975363](#)

Article Published Date : Jan 01, 2004

Authors : Hong Lin, Yu-Hong She, Barrie R Cassileth, Frank Sirotnak, Susanna Cunningham Rundles

Study Type : In Vitro Study

Additional Links

Substances : [Maitake Mushroom : CK\(61\) : AC\(34\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Doxorubicin : CK\(59\) : AC\(23\)](#)

Pharmacological Actions : [Hematopoietic : CK\(20\) : AC\(9\)](#)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\) : CK\(33\) : AC\(10\)](#)

Kidney Damage (AC 1)

[Mangosteen protects against cisplatin-induced kidney toxicity.](#) - GMI Summary

Pubmed Data : Free Radic Res. 2009;43(11):1122-32. PMID: [19863372](#)

Article Published Date : Jan 01, 2009

Authors : Jazmin M Pérez-Rojas, Cristino Cruz, Patricia García-López, Dolores J Sánchez-González, Claudia M Martínez-Martínez, Gisela Ceballos, Magali Espinosa, Jorge Meléndez-Zajgla, José Pedraza-Chaverri

Study Type : Animal Study

Additional Links

Substances : [Mangosteen](#) : CK(43) : AC(21)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Kidney Damage](#) : CK(118) : AC(41)

Pharmacological Actions : [Renoprotective](#) : CK(179) : AC(84)

Luteolin (AC 2)

[Luteolin has anti-proliferative and chemosensitizing effects on human gastric cancer cells.](#) - GMI Summary

Pubmed Data : Mol Cell Biochem. 2008 Jun;313(1-2):125-32. Epub 2008 Apr 9. PMID: [18398671](#)

Article Published Date : Jun 01, 2008

Authors : Bin Wu, Qiang Zhang, Weiming Shen, Jun Zhu

Study Type : In Vitro Study

Additional Links

Substances : [Luteolin](#) : CK(61) : AC(51)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Gastric Cancer](#) : CK(360) : AC(108)

Pharmacological Actions : [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: Cisplatin](#) : CK(31) : AC(11), [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

[Luteolin suppresses cisplatin-induced cell death in auditory cells.](#) - GMI Summary

Pubmed Data : J Med Food. 2008 Jun;11(2):230-6. PMID: [18598163](#)

Article Published Date : Jun 01, 2008

Authors : Byung-Min Choi, Dai-Won Lim, Ju-A Lee, Shang Shang Gao, Dae Young Kwon, Bok-Ryang Kim

Study Type : In Vitro Study

Additional Links

Substances : [Luteolin](#) : CK(61) : AC(51)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Anti-Apoptotic](#) : CK(59) : AC(37)

Panax Notoginseng (AC 1)

[Panax Notoginseng has a protective effect against doxorubicin-induced cardiotoxicity in mice.](#) - GMI Summary

Pubmed Data : Planta Med. 2008 Feb;74(3):203-9. Epub 2008 Feb 8. PMID: [18260050](#)

Article Published Date : Feb 01, 2008

Authors : Li Liu, Run Shi, Qiang Shi, Yiyu Cheng, Yang Huo

Study Type : Animal Study

Additional Links

Substances : [Panax Notoginseng](#) : CK(42) : AC(9)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Piperidines (AC 1)

[Piperine protects against cisplatin-induced toxicity in auditory cells.](#) - GMI Summary

Pubmed Data : J Nutr Biochem. 2007 Sep;18(9):615-22. Epub 2007 Apr 5. PMID: [17418561](#)

Article Published Date : Sep 01, 2007

Authors : Byung-Min Choi, Sung-Min Kim, Tae-Kwang Park, Guang Li, Sung-Jae Hong, Raekil Park, Hun-Taeg Chung, Bok-Ryang Kim

Study Type : Animal Study

Additional Links

Substances : [Piperidines : CK\(45\) : AC\(17\)](#)

Diseases : [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#), [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#)

Pharmacological Actions : [Antineoplastic Agents : CK\(750\) : AC\(434\)](#), [Apoptotic : CK\(1419\) : AC\(1087\)](#)

Pomegranate Seed (AC 1)

[Pomegranate seed extract attenuates chemotherapy-induced acute nephrotoxicity and hepatotoxicity.](#) - GMI Summary

Pubmed Data : J Med Food. 2011 May 6. Epub 2011 May 6. PMID: [21548807](#)

Article Published Date : May 06, 2011

Authors : Kerim Cayir, Ali Karadeniz, Nejdet Simsek, Serap Yildirim, Emre Karakuş, Adem Kara, Hürrem Turan Akkoyun, Emin Sengül

Study Type : Animal Study

Additional Links

Substances : [Pomegranate Seed : CK\(2\) : AC\(1\)](#)

Diseases : [Chemotherapy-Induced Liver Toxicity : CK\(14\) : AC\(8\)](#), [Chemotherapy-Induced Toxicity : CK\(691\) : AC\(186\)](#)

Pharmacological Actions : [Antioxidants : CK\(3530\) : AC\(1293\)](#), [Glutathione S-transferase Inhibitor : CK\(3\) : AC\(2\)](#), [Hepatoprotective : CK\(528\) : AC\(257\)](#), [Renoprotective : CK\(179\) : AC\(84\)](#)

Rehmannia (AC 2)

[Rehmannia protects against adriamycin-induced cytotoxicity in cardiac muscle cells.](#) - GMI Summary

Pubmed Data : Life Sci. 2005 Mar 18;76(18):2027-42. PMID: [15826871](#)

Article Published Date : Mar 18, 2005

Authors : Han-Jung Chae, Hyung-Ryong Kim, Do-Sung Kim, Eun-Rhan Woo, Yong-Gon Cho, Soo-Wan Chae

Study Type : In Vitro Study

Additional Links

Substances : [Rehmannia : CK\(145\) : AC\(36\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Adriamycin : CK\(17\) : AC\(10\)](#)

Pharmacological Actions : [Cardioprotective : CK\(627\) : AC\(185\)](#)

[Rehmannia protects against cisplatin-induced toxicity to auditory cells in a dose dependent fashion.](#) - GMI Summary

Pubmed Data : J Ethnopharmacol. 2006 Oct 11;107(3):383-8. Epub 2006 Apr 6. PMID: [16698207](#)

Article Published Date : Oct 11, 2006

Authors : Hyeon-Hee Yu, Se-Jeong Seo, Yeon-Hwa Kim, Hae-Youn Lee, Rae-Kil Park, Hong-Seob So, Seon Li Jang, Yong-Ouk You

Study Type : In Vitro Study

Additional Links

Substances : [Rehmannia](#) : CK(145) : AC(36)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Rubia Cordifolia (AC 1)

[Rubia cordifolia ameliorates cisplatin-induced nephrotoxicity in mice.](#) - GMI Summary

Pubmed Data : J Cancer Res Ther. 2008 Jul-Sep;4(3):111-5. PMID: [18923202](#)

Article Published Date : Jul 01, 2008

Authors : Jisha Joy, Cherupally Krishnan Krishnan Nair

Study Type : Animal Study

Additional Links

Substances : [Rubia Cordifolia](#) : CK(8) : AC(4)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Plant Extracts](#) : CK(3297) : AC(1135)

Skin Cancer: Squamous Cell (AC 2)

[Nicotine induces resistance to chemotherapy in nasal epithelial cancer.](#) - GMI Summary

Pubmed Data : Am J Rhinol Allergy. 2010 Mar;24(2):e73-7. PMID: [20338106](#)

Article Published Date : Mar 01, 2010

Authors : Tianjie Shen, Wei Le, Allison Yee, Opal Kamdar, Peter H Hwang, Daya Upadhyay

Study Type : In Vitro Study

Additional Links

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Skin Cancer: Squamous Cell](#) : CK(52) : AC(16), [Smoking](#) : CK(508) : AC(68)

Problem Substances : [Nicotine](#) : CK(52) : AC(6)

Adverse Pharmacological Actions : [Carcinogen](#) : CK(59) : AC(11)

[Vitamin A and D have an anti-tumor effect against head and neck squamous cell carcinoma.](#) - GMI Summary

Pubmed Data : Auris Nasus Larynx. 2003 Dec;30(4):403-12. PMID: [14656567](#)

Article Published Date : Dec 01, 2003

Authors : Kenichi Satake, Emi Takagi, Akiko Ishii, Yasumasa Kato, Yukari Imagawa, Yuu Kimura, Mamoru Tsukuda

Study Type : In Vitro Study

Additional Links

Substances : [Vitamin A](#) : CK(358) : AC(53), [Vitamin D](#) : CK(1493) : AC(220)

Diseases : [Head and Neck Cancer](#) : CK(36) : AC(14), [Skin Cancer: Squamous Cell](#) : CK(52) : AC(16)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Cell cycle arrest](#) : CK(371) : AC(311), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug: 5-flourouracil](#) : CK(88) : AC(23)

Spirulina (AC 1)

[Spirulina has a protective effect against doxorubicin-induced cardiotoxicity in mice.](#) - GMI Summary

Pubmed Data : Phytother Res. 2005 Dec;19(12):1030-7. PMID: [16372368](#)

Article Published Date : Dec 01, 2005

Authors : Mahmood Khan, Jagdish Chandra Shobha, Iyyapu Krishna Mohan, Madireddi Umamaheswara Rao Naidu, Challa Sundaram, Shashi Singh, Periannan Kuppusamy, Vijay Kumar Kutala

Study Type : Animal Study

Additional Links

Substances : [Spirulina](#) : CK(77) : AC(23)

Diseases : [Cardiotoxicity: Chemotherapy-Induced](#) : CK(12) : AC(6), [Chemotherapy-Induced Toxicity: Doxorubicin](#) : CK(59) : AC(23)

Pharmacological Actions : [Cardioprotective](#) : CK(627) : AC(185)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275), [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Testosterone (AC 1)

[Testosterone has a preventive role on cisplatin-induced gonadal toxicity.](#) - GMI Summary

Pubmed Data : Fertil Steril. 2010 Mar 15;93(5):1388-93. Epub 2009 Apr 10. PMID: [19362306](#)

Article Published Date : Mar 15, 2010

Authors : Alireza Aminsharifi, Saeed Shakeri, Ali Ariafar, Behnam Moeinjahromi, Prikala V Kumar, Saeed Karbalaee doost

Study Type : Animal Study

Additional Links

Substances : [Testosterone](#) : CK(133) : AC(25)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434)

Additional Keywords : [Drug Side Effect Attenuation](#) : CK(252) : AC(50)

Tocotrienol: Delta (AC 2)

[Delta-tocotrienol acts as a chemosensitizing agent.](#) - GMI Summary

Pubmed Data : Br J Pharmacol. 2010 Dec 30. Epub 2010 Dec 30. PMID: [21198544](#)

Article Published Date : Dec 30, 2010

Authors : [No authors listed]

Study Type : In Vitro Study

Additional Links

Substances : [Tocotrienol: Delta](#) : CK(7) : AC(7)

Diseases : [Cancers: All](#) : CK(8323) : AC(2625), [Liver Cancer](#) : CK(758) : AC(265)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug Synergy](#) : CK(309) : AC(137)

[Delta-tocotrienol protects mouse and human hematopoietic progenitors from gamma-irradiation.](#) - GMI Summary

Pubmed Data : Haematologica. 2010 Dec;95(12):1996-2004. Epub 2010 Sep 7. PMID: [20823133](#)

Article Published Date : Dec 01, 2010

Authors : [No authors listed]

Study Type : In Vitro Study

Additional Links

Substances : [Tocotrienol: Delta](#) : CK(7) : AC(7)

Diseases : [Chemotherapy Induced Myelotoxicity](#) : CK(48) : AC(13), [Radiation Induced Illness: Bone Marrow](#) : CK(22) : AC(12)

Pharmacological Actions : [Radioprotective](#) : CK(453) : AC(180)

Gallbladder Cancer (AC 1)

[Emodin enhances sensitivity of gallbladder cancer cells to chemotherapy.](#) - GMI Summary

Pubmed Data : Biochem Pharmacol. 2010 Apr 15;79(8):1134-40. Epub 2009 Dec 11. PMID: [20005210](#)

Article Published Date : Apr 15, 2010

Authors : Wei Wang, Yue-ping Sun, Xin-zhi Huang, Min He, Yu-ying Chen, Gui-ying Shi, Hui Li, Jing Yi, Jian Wang

Study Type : In Vitro Study

Additional Links

Substances : [Emodin](#) : CK(30) : AC(19)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Gallbladder Cancer](#) : CK(56) : AC(10)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Interleukin-6 Downregulation (AC 1)

[Curcumin inhibits growth and sensitizes ovarian cancer cells to cisplatin-mediated killing.](#) - GMI Summary

Pubmed Data : Carcinogenesis. 1982;3(11):1331-8. PMID: [12447990](#)

Article Published Date : Jan 01, 1982

Authors : Marion M Chan, Dunne Fong, Kenneth J Soprano, William F Holmes, Harry Heverling

Study Type : In Vitro Study

Additional Links

Substances : [Curcumin](#) : CK(2870) : AC(1475), [Flavonoids](#) : CK(887) : AC(289), [Quercetin](#) : CK(312) : AC(140)

Diseases : [Cancers: Drug Resistant](#) : CK(210) : AC(130), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Ovarian Cancer](#) : CK(117) : AC(50)

Pharmacological Actions : [Antineoplastic Agents](#) : CK(750) : AC(434), [Antiproliferative](#) : CK(957) : AC(711), [Apoptotic](#) : CK(1419) : AC(1087), [Chemosensitizer](#) : CK(188) : AC(157), [Interleukin-6 Downregulation](#) : CK(497) : AC(133)

Mesothelioma (AC 1)

[A tocotrienol-rich fraction from rice bran enhances cisplatin-induced cytotoxicity in human mesothelioma cells.](#) - GMI Summary

Pubmed Data : Phytother Res. 2010 Feb 1. Epub 2010 Feb 1. PMID: [20127663](#)

Article Published Date : Feb 01, 2010

Authors : Keisuke Nakashima, Nantiga Virgona, Mio Miyazawa, Takashi Watanabe, Tomohiro Yano

Study Type : In Vitro Study

Additional Links

Substances : [Rice Bran](#) : CK(29) : AC(14), [Tocotrienols](#) : CK(21) : AC(16)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Mesothelioma](#) : CK(30) : AC(9)

Pharmacological Actions : [Chemosensitizer](#) : CK(188) : AC(157)

Additional Keywords : [Drug-Plant-Vitamin Synergies](#) : CK(1011) : AC(275)

Neutropenia: Cyclic (AC 1)

[Maitake enhances granulopoiesis and mobilization of granulocytes by increasing granulocyte colony-stimulating factor.](#) - GMI Summary

Pubmed Data : Int Immunopharmacol. 2009 Jun 30. PMID: [19573626](#)

Article Published Date : Jun 30, 2009

Authors : Koichi Ito, Yuki Masuda, Yoshihiko Yamasaki, Yoshinobu Yokota, Hiroaki Nanba

Study Type : Commentary

Additional Links

Substances : [Maitake Mushroom](#) : CK(61) : AC(34)

Diseases : [Chemotherapy-Induced Toxicity](#) : CK(691) : AC(186), [Chemotherapy-Induced Toxicity: Cisplatin](#) : CK(165) : AC(64), [Leukopenia: Chemotherapy Induced](#) : CK(25) : AC(5), [Neutropenia](#) : CK(90) : AC(22), [Neutropenia: Chemotherapy Induced](#) : CK(82) : AC(17), [Neutropenia: Cyclic](#) : CK(48) : AC(16)

Additional Keywords : [Colony-Stimulating Factors \(CSFs\)](#) : CK(33) : AC(10)

Rice Bran (AC 1)

[A tocotrienol-rich fraction from rice bran enhances cisplatin-induced cytotoxicity in human mesothelioma cells.](#) - GMI Summary

Pubmed Data : Phytother Res. 2010 Feb 1. Epub 2010 Feb 1. PMID: [20127663](#)

Article Published Date : Feb 01, 2010

Authors : Keisuke Nakashima, Nantiga Virgona, Mio Miyazawa, Takashi Watanabe, Tomohiro Yano

Study Type : In Vitro Study

Additional Links

Substances : [Rice Bran : CK\(29\) : AC\(14\)](#), [Tocotrienols : CK\(21\) : AC\(16\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Mesothelioma : CK\(30\) : AC\(9\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

Tocotrienols (AC 1)

[A tocotrienol-rich fraction from rice bran enhances cisplatin-induced cytotoxicity in human mesothelioma cells.](#) - GMI Summary

Pubmed Data : Phytother Res. 2010 Feb 1. Epub 2010 Feb 1. PMID: [20127663](#)

Article Published Date : Feb 01, 2010

Authors : Keisuke Nakashima, Nantiga Virgona, Mio Miyazawa, Takashi Watanabe, Tomohiro Yano

Study Type : In Vitro Study

Additional Links

Substances : [Rice Bran : CK\(29\) : AC\(14\)](#), [Tocotrienols : CK\(21\) : AC\(16\)](#)

Diseases : [Chemotherapy-Induced Toxicity: Cisplatin : CK\(165\) : AC\(64\)](#), [Mesothelioma : CK\(30\) : AC\(9\)](#)

Pharmacological Actions : [Chemosensitizer : CK\(188\) : AC\(157\)](#)

Additional Keywords : [Drug-Plant-Vitamin Synergies : CK\(1011\) : AC\(275\)](#)

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