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## **Research Topic**

**Ashwagandha**

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## **Overview of Terms**

# Associated with Your Search Topic

68 Relevant Results for  
Diseases

Disease/Symptom	Cumulative Knowledge	Article Count
<a href="#">Oxidative Stress</a>	15	4
<a href="#">Alcohol Withdrawal</a>	12	2
<a href="#">Obsessive-Compulsive Disorder</a>	10	1
<a href="#">Breast Cancer</a>	6	4
<a href="#">Cancers: All</a>	6	6
<a href="#">Malignant Melanoma</a>	5	1
<a href="#">Alzheimer's Disease</a>	4	2
<a href="#">Hypothyroidism</a>	4	2
<a href="#">Insulin Resistance</a>	4	2
<a href="#">Skin Cancer</a>	4	2
<a href="#">Anxiety Disorders</a>	3	2
<a href="#">Gout</a>	3	2
<a href="#">Stress</a>	3	2
<a href="#">Anxiety</a>	2	1
<a href="#">Arsenic Poisoning</a>	2	1
<a href="#">Arthritis</a>	2	1
<a href="#">Aspergillosis</a>	2	1
<a href="#">Breast Cancer: Triple Negative</a>	2	1
<a href="#">Cholesterol: High</a>	2	1
<a href="#">Cognitive Decline/Dysfunction</a>	2	1
<a href="#">Colon Cancer</a>	2	1
<a href="#">Dalton's Ascitic Lymphoma</a>	2	1
<a href="#">Depression</a>	2	1
<a href="#">Diabetes Mellitus: Type 2</a>	2	1

<b>Duchenne's Muscular Dystrophy</b>	<b>2</b>	<b>1</b>
<b>Glioma</b>	<b>2</b>	<b>1</b>
<b>Heart Failure</b>	<b>2</b>	<b>1</b>
<b>High Fructose Diet</b>	<b>2</b>	<b>1</b>
<b>Hypertension</b>	<b>2</b>	<b>1</b>
<b>Hypertension: Pulmonary</b>	<b>2</b>	<b>1</b>
<b>Immune Disorders: Low Immune Function</b>	<b>2</b>	<b>1</b>
<b>Infertility: Male</b>	<b>2</b>	<b>1</b>
<b>Iron Overload</b>	<b>2</b>	<b>1</b>
<b>Lead Poisoning</b>	<b>2</b>	<b>1</b>
<b>Leukemia</b>	<b>2</b>	<b>2</b>
<b>Lipopolysaccharide-Induced Toxicity</b>	<b>2</b>	<b>1</b>
<b>Listeria Infections</b>	<b>2</b>	<b>1</b>
<b>Lupus Erythematosus: Systemic</b>	<b>2</b>	<b>1</b>
<b>Lymphoma</b>	<b>2</b>	<b>1</b>
<b>Malaria</b>	<b>2</b>	<b>1</b>
<b>Morphine Tolerance/Dependence</b>	<b>2</b>	<b>1</b>
<b>Neutropenia: Chemotherapy Induced</b>	<b>2</b>	<b>1</b>
<b>Opiate Tolerance</b>	<b>2</b>	<b>1</b>
<b>Oral Cancer</b>	<b>2</b>	<b>1</b>
<b>Osteoporosis</b>	<b>2</b>	<b>1</b>
<b>Over-active Libido</b>	<b>2</b>	<b>1</b>
<b>Pancreatic Cancer</b>	<b>2</b>	<b>1</b>
<b>Parkinson's Disease</b>	<b>2</b>	<b>1</b>
<b>Pesticide Toxicity</b>	<b>2</b>	<b>1</b>
<b>Vaccine-induced Toxicity</b>	<b>2</b>	<b>1</b>
<b>Acute Myeloid Leukemia</b>	<b>1</b>	<b>1</b>
<b>Aging</b>	<b>1</b>	<b>1</b>

<b>Cardiovascular Disease: Prevention</b>	<b>1</b>	<b>1</b>
<b>Cardiovascular Diseases</b>	<b>1</b>	<b>1</b>
<b>Chronic Myeloid Leukemia</b>	<b>1</b>	<b>1</b>
<b>Dementia</b>	<b>1</b>	<b>1</b>
<b>Foodborne Pathogens: Prevention/Food Preservation</b>	<b>1</b>	<b>1</b>
<b>Hyperuricemia</b>	<b>1</b>	<b>1</b>
<b>Intima Media Thickening</b>	<b>1</b>	<b>1</b>
<b>Memory Disorders</b>	<b>1</b>	<b>1</b>
<b>Myeloid Leukemia: Acute</b>	<b>1</b>	<b>1</b>
<b>Neurodegenerative Diseases</b>	<b>1</b>	<b>1</b>
<b>Osteoarthritis</b>	<b>1</b>	<b>1</b>
<b>Osteosarcoma</b>	<b>1</b>	<b>1</b>
<b>Ovarian Cancer</b>	<b>1</b>	<b>1</b>
<b>Prostate Cancer</b>	<b>1</b>	<b>1</b>
<b>Skin Cancer: Prevention</b>	<b>1</b>	<b>1</b>
<b>Tumors</b>	<b>1</b>	<b>1</b>

### 39 Relevant Results for Pharmacological Actions

<b>Pharmacological Action Name</b>	<b>Cumulative Knowledge</b>	<b>Article Count</b>
<b>Antioxidants</b>	<b>23</b>	<b>9</b>
<b>Superoxide Dismutase Up-regulation</b>	<b>15</b>	<b>4</b>
<b>Apoptotic</b>	<b>12</b>	<b>6</b>
<b>Catalase Up-Regulation</b>	<b>11</b>	<b>2</b>
<b>Antiproliferative</b>	<b>9</b>	<b>6</b>
<b>Chemopreventive</b>	<b>7</b>	<b>4</b>
<b>Anti-Inflammatory Agents</b>	<b>6</b>	<b>3</b>
<b>Tumor Suppressor Protein p53 Upregulation</b>	<b>5</b>	<b>3</b>
<b>NF-kappaB Inhibitor</b>	<b>3</b>	<b>2</b>

<b>Analgesics</b>	<b>2</b>	<b>1</b>
<b>Anti-Anxiety Agents</b>	<b>2</b>	<b>1</b>
<b>Anti-Fibrotic</b>	<b>2</b>	<b>1</b>
<b>Antidepressive Agents</b>	<b>2</b>	<b>1</b>
<b>Antinoceptive</b>	<b>2</b>	<b>1</b>
<b>Cytoprotective</b>	<b>2</b>	<b>1</b>
<b>Heat Shock Protein Down-Regulation</b>	<b>2</b>	<b>1</b>
<b>Hepatoprotective</b>	<b>2</b>	<b>1</b>
<b>Hypolipidemic</b>	<b>2</b>	<b>1</b>
<b>Interleukin-6 Downregulation</b>	<b>2</b>	<b>1</b>
<b>NF-kappa-B-inducing kinase (NIK) modulator</b>	<b>2</b>	<b>1</b>
<b>Neuroprotective Agents</b>	<b>2</b>	<b>1</b>
<b>STAT3 Inhibitor</b>	<b>2</b>	<b>1</b>
<b>Tumor Necrosis Factor (TNF) Alpha Inhibitor</b>	<b>2</b>	<b>1</b>
<b>Vascular Cell Adhesion Molecule-1 Inhibitor</b>	<b>2</b>	<b>1</b>
<b>Vascular Endothelial Growth Factor A Inhibitor</b>	<b>2</b>	<b>1</b>
<b>Vascular Endothelial Growth Factor Inhibitors</b>	<b>2</b>	<b>1</b>
<b>Anti-Angiogenic</b>	<b>1</b>	<b>1</b>
<b>Anti-metastatic</b>	<b>1</b>	<b>1</b>
<b>Anticarcinogenic Agents</b>	<b>1</b>	<b>1</b>
<b>Antimicrobial</b>	<b>1</b>	<b>1</b>
<b>Antineoplastic Agents</b>	<b>1</b>	<b>1</b>
<b>Cardioprotective</b>	<b>1</b>	<b>1</b>
<b>Cell cycle arrest</b>	<b>1</b>	<b>1</b>
<b>Food Preservatives</b>	<b>1</b>	<b>1</b>
<b>Heat Shock Protein Inducer</b>	<b>1</b>	<b>1</b>
<b>Immunomodulatory</b>	<b>1</b>	<b>1</b>
<b>Neuritogenic</b>	<b>1</b>	<b>1</b>

<b>Neurorestorative</b>	<b>1</b>	<b>1</b>
<b>Radiation-Sensitizing Agents</b>	<b>1</b>	<b>1</b>

## 22 Relevant Results for Substances

<b>Substance Name</b>	<b>Cumulative Knowledge</b>	<b>Article Count</b>
<b>Green Tea</b>	<b>22</b>	<b>8</b>
<b>Turmeric</b>	<b>22</b>	<b>9</b>
<b>Bacopa</b>	<b>20</b>	<b>7</b>
<b>Milk Thistle</b>	<b>20</b>	<b>7</b>
<b>Protandim</b>	<b>20</b>	<b>7</b>
<b>Bauhinia purpurea</b>	<b>2</b>	<b>1</b>
<b>Holy Basil</b>	<b>2</b>	<b>1</b>
<b>Shilajit</b>	<b>2</b>	<b>1</b>
<b>Triphala</b>	<b>2</b>	<b>1</b>
<b>Black Cohosh</b>	<b>1</b>	<b>1</b>
<b>Burdock</b>	<b>1</b>	<b>1</b>
<b>Echinacea</b>	<b>1</b>	<b>1</b>
<b>Flavonoids</b>	<b>1</b>	<b>1</b>
<b>Flaxseed</b>	<b>1</b>	<b>1</b>
<b>Garlic</b>	<b>1</b>	<b>1</b>
<b>Ginger</b>	<b>1</b>	<b>1</b>
<b>Ginseng</b>	<b>1</b>	<b>1</b>
<b>Gotu Kola</b>	<b>1</b>	<b>1</b>
<b>Indian Gooseberry</b>	<b>1</b>	<b>1</b>
<b>Mint</b>	<b>1</b>	<b>1</b>
<b>Polyphenols</b>	<b>1</b>	<b>1</b>
<b>Terminalia</b>	<b>1</b>	<b>1</b>

## 24 Relevant Results for Keywords

## 24 Relevant Results for Keywords

<b>Keyword Name</b>	<b>Cumulative Knowledge</b>	<b>Article Count</b>
<b>Plant Extracts</b>	<b>27</b>	<b>10</b>
<b>Dose Response</b>	<b>5</b>	<b>1</b>
<b>Selective Cytotoxicity</b>	<b>3</b>	<b>3</b>
<b>Ayurveda</b>	<b>2</b>	<b>2</b>
<b>Benzodiazepine Alternatives</b>	<b>2</b>	<b>1</b>
<b>Colony-Stimulating Factors (CSFs)</b>	<b>2</b>	<b>1</b>
<b>Drug Side Effect Attenuation</b>	<b>2</b>	<b>1</b>
<b>Drug-Plant-Vitamin Synergies</b>	<b>2</b>	<b>2</b>
<b>Drug: Alprazolam</b>	<b>2</b>	<b>1</b>
<b>GABAergic</b>	<b>2</b>	<b>1</b>
<b>Myeloid Progenitors</b>	<b>2</b>	<b>1</b>
<b>Natural Substances Versus Drugs</b>	<b>2</b>	<b>1</b>
<b>Phytotherapy</b>	<b>2</b>	<b>1</b>
<b>Safety of Natural Substances</b>	<b>2</b>	<b>1</b>
<b>Serotonergic</b>	<b>2</b>	<b>1</b>
<b>TH1 Immune Booster</b>	<b>2</b>	<b>1</b>
<b>Cancer Stem Cells</b>	<b>1</b>	<b>1</b>
<b>Chemotherapeutic Synergy: Cisplatin</b>	<b>1</b>	<b>1</b>
<b>Drug Synergy</b>	<b>1</b>	<b>1</b>
<b>Fruit Juice</b>	<b>1</b>	<b>1</b>
<b>Gene Expression Regulation</b>	<b>1</b>	<b>1</b>
<b>Lunar Cycles</b>	<b>1</b>	<b>1</b>
<b>Risk Reduction</b>	<b>1</b>	<b>1</b>
<b>Withanone</b>	<b>1</b>	<b>1</b>

## 2 Relevant Results for Problem Substances

Problem Substance Name	Cumulative Knowledge	Article Count
Selective Serotonin Reuptake Inhibitors (SSRIs)	10	1
Mouse Mammary Tumour Viruses (MMTV)	2	1

**View the Evidence.**  
**71 Research Articles in Total.**

**Category : Diseases**

## Acute Myeloid Leukemia (AC 1) (CK 1)

**Ashwaganda induces programmed cell death in human myeloid leukemia cells.**

**Pubmed Data** : Apoptosis. 2007 Nov;12(11):2115-33. PMID: [17874299](#)

**Article Published Date** : Nov 01, 2007

**Authors** : Fayaz Malik, Ajay Kumar, Shashi Bhushan, Sheema Khan, Aruna Bhatia, Krishan Avtar Suri, Ghulam Nabi Qazi, Jaswant Singh

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Acute Myeloid Leukemia : CK(89) : AC(46) , Chronic Myeloid Leukemia : CK(31) : AC(16) , Myeloid Leukemia: Acute : CK(3) : AC(3)

## Aging (AC 1) (CK 1)

**Ashwaganda contains a compound, withanone, which demonstrates antiaging properties in normal human**



## fibroblasts.

**Pubmed Data** : Basic Clin Pharmacol Toxicol. 2007 Feb;100(2):121-6. PMID: [19587106](#)

**Article Published Date** : Feb 01, 2007

**Authors** : Nashi Widodo, Navjot Shah, Didik Priyandoko, Tetsuro Ishii, Sunil C Kaul, Renu Wadhwa

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Ashwagandha : CK(154) : AC(74)

**Diseases** : Aging : CK(1633) : AC(434)

**Additional Keywords** : Withanone : CK(1) : AC(1)

## Alcohol Withdrawal (AC 2) (CK 12)

### A polyherbal formula is comparable to the benzodiazepine drug alprazolam in reducing ethanol withdrawal-induced anxiety behavior.

**Pubmed Data** : Evid Based Complement Alternat Med. 2011;2011. Epub 2010 Sep 7. PMID: [20953426](#)

**Article Published Date** : Jan 01, 2011

**Authors** : L Mohan, U S C Rao, H N Gopalakrishna, V Nair

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Green Tea : CK(1961) : AC(561), Holy Basil : CK(111) : AC(44), Shilajit : CK(22) : AC(8), Triphala : CK(11) : AC(7)

**Diseases** : Alcohol Withdrawal : CK(78) : AC(15), Anxiety Disorders : CK(1215) : AC(180)

**Additional Keywords** : Benzodiazepine Alternatives : CK(26) : AC(4), Drug: Alprazolam : CK(2) : AC(2), Natural Substances Versus Drugs : CK(1694) : AC(300)

### Ashwaganda attenuates withdrawal-induced anxiety due to chronic ethanol consumption.

**Pubmed Data** : Indian J Exp Biol. 2008 Jun;46(6):470-5. PMID: [18697607](#)

**Article Published Date** : Jun 01, 2008

**Authors** : Girdhari Lal Gupta, Avtar Chand Rana

**Study Type** : Human Study

### Additional Links

**Substances** : Ashwagandha : CK(154) : AC(74)

**Diseases** : Alcohol Withdrawal : CK(78) : AC(15)

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## Alzheimer's Disease (AC 2) (CK 4)

**Ashwaganda contains compounds which may ameliorate neuronal dysfunction in Alzheimer's disease.**

**Pubmed Data** : Eur J Neurosci. 2006 Mar;23(6):1417-26. PMID: [16553605](#)

**Article Published Date** : Mar 01, 2006

**Authors** : Tomoharu Kuboyama, Chihiro Tohda, Katsuko Komatsu

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Alzheimer's Disease : CK(1287) : AC(379)

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**Ashwaganda reverses some aspects of Alzheimer's disease pathology.**

**Pubmed Data** : Proc Natl Acad Sci U S A. 2012 Jan 30. Epub 2012 Jan 30. PMID: [22308347](#)

**Article Published Date** : Jan 30, 2012

**Authors** : Neha Sehgal, Alok Gupta, Rupanagudi Khader Valli, Shanker Datt Joshi, Jessica T Mills, Edith Hamel, Pankaj Khanna, Subhash Chand Jain, Suman S Thakur, Vijayalakshmi Ravindranath

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Alzheimer's Disease : CK(1287) : AC(379)

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## Anxiety (AC 1) (CK 2)

**W. somnifera has adaptogenic, anxiolytic and antidepressant activities.**

**Pubmed Data** : J Intercult Ethnopharmacol. 2016 Jun-Aug;5(3):274-7. Epub 2016 Apr 21. PMID: [27366354](#)

**Article Published Date** : May 31, 2016

**Authors** : Amitabha Dey, Shyam Sunder Chatterjee, Vikas Kumar

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Anxiety : CK(26) : AC(5), Depression : CK(1832) : AC(265), Stress : CK(621) : AC(102)

**Pharmacological Actions** : Anti-Anxiety Agents : CK(334) : AC(56), Antidepressive Agents : CK(992) : AC(160)

**Additional Keywords** : Plant Extracts : CK(7481) : AC(2461)

## Anxiety Disorders (AC 2) (CK 3)

**A polyherbal formula is comparable to the benzodiazepine drug alprazolam in reducing ethanol withdrawal-induced anxiety behavior.**

**Pubmed Data** : Evid Based Complement Alternat Med. 2011;2011. Epub 2010 Sep 7. PMID: [20953426](#)

**Article Published Date** : Jan 01, 2011

**Authors** : L Mohan, U S C Rao, H N Gopalakrishna, V Nair

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68), Green Tea : CK(1961) : AC(561), Holy Basil : CK(111) : AC(44), Shilajit : CK(22) : AC(8), Triphala : CK(11) : AC(7)

**Diseases** : Alcohol Withdrawal : CK(78) : AC(15), Anxiety Disorders : CK(1215) : AC(180)

**Additional Keywords** : Benzodiazepine Alternatives : CK(26) : AC(4), Drug: Alprazolam : CK(2) : AC(2), Natural Substances Versus Drugs : CK(1694) : AC(300)

**Ashwagandha intervention resulted in greater score improvements (significantly in most cases) than placebo in outcomes on anxiety or stress scales.**

**Pubmed Data** : J Altern Complement Med. 2014 Dec ;20(12):901-8. PMID: [25405876](#)

**Article Published Date** : Nov 30, 2014

**Authors** : Morgan A Pratte, Kaushal B Nanavati, Virginia Young, Christopher P Morley

**Study Type** : Review

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Anxiety Disorders : CK(1215) : AC(180), Stress : CK(621) : AC(102)

**Additional Keywords** : Ayurveda : CK(4) : AC(4), Plant Extracts : CK(7438) : AC(2449)

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## Arsenic Poisoning (AC 1) (CK 2)

**Withania somnifera possesses phyto remedial effect and it is one of the best antidotes against arsenic-induced reproductive toxicity.**

**Pubmed Data** : Avicenna J Phytomed. 2015 Jul-Aug;5(4):355-64. PMID: [26445714](#)

**Article Published Date** : Jun 30, 2015

**Authors** : Arun Kumar, Ranjit Kumar, Mohammad Samuir Rahman, Mohammad Asif Iqubal, Gautam Anand, Pintoo Kumar Niraj, Mohammad Ali

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Arsenic Poisoning : CK(160) : AC(49)

**Pharmacological Actions** : Antioxidants : CK(7275) : AC(2666), Cytoprotective : CK(184) : AC(92)

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## Arthritis (AC 1) (CK 2)

**Ashwaganda reverses the symptoms of gouty arthritis in an experimental model with rats.**

**Pubmed Data** : Chem Biol Interact. 2006 Dec 15;164(3):174-80. Epub 2006 Nov 7. PMID: [17084827](#)

**Article Published Date** : Dec 15, 2006

**Authors** : Mahaboobkhan Rasool, Palaninathan Varalakshmi

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Arthritis : CK(1964) : AC(312), Gout : CK(131) : AC(29)

## Aspergillosis (AC 1) (CK 2)

### Ashwaganda protects against systemic Aspergillus infection.

**Pubmed Data** : Immunopharmacol Immunotoxicol. 1998 Feb;20(1):191-8. PMID: [9543708](#)

**Article Published Date** : Feb 01, 1998

**Authors** : J N Dhuley

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(154) : AC(74)

**Diseases** : Aspergillosis : CK(10) : AC(10)

## Breast Cancer (AC 4) (CK 6)

### An extract of Withania somnifera reduced the number of mammary carcinomas that developed and reduced the rate of cell division in the carcinomas.

**Pubmed Data** : Anticancer Res. 2014 Nov ;34(11):6327-32. PMID: [25368231](#)

**Article Published Date** : Oct 31, 2014

**Authors** : Kamel F Khazal, Donald L Hill, Clinton J Grubbs

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Breast Cancer : CK(3505) : AC(1056), Breast Cancer: Triple Negative : CK(257) : AC(139)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4578) : AC(1604), Antiproliferative : CK(2471) : AC(1680), Chemopreventive : CK(2829) : AC(783)

**Additional Keywords** : Phytotherapy : CK(1186) : AC(218), Plant Extracts : CK(7438) : AC(2449)

**Problem Substances** : Mouse Mammary Tumour Viruses (MMTV) : CK(11) : AC(2)

**Ashwaganda has an antiproliferative effect against**

## human breast cancer cells.

**Pubmed Data** : Nutr Cancer. 2008;60 Suppl 1:51-60. PMID: [19003581](#)

**Article Published Date** : Jan 01, 2008

**Authors** : Silvia D Stan, Yan Zeng, Shivendra V Singh

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Breast Cancer : CK(3505) : AC(1056)

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## This reviews natural plants as breast cancer preventatives or use in treatments.

**Pubmed Data** : Saudi Pharm J. 2016 May ;24(3):233-40. Epub 2016 May 5. PMID: [27275107](#)

**Article Published Date** : Apr 30, 2016

**Authors** : Munazza Shareef, Muhammad Aqeel Ashraf, Maliha Sarfraz

**Study Type** : Review

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68) , Black Cohosh : CK(61) : AC(20) , Burdock : CK(42) : AC(26) , Echinacea : CK(529) : AC(99) , Flavonoids : CK(1215) : AC(379) , Flaxseed : CK(453) : AC(90) , Garlic : CK(712) : AC(225) , Ginseng : CK(473) : AC(133) , Polyphenols : CK(930) : AC(334) , Turmeric : CK(4951) : AC(2343)

**Diseases** : Breast Cancer : CK(3505) : AC(1056)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659) , Antiproliferative : CK(2471) : AC(1680) , Chemopreventive : CK(2829) : AC(783)

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## Withaferin-A, a compound found within Ashwaganda, exhibits in vivo anticancer activity in human breast cancer cells.

**Pubmed Data** : Cancer Res. 2008 Sep 15;68(18):7661-9. PMID: [18794155](#)

**Article Published Date** : Sep 15, 2008

**Authors** : Silvia D Stan, Eun-Ryeong Hahm, Renaud Warin, Shivendra V Singh

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Breast Cancer : CK(3505) : AC(1056)

**Pharmacological Actions** : Apoptotic : CK(2952) : AC(2071)

---

## Breast Cancer: Triple Negative (AC 1) (CK 2)

**An extract of *Withania somnifera* reduced the number of mammary carcinomas that developed and reduced the rate of cell division in the carcinomas.**

**Pubmed Data** : Anticancer Res. 2014 Nov ;34(11):6327-32. PMID: [25368231](#)

**Article Published Date** : Oct 31, 2014

**Authors** : Kamel F Khazal, Donald L Hill, Clinton J Grubbs

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Breast Cancer : CK(3505) : AC(1056), Breast Cancer: Triple Negative : CK(257) : AC(139)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4578) : AC(1604), Antiproliferative : CK(2471) : AC(1680), Chemopreventive : CK(2829) : AC(783)

**Additional Keywords** : Phytotherapy : CK(1186) : AC(218), Plant Extracts : CK(7438) : AC(2449)

**Problem Substances** : Mouse Mammary Tumour Viruses (MMTV) : CK(11) : AC(2)

---

## Cancers: All (AC 6) (CK 6)

**Ashwaganda has pronounced and diverse anti-cancer activity.**

**Pubmed Data** : Cancer Lett. 2008 Jan 9. PMID: [18191020](#)

**Article Published Date** : Jan 09, 2008

**Authors** : Nashi Widodo, Yasuomi Takagi, Bhupal G Shrestha, Tetsuro Ishii, Sunil C Kaul, Renu Wadhwa

**Study Type** : Commentary

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Cancers: All : CK(14469) : AC(4575)

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## Ashwaganda has significant anti-angiogenesis activity, indicating its possible utility for treating cancer.

**Pubmed Data** : Angiogenesis. 2004;7(2):115-22. PMID: [15516832](#)

**Article Published Date** : Jan 01, 2004

**Authors** : Royce Mohan, Hans J Hammers, Paola Bargagna-Mohan, Xiaoguo H Zhan, Christopher J Herbstritt, Antonio Ruiz, Li Zhang, Art D Hanson, Barry P Conner, John Rougas, Victor S Pribluda

**Study Type** : Commentary

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Cancers: All : CK(14469) : AC(4575)

**Pharmacological Actions** : Anti-Angiogenic : CK(195) : AC(136)

---

## Ashwaganda is a novel and ideal complementary therapy for integrative oncology care.

**Pubmed Data** : Wien Klin Wochenschr. 2000 Jul 28;112(14):610-6. PMID: [17176166](#)

**Article Published Date** : Jul 28, 2000

**Authors** : Marie Winters

**Study Type** : Commentary

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Cancers: All : CK(14469) : AC(4575)

**Additional Keywords** : Drug-Plant-Vitamin Synergies : CK(965) : AC(266)

---

## Ashwaganda is a potent and relatively safe radiosensitizer/chemotherapeutic agent.

**Pubmed Data** : Indian J Exp Biol. 1996 Oct;34(10):927-32. PMID: [9055640](#)

**Article Published Date** : Oct 01, 1996

**Authors** : P U Devi

**Study Type** : Commentary

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Cancers: All : CK(14469) : AC(4575)

**Pharmacological Actions** : Radiation-Sensitizing Agents : CK(1) : AC(1)

**Additional Keywords** : Drug-Plant-Vitamin Synergies : CK(965) : AC(266)

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## Ashwaganda selectively kills cancer cells.

**Pubmed Data** : PLoS One. 2010;5(10):e13536. Epub 2010 Oct 21. PMID: [20975835](#)

**Article Published Date** : Jan 01, 2010



**Authors** : Nashi Widodo, Didik Priyandoko, Navjot Shah, Renu Wadhwa, Sunil C Kaul

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Cancers: All : CK(14469) : AC(4575)

**Additional Keywords** : Selective Cytotoxicity : CK(158) : AC(112)

---

**The present review summarizes the key preclinical studies demonstrating anticancer effects of withaferin along with its molecular targets and mechanisms related to its anticancer effects.**

**Pubmed Data** : Enzymes. 2015 ;37:73-94. Epub 2015 Jul 29. PMID: [26298456](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Abbas K Samadi

**Study Type** : Review

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Cancers: All : CK(14469) : AC(4575)

**Pharmacological Actions** : Apoptotic : CK(2952) : AC(2071)

**Additional Keywords** : Ayurveda : CK(4) : AC(4)

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## Cardiovascular Disease: Prevention (AC 1) (CK 1)

**Withaferin A is a potent lead compound against multiple targets associated with cardiovascular disease.**

**Pubmed Data** : Curr Comput Aided Drug Des. 2015 Nov 5. Epub 2015 Nov 5. PMID: [26548552](#)

**Article Published Date** : Nov 04, 2015

**Authors** : Rekha Ravindran, Nitika Sharma, Sujata Roy, A R Thakur, G Subhadra, K Sriram, Jamuna Devi, Johanna Rajkumar

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Cardiovascular Disease: Prevention : CK(3187) : AC(425) , Cardiovascular Diseases : CK(7145) : AC(903)

**Pharmacological Actions** : Cardioprotective : CK(1594) : AC(408)

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## Cardiovascular Diseases (AC 1) (CK 1)

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**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Cardiovascular Disease: Prevention : CK(3187) : AC(425) , Cardiovascular Diseases : CK(7145) : AC(903)

**Pharmacological Actions** : Cardioprotective : CK(1594) : AC(408)

---

## Cholesterol: High (AC 1) (CK 2)

**Ashwaganda has significant cholesterol lowering and blood lipid modulating effects in the rat experimental model.**

**Pubmed Data** : Caries Res. 2001 Mar-Apr;35(2):125-8. PMID: [16713218](#)

**Article Published Date** : Mar 01, 2001

**Authors** : Nishant P Visavadiya, A V R L Narasimhacharya

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Cholesterol: High : CK(1226) : AC(195)

**Pharmacological Actions** : Hypolipidemic : CK(1173) : AC(248)

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# Chronic Myeloid Leukemia (AC 1) (CK 1)

## Ashwaganda induces programmed cell death in human myeloid leukemia cells.

**Pubmed Data** : Apoptosis. 2007 Nov;12(11):2115-33. PMID: [17874299](#)

**Article Published Date** : Nov 01, 2007

**Authors** : Fayaz Malik, Ajay Kumar, Shashi Bhushan, Sheema Khan, Aruna Bhatia, Krishan Avtar Suri, Ghulam Nabi Qazi, Jaswant Singh

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Acute Myeloid Leukemia : CK(89) : AC(46) , Chronic Myeloid Leukemia : CK(31) : AC(16) , Myeloid Leukemia: Acute : CK(3) : AC(3)

# Cognitive Decline/Dysfunction (AC 1) (CK 2)

## Ashwaganda attenuates insecticide-induced inhibition and impairment of cognitive function.

**Pubmed Data** : Int Immunopharmacol. 2003 Sep;3(9):1313-24. PMID: [20521626](#)

**Article Published Date** : Sep 01, 2003

**Authors** : C S Yadav, V Kumar, S G Suke, R S Ahmed, P K Mediratta, B D Banerjee

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Cognitive Decline/Dysfunction : CK(1140) : AC(213) , Pesticide Toxicity : CK(190) : AC(60)

**Pharmacological Actions** : Neuroprotective Agents : CK(2254) : AC(1063)

**Additional Keywords** : Plant Extracts : CK(7438) : AC(2449)

## Colon Cancer (AC 1) (CK 2)

**Withaferin-A is able to inhibit not only the proliferation of HCT116 cells but also attenuated the tumor growth in vivo by suppressing STAT3 signaling pathways.**

**Pubmed Data** : J Cancer Prev. 2015 Sep ;20(3):185-92. PMID: [26473157](#)

**Article Published Date** : Aug 31, 2015

**Authors** : Bu Young Choi, Bong-Woo Kim

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Colon Cancer : CK(746) : AC(428)

**Pharmacological Actions** : Antiproliferative : CK(2471) : AC(1680), STAT3 Inhibitor : CK(53) : AC(31)

## Dalton's Ascitic Lymphoma (AC 1) (CK 2)

**Ashwaganda has significant therapeutic effects against Dalton's Ascitic Lymphoma.**

**Pubmed Data** : Exp Lung Res. 2000 Dec;26(8):709-30. PMID: [15234777](#)

**Article Published Date** : Dec 01, 2000

**Authors** : A J M Christina, D Gladwin Joseph, M Packialakshmi, R Kothai, S Jerry Heison Robert, N Chidambaranathan, M Ramasamy

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(154) : AC(74)

**Diseases** : Dalton's Ascitic Lymphoma : CK(2) : AC(1) , Lymphoma : CK(253) : AC(83)

## Dementia (AC 1) (CK 1)

**Ashwaganda contains compounds which promote the formation of dendrites, indicating its therapeutic potential in the dementia brain.**

**Pubmed Data** : Neuroreport. 2000 Jun 26;11(9):1981-5. PMID: [10884056](#)

**Article Published Date** : Jun 26, 2000

**Authors** : C Tohda, T Kuboyama, K Komatsu

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(154) : AC(74)

**Diseases** : [Dementia](#) : CK(571) : AC(79)

**Pharmacological Actions** : [Neurorestorative](#) : CK(71) : AC(21)

## Depression (AC 1) (CK 2)

**W. somnifera has adaptogenic, anxiolytic and antidepressant activities.**

**Pubmed Data** : J Intercult Ethnopharmacol. 2016 Jun-Aug;5(3):274-7. Epub 2016 Apr 21. PMID: [27366354](#)

**Article Published Date** : May 31, 2016

**Authors** : Amitabha Dey, Shyam Sunder Chatterjee, Vikas Kumar

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Anxiety](#) : CK(26) : AC(5), [Depression](#) : CK(1832) : AC(265), [Stress](#) : CK(621) : AC(102)

**Pharmacological Actions** : [Anti-Anxiety Agents](#) : CK(334) : AC(56), [Antidepressive Agents](#) : CK(992) : AC(160)

**Additional Keywords** : [Plant Extracts](#) : CK(7481) : AC(2461)

# Diabetes Mellitus: Type 2 (AC 1) (CK 2)

## Ashwaganda significantly improves insulin sensitivity in Non-Insulin Dependent Diabetes Mellitus.

**Pubmed Data** : Basic Clin Pharmacol Toxicol. 2008 Jun;102(6):498-503. Epub 2008 Mar 16. PMID: [18346053](#)

**Article Published Date** : Jun 01, 2008

**Authors** : Tarique Anwer, Manju Sharma, Krishna Kolappa Pillai, Muzaffar Iqbal

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Diabetes Mellitus: Type 2 : CK(3384) : AC(595), Insulin Resistance : CK(1670) : AC(343)

# Duchenne's Muscular Dystrophy (AC 1) (CK 2)

## A poly-herbal formula named Protandim reduces oxidative stress in a mouse model of Duchenne muscular dystrophy.

**Pubmed Data** : J Diet Suppl. 2010 Jun 1;7(2):159-178. PMID: [20740052](#)

**Article Published Date** : Jun 01, 2010

**Authors** : Muhammad Muddasir Qureshi, Warren C McClure, Nicole L Arevalo, Rick E Rabon, Benjamin Mohr, Swapan K Bose, Joe M McCord, Brian S Tseng

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4968) : AC(2348)

**Diseases** : Duchenne's Muscular Dystrophy : CK(12) : AC(6)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659)

# Foodborne Pathogens: Prevention/Food Preservation (AC 1) (CK 1)

**This study confirmed the potential of selected extracts of spices as effective natural food preservative in juices.**

**Pubmed Data** : Int J Microbiol. 2016 ;2016:9015802. Epub 2016 Jan 4. PMID: [26880927](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Romika Dhiman, Neeraj Aggarwal, Kamal Rai Aneja, Manpreet Kaur

**Study Type** : In Vitro Study

## **Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68), Ginger : CK(676) : AC(175), Gotu Kola : CK(50) : AC(20), Indian Gooseberry : CK(1) : AC(1), Mint : CK(380) : AC(60), Terminalia : CK(25) : AC(16), Turmeric : CK(4951) : AC(2343)

**Diseases** : Foodborne Pathogens: Prevention/Food Preservation : CK(19) : AC(18)

**Pharmacological Actions** : Antimicrobial : CK(292) : AC(127), Food Preservatives : CK(1) : AC(1)

**Additional Keywords** : Fruit Juice : CK(85) : AC(11), Plant Extracts : CK(7438) : AC(2449)

# Glioma (AC 1) (CK 2)

**A ashwagandha water extract suppressed the tumor growth of glioma cells.**

**Pubmed Data** : Mol Neurobiol. 2015 Jul 26. Epub 2015 Jul 26. PMID: [26208698](#)

**Article Published Date** : Jul 25, 2015

**Authors** : Hardeep Kataria, Sushil Kumar, Harshita Chaudhary, Gurcharan Kaur

**Study Type** : Animal Study, In Vitro Study

## **Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Glioma : CK(174) : AC(84)

**Pharmacological Actions** : Antiproliferative : CK(2471) : AC(1680), Heat Shock Protein Down-Regulation : CK(1) : AC(1), NF-kappaB Inhibitor : CK(1113) : AC(693), Vascular Endothelial Growth Factor Inhibitors : CK(123) : AC(61)

**Additional Keywords** : Plant Extracts : CK(7438) : AC(2449)

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## Gout (AC 2) (CK 3)

### Ashwaganda reverses the symptoms of gouty arthritis in an experimental model with rats.

**Pubmed Data** : Chem Biol Interact. 2006 Dec 15;164(3):174-80. Epub 2006 Nov 7. PMID: [17084827](#)

**Article Published Date** : Dec 15, 2006

**Authors** : Mahaboobkhan Rasool, Palaninathan Varalakshmi

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Arthritis : CK(1964) : AC(312), Gout : CK(131) : AC(29)

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### Withaferin A, a compound found within Ashwaganda, exhibits a strong anti-inflammatory effect against gouty arthritis.

**Pubmed Data** : J Pharm Pharm Sci. 2008;11(4):46-55. PMID: [19183513](#)

**Article Published Date** : Jan 01, 2008

**Authors** : Evan Prince Sabina, Sonal Chandal, Mahaboob Khan Rasool

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(154) : AC(74)

**Diseases** : Gout : CK(131) : AC(29), Hyperuricemia : CK(217) : AC(48)

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## Heart Failure (AC 1) (CK 2)

### A multi-herbal product called Protandim prevents fibrosis and capillary loss and preserves right ventricular function



## in rats.

**Pubmed Data** : Circulation. 2009 Nov 17;120(20):1951-60. Epub 2009 Nov 2. PMID: [19884466](#)

**Article Published Date** : Nov 17, 2009

**Authors** : Harm J Bogaard, Ramesh Natarajan, Scott C Henderson, Carlin S Long, Donatas Kraskauskas, Lisa Smithson, Ramzi Ockaili, Joe M McCord, Norbert F Voelkel

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68) , Bacopa : CK(125) : AC(52) , Green Tea : CK(1957) : AC(558) , Milk Thistle : CK(281) : AC(64) , Protandim : CK(20) : AC(7) , Turmeric : CK(4968) : AC(2348)

**Diseases** : Heart Failure : CK(918) : AC(124) , Hypertension : CK(2944) : AC(404) , Hypertension: Pulmonary : CK(92) : AC(35)

**Pharmacological Actions** : Anti-Fibrotic : CK(44) : AC(28) , Vascular Endothelial Growth Factor A Inhibitor : CK(132) : AC(71)

## High Fructose Diet (AC 1) (CK 2)

### Oral administration of WSR has analgesic and anti-inflammatory effects in fructose drinking water rats and causes improved insulin resistance index.

**Pubmed Data** : J Basic Clin Physiol Pharmacol. 2016 Jun 1 ;27(4):387-91. PMID: [27383871](#)

**Article Published Date** : May 31, 2016

**Authors** : Mohammad Reza Shahraki, Zahra Samadi Noshahr, Hassan Ahmadvand, Alireza Nakhaie

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : High Fructose Diet : CK(88) : AC(25) , Insulin Resistance : CK(1670) : AC(343)

**Pharmacological Actions** : Analgesics : CK(1315) : AC(215) , Anti-Inflammatory Agents : CK(4615) : AC(1613) , Antinoceptive : CK(189) : AC(49) , Interleukin-6 Downregulation : CK(1081) : AC(339) , Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1766) : AC(649)

## Hypertension (AC 1) (CK 2)

## A multi-herbal product called Protandim prevents fibrosis and capillary loss and preserves right ventricular function in rats.

**Pubmed Data** : Circulation. 2009 Nov 17;120(20):1951-60. Epub 2009 Nov 2. PMID: [19884466](#)

**Article Published Date** : Nov 17, 2009

**Authors** : Harm J Bogaard, Ramesh Natarajan, Scott C Henderson, Carlin S Long, Donatas Kraskauskas, Lisa Smithson, Ramzi Ockaili, Joe M McCord, Norbert F Voelkel

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68) , Bacopa : CK(125) : AC(52) , Green Tea : CK(1957) : AC(558) , Milk Thistle : CK(281) : AC(64) , Protandim : CK(20) : AC(7) , Turmeric : CK(4968) : AC(2348)

**Diseases** : Heart Failure : CK(918) : AC(124) , Hypertension : CK(2944) : AC(404) , Hypertension: Pulmonary : CK(92) : AC(35)

**Pharmacological Actions** : Anti-Fibrotic : CK(44) : AC(28) , Vascular Endothelial Growth Factor A Inhibitor : CK(132) : AC(71)

## Hypertension: Pulmonary (AC 1) (CK 2)

## A multi-herbal product called Protandim prevents fibrosis and capillary loss and preserves right ventricular function in rats.

**Pubmed Data** : Circulation. 2009 Nov 17;120(20):1951-60. Epub 2009 Nov 2. PMID: [19884466](#)

**Article Published Date** : Nov 17, 2009

**Authors** : Harm J Bogaard, Ramesh Natarajan, Scott C Henderson, Carlin S Long, Donatas Kraskauskas, Lisa Smithson, Ramzi Ockaili, Joe M McCord, Norbert F Voelkel

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68) , Bacopa : CK(125) : AC(52) , Green Tea : CK(1957) : AC(558) , Milk Thistle : CK(281) : AC(64) , Protandim : CK(20) : AC(7) , Turmeric : CK(4968) : AC(2348)

**Diseases** : Heart Failure : CK(918) : AC(124) , Hypertension : CK(2944) : AC(404) , Hypertension: Pulmonary : CK(92) : AC(35)

**Pharmacological Actions** : Anti-Fibrotic : CK(44) : AC(28) , Vascular Endothelial Growth Factor A Inhibitor : CK(132) : AC(71)

## Hyperuricemia (AC 1) (CK 1)

**Withaferin A, a compound found within Ashwaganda, exhibits a strong anti-inflammatory effect against gouty arthritis.**

**Pubmed Data** : J Pharm Pharm Sci. 2008;11(4):46-55. PMID: [19183513](#)

**Article Published Date** : Jan 01, 2008

**Authors** : Evan Prince Sabina, Sonal Chandal, Mahaboob Khan Rasool

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(154) : AC(74)

**Diseases** : Gout : CK(131) : AC(29), Hyperuricemia : CK(217) : AC(48)

## Hypothyroidism (AC 2) (CK 4)

**Ashwaganda and Bauhinia purpurea stimulate thyroid function.**

**Pubmed Data** : J Ethnopharmacol. 1999 Nov 1;67(2):233-9. PMID: [10619390](#)

**Article Published Date** : Nov 01, 1999

**Authors** : S Panda, A Kar

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(154) : AC(74), Bauhinia purpurea : CK(10) : AC(6)

**Diseases** : Hypothyroidism : CK(582) : AC(89)

**Ashwaganda stimulates thyroid function by increasing T3 and T4 concentrations.**

**Pubmed Data** : J Pharm Pharmacol. 1998 Sep;50(9):1065-8. PMID: [9811169](#)

**Article Published Date** : Sep 01, 1998

**Authors** : S Panda, A Kar

**Study Type** : Animal Study

### Additional Links

**Substances** : [Ashwagandha](#) : CK(154) : AC(74)

**Diseases** : [Hypothyroidism](#) : CK(582) : AC(89)

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## Immune Disorders: Low Immune Function (AC 1) (CK 2)

### Ashwaganda improves immune function by increasing Th1 (cell-mediated) immunity. - Article 2.

**Pubmed Data** : Life Sci. 2007 Mar 27;80(16):1525-38. Epub 2007 Jan 25. PMID: [17336338](#)

**Article Published Date** : Mar 27, 2007

**Authors** : Fayaz Malik, Jaswant Singh, Anamika Khajuria, Krishan A Suri, Naresh K Satti, Surjeet Singh, Maharaj K Kaul, Arun Kumar, Aruna Bhatia, Ghulam N Qazi

**Study Type** : Animal Study

### Additional Links

**Substances** : [Ashwagandha](#) : CK(154) : AC(74)

**Diseases** : [Immune Disorders: Low Immune Function](#) : CK(489) : AC(118)

**Additional Keywords** : [TH1 Immune Booster](#) : CK(4) : AC(1)

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## Infertility: Male (AC 1) (CK 2)

### Ashwaganda improves semen quality in stress-related male fertility.

**Pubmed Data** : Evid Based Complement Alternat Med. 2009 Sep 29. PMID: [19789214](#)

**Article Published Date** : Sep 29, 2009

**Authors** : Abbas Ali Mahdi, Kamla Kant Shukla, Mohammad Kaleem Ahmad, Singh Rajender, Satya Narain Shankhwar, Vishwajeet Singh, Deepansh Dalela

**Study Type** : Animal Study

### Additional Links

**Substances** : [Ashwagandha](#) : CK(154) : AC(74)

**Diseases** : [Infertility: Male](#) : CK(383) : AC(93)

## Insulin Resistance (AC 2) (CK 4)

### Ashwaganda significantly improves insulin sensitivity in Non-Insulin Dependent Diabetes Mellitus.

**Pubmed Data** : Basic Clin Pharmacol Toxicol. 2008 Jun;102(6):498-503. Epub 2008 Mar 16. PMID: [18346053](#)

**Article Published Date** : Jun 01, 2008

**Authors** : Tarique Anwer, Manju Sharma, Krishna Kolappa Pillai, Muzaffar Iqbal

**Study Type** : Animal Study

#### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Diabetes Mellitus: Type 2 : CK(3384) : AC(595), Insulin Resistance : CK(1670) : AC(343)

### Oral administration of WSR has analgesic and anti-inflammatory effects in fructose drinking water rats and causes improved insulin resistance index.

**Pubmed Data** : J Basic Clin Physiol Pharmacol. 2016 Jun 1 ;27(4):387-91. PMID: [27383871](#)

**Article Published Date** : May 31, 2016

**Authors** : Mohammad Reza Shahraki, Zahra Samadi Noshahr, Hassan Ahmadvand, Alireza Nakhaie

**Study Type** : Animal Study

#### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : High Fructose Diet : CK(88) : AC(25), Insulin Resistance : CK(1670) : AC(343)

**Pharmacological Actions** : Analgesics : CK(1315) : AC(215), Anti-Inflammatory Agents : CK(4615) : AC(1613), Antinoceptive : CK(189) : AC(49), Interleukin-6 Downregulation : CK(1081) : AC(339), Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1766) : AC(649)

## Intima Media Thickening (AC 1) (CK 1)

## A multi-herbal product called Protandim attenuates intima hyperplasia.

**Pubmed Data** : Free Radic Biol Med. 2011 Mar 15;50(6):700-9. Epub 2010 Dec 15. PMID: [21167278](#)

**Article Published Date** : Mar 15, 2011

**Authors** : Binata Joddar, Rashmeet K Reen, Michael S Firstenberg, Saradhadevi Varadharaj, Joe M McCord, Jay L Zweier, Keith J Gooch

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4968) : AC(2348)

**Diseases** : Intima Media Thickening : CK(153) : AC(34)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), Catalase Up-Regulation : CK(118) : AC(42), Superoxide Dismutase Up-regulation : CK(508) : AC(171)

## Iron Overload (AC 1) (CK 2)

### Ashwaganda's hepatoprotective properties protects against iron overload toxicity.

**Pubmed Data** : Phytother Res. 2000 Nov;14(7):568-70. PMID: [11054855](#)

**Article Published Date** : Nov 01, 2000

**Authors** : A Bhattacharya, M Ramanathan, S Ghosal, S K Bhattacharya

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Iron Overload : CK(31) : AC(17)

**Pharmacological Actions** : Hepatoprotective : CK(1383) : AC(592)

## Lead Poisoning (AC 1) (CK 2)

### Ashwaganda ameliorates the oxidative damage associated with lead poisoning.

**Pubmed Data** : Hematol Oncol. 2009 Mar;27(1):17-22. PMID: [10816336](#)

**Article Published Date** : Mar 01, 2009

**Authors** : S S Chaurasia, S Panda, A Kar

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(154) : AC(74)

**Diseases** : [Lead Poisoning](#) : CK(201) : AC(58)

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## Leukemia (AC 2) (CK 2)

**Ashwaganda holds promise as a new, alternative, inexpensive chemotherapeutic agent for the treatment of patients with leukemia of both lymphoid and myeloid origin.**

**Pubmed Data** : Apoptosis. 2008 Nov 6. [Epub ahead of print] PMID: [18987975](#)

**Article Published Date** : Nov 06, 2008

**Authors** : Chandan Mandal, Avijit Dutta, Asish Mallick, Sarmila Chandra, Laxminarain Misra, Rajender S Sangwan, Chitra Mandal

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Leukemia](#) : CK(965) : AC(385)

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**Ashwaganda induces programmed cell death in human leukemia cells.**

**Pubmed Data** : Apoptosis. 2008 Nov 11. [Epub ahead of print] PMID: [19002588](#)

**Article Published Date** : Nov 11, 2008

**Authors** : Jung Hwa Oh, Tae-Jin Lee, Sang Hyun Kim, Yung Hyun Choi, Sang Han Lee, Jin Man Lee, Young-Ho Kim, Jong-Wook Park, Taeg Kyu Kwon

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Leukemia](#) : CK(965) : AC(385)

**Pharmacological Actions** : [NF-kappaB Inhibitor](#) : CK(1113) : AC(693)

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# Lipopolysaccharide-Induced Toxicity (AC 1) (CK 2)

## Withaferin A attenuates lipopolysaccharide-induced acute lung injury in neonatal rats.

**Pubmed Data** : Cell Mol Biol (Noisy-le-grand). 2015 ;61(3):102-6. Epub 2015 Jul 31. PMID: [26255139](#)

**Article Published Date** : Dec 31, 2014

**Authors** : S Gao, H Li, X-Q Zhou, J-B You, D-N Tu, G Xia, J-X Jiang, C Xin

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Lipopolysaccharide-Induced Toxicity : CK(358) : AC(217) , Oxidative Stress : CK(3836) : AC(1369)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4615) : AC(1613) , Antioxidants : CK(7261) : AC(2659)

# Listeria Infections (AC 1) (CK 2)

## Ashwaganda (*W. somnifera*) increases host resistance through increasing production of colony-stimulating activity in Listeria infected mice.

**Pubmed Data** : Breast Cancer Res Treat. 2010 Feb 16. Epub 2010 Feb 16. PMID: [16919825](#)

**Article Published Date** : Feb 16, 2010

**Authors** : Silvia T Teixeira, Marize C Valadares, Shirley A Gonçalves, Adriana de Melo, Mary L S Queiroz

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(154) : AC(74)

**Diseases** : Listeria Infections : CK(30) : AC(24)

**Additional Keywords** : Colony-Stimulating Factors (CSFs) : CK(33) : AC(9) , Myeloid Progenitors : CK(8) : AC(4)



# Lupus Erythematosus: Systemic (AC 1) (CK 2)

## Ashwaganda has therapeutic properties in a pristane-induced model of systemic lupus erythematosus.

**Pubmed Data** : Inflammopharmacology. 2011 Dec 13. Epub 2011 Dec 13. PMID: [22160928](#)

**Article Published Date** : Dec 13, 2011

**Authors** : Ujla Minhas, Ranjana Minz, Prabir Das, Archana Bhatnagar

**Study Type** : Animal Study

### Additional Links

**Substances** : [Ashwagandha](#) : CK(154) : AC(74)

**Diseases** : [Lupus Erythematosus: Systemic](#) : CK(463) : AC(66)

# Lymphoma (AC 1) (CK 2)

## Ashwaganda has significant therapeutic effects against Dalton's Ascitic Lymphoma.

**Pubmed Data** : Exp Lung Res. 2000 Dec;26(8):709-30. PMID: [15234777](#)

**Article Published Date** : Dec 01, 2000

**Authors** : A J M Christina, D Gladwin Joseph, M Packialakshmi, R Kothai, S Jerry Heison Robert, N Chidambaranathan, M Ramasamy

**Study Type** : Animal Study

### Additional Links

**Substances** : [Ashwagandha](#) : CK(154) : AC(74)

**Diseases** : [Dalton's Ascitic Lymphoma](#) : CK(2) : AC(1) , [Lymphoma](#) : CK(253) : AC(83)

## Malaria (AC 1) (CK 2)

### Ashwaganda suppresses the malaria parasite in rodents.

**Pubmed Data** : Ethiop Med J. 2006 Jul;44(3):279-85. PMID: [17447395](#)

**Article Published Date** : Jul 01, 2006

**Authors** : Dawit Dikasso, Eyassu Makonnen, Asfaw Debella, Dawit Abebe, Kelbessa Urga, Walleign Makonnen, Daniel Melaku, Moges Kassa, Mulugeta Guta

**Study Type** : Animal Study

#### Additional Links

**Substances** : [Ashwagandha](#) : CK(154) : AC(74)

**Diseases** : [Malaria](#) : CK(142) : AC(56)

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## Malignant Melanoma (AC 1) (CK 5)

### A water extract of *Withania somnifera* has potent cytotoxic effect on human malignant melanoma A375 cells.

**Pubmed Data** : PLoS One. 2015 ;10(9):e0137498. Epub 2015 Sep 3. PMID: [26334881](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Babli Halder, Shruti Singh, Suman S Thakur

**Study Type** : Human In Vitro

#### Additional Links

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Malignant Melanoma](#) : CK(189) : AC(8)

**Pharmacological Actions** : [Apoptotic](#) : CK(2952) : AC(2071)

**Additional Keywords** : [Dose Response](#) : CK(1039) : AC(403), [Plant Extracts](#) : CK(7438) : AC(2449)

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## Memory Disorders (AC 1) (CK 1)

## Ashwaganda contains compounds with significant neurologically regenerative properties, capable of reconstructing neuronal networks.

**Pubmed Data** : Br J Pharmacol. 2005 Apr;144(7):961-71. PMID: [15711595](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Tomoharu Kuboyama, Chihiro Tohda, Katsuko Komatsu

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Ashwagandha : CK(154) : AC(74)

**Diseases** : Memory Disorders : CK(340) : AC(103), Neurodegenerative Diseases : CK(3376) : AC(850)

**Pharmacological Actions** : Neuritogenic : CK(133) : AC(59)

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## Morphine Tolerance/Dependence (AC 1) (CK 2)

### Ashwaganda reduces morphine tolerance and dependence in mice

**Pubmed Data** : J Ethnopharmacol. 1997 Aug;57(3):213-7. PMID: [9292416](#)

**Article Published Date** : Aug 01, 1997

**Authors** : S K Kulkarni, I Ninan

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(154) : AC(74)

**Diseases** : Morphine Tolerance/Dependence : CK(75) : AC(31), Opiate Tolerance : CK(14) : AC(3)

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## Myeloid Leukemia: Acute (AC 1) (CK 1)

### Ashwaganda induces programmed cell death in human

## myeloid leukemia cells.

**Pubmed Data** : Apoptosis. 2007 Nov;12(11):2115-33. PMID: [17874299](#)

**Article Published Date** : Nov 01, 2007

**Authors** : Fayaz Malik, Ajay Kumar, Shashi Bhushan, Sheema Khan, Aruna Bhatia, Krishan Avtar Suri, Ghulam Nabi Qazi, Jaswant Singh

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Acute Myeloid Leukemia](#) : CK(89) : AC(46) , [Chronic Myeloid Leukemia](#) : CK(31) : AC(16) , [Myeloid Leukemia: Acute](#) : CK(3) : AC(3)

## Neurodegenerative Diseases (AC 1) (CK 1)

**Ashwaganda contains compounds with significant neurologically regenerative properties, capable of reconstructing neuronal networks.**

**Pubmed Data** : Br J Pharmacol. 2005 Apr;144(7):961-71. PMID: [15711595](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Tomoharu Kuboyama, Chihiro Tohda, Katsuko Komatsu

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Ashwagandha](#) : CK(154) : AC(74)

**Diseases** : [Memory Disorders](#) : CK(340) : AC(103) , [Neurodegenerative Diseases](#) : CK(3376) : AC(850)

**Pharmacological Actions** : [Neuritogenic](#) : CK(133) : AC(59)

## Neutropenia: Chemotherapy Induced (AC 1) (CK 2)

## Ashwaganda reverses paclitaxel induced neutropenia.

**Pubmed Data** : Indian J Physiol Pharmacol. 2001 Apr;45(2):253-7. PMID: [11480235](#)

**Article Published Date** : Apr 01, 2001

**Authors** : Y K Gupta, S S Sharma, K Rai, C K Katiyar

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(154) : AC(74)

**Diseases** : Neutropenia: Chemotherapy Induced : CK(72) : AC(16)

**Additional Keywords** : Drug Side Effect Attenuation : CK(251) : AC(49)

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## Obsessive-Compulsive Disorder (AC 1) (CK 10)

### W. somnifera extract may be beneficial as a safe and effective adjunct to SSRIs in the treatment of OCD.

**Pubmed Data** : Complement Ther Med. 2016 Aug ;27:25-9. Epub 2016 Apr 9. PMID: [27515872](#)

**Article Published Date** : Jul 31, 2016

**Authors** : Seyedeh Pardis Jahanbakhsh, Ali Akhondpour Manteghi, Seyed Ahmad Emami, Saman Mahyari, Beheshteh Gholampour, Amir Hooshang Mohammadpour, Amirhossein Sahebkar

**Study Type** : Human Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Obsessive-Compulsive Disorder : CK(178) : AC(25)

**Additional Keywords** : Plant Extracts : CK(7481) : AC(2461)

**Problem Substances** : Selective Serotonin Reuptake Inhibitors (SSRIs) : CK(74) : AC(9)

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## Opiate Tolerance (AC 1) (CK 2)

### Ashwaganda reduces morphine tolerance and

## dependence in mice

**Pubmed Data** : J Ethnopharmacol. 1997 Aug;57(3):213-7. PMID: [9292416](#)

**Article Published Date** : Aug 01, 1997

**Authors** : S K Kulkarni, I Ninan

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(154) : AC(74)

**Diseases** : Morphine Tolerance/Dependence : CK(75) : AC(31) , Opiate Tolerance : CK(14) : AC(3)

## Oral Cancer (AC 1) (CK 2)

**Withaferin-A, a compound found within Ashwaganda, has a protective effect against DMBA-induced oral cancer in hamsters.**

**Pubmed Data** : Indian J Exp Biol. 2009 Jan;47(1):16-23. PMID: [19317347](#)

**Article Published Date** : Jan 01, 2009

**Authors** : S Manoharan, K Panjamurthy, Venugopal P Menon, S Balakrishnan, Linsa Mary Alias

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Oral Cancer : CK(214) : AC(79)

**Pharmacological Actions** : Antioxidants : CK(7275) : AC(2666) , Chemopreventive : CK(2829) : AC(783)

## Osteoarthritis (AC 1) (CK 1)

**Ashwaganda protects the cartilage matrix in osteoarthritis.**

**Pubmed Data** : Blood Coagul Fibrinolysis. 2008 Dec;19(8):785-92. PMID: [17435322](#)

**Article Published Date** : Dec 01, 2008

**Authors** : Venil N Sumantran, Asavari Kulkarni, Sanjay Boddul, Trushna Chinchwade, Soumya J Koppikar, Abhay Harsulkar, Bhushan Patwardhan, Arvind Chopra, Ulhas V Wagh

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Osteoarthritis](#) : CK(769) : AC(114)

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## Osteoporosis (AC 1) (CK 2)

**Ashwaganda markedly prevents bone changes in ovariectomized rats.**

**Pubmed Data** : Phytomedicine. 2007 Feb;14(2-3):136-42. Epub 2006 May 18. PMID: [16597369](#)

**Article Published Date** : Feb 01, 2007

**Authors** : Prabhakara Reddy Nagareddy, M Lakshmana

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Osteoporosis](#) : CK(1282) : AC(244)

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## Osteosarcoma (AC 1) (CK 1)

**The present study demonstrated the antiproliferative effects of withaferin A on the human osteosarcoma cell lines MG-63 and U2OS.**

**Pubmed Data** : Exp Ther Med. 2015 Jul ;10(1):323-329. Epub 2015 May 7. PMID: [26170956](#)

**Article Published Date** : Jun 30, 2015

**Authors** : Ting-Zhuo Lv, Guang-Shun Wang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Osteosarcoma](#) : CK(133) : AC(69)

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**Pharmacological Actions** : Antiproliferative : CK(2475) : AC(1682), Cell cycle arrest : CK(808) : AC(610)

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## Ovarian Cancer (AC 1) (CK 1)

**Withaferin A combined with cisplatin resulted in a 70 to 80% reduction in tumor growth and complete inhibition of metastasis.**

**Pubmed Data** : PLoS One. 2014 ;9(9):e107596. Epub 2014 Sep 29. PMID: [25264898](#)

**Article Published Date** : Dec 31, 2013

**Authors** : Sham S Kakar, Mariusz Z Ratajczak, Karen S Powell, Mana Moghadamfalahi, Donald M Miller, Surinder K Batra, Sanjay K Singh

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Ovarian Cancer : CK(360) : AC(128)

**Pharmacological Actions** : Anti-metastatic : CK(613) : AC(410), Antiproliferative : CK(2471) : AC(1680)

**Additional Keywords** : Cancer Stem Cells : CK(133) : AC(87), Chemotherapeutic Synergy: Cisplatin : CK(79) : AC(56)

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## Over-active Libido (AC 1) (CK 2)

**Ashwaganda interferes with sexual desire via hyperprolactinemic, GABAergic, serotonergic or sedative activities.**

**Pubmed Data** : Asian J Androl. 2002 Dec;4(4):295-8. PMID: [12508132](#)

**Article Published Date** : Dec 01, 2002

**Authors** : I Ilayperuma, W D Ratnasooriya, T R Weerasooriya

**Study Type** : Animal Study

**Additional Links**



**Substances** : Ashwagandha : CK(154) : AC(74)

**Diseases** : Over-active Libido : CK(2) : AC(1)

**Additional Keywords** : GABAergic : CK(2) : AC(1), Serotonergic : CK(2) : AC(1)

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## Oxidative Stress (AC 4) (CK 15)

### A multi-herbal product called Protandim has antioxidant properties.

**Pubmed Data** : Free Radic Biol Med. 2009 Feb 1;46(3):430-40. Epub 2008 Nov 17. PMID: [19056485](#)

**Article Published Date** : Feb 01, 2009

**Authors** : Kalpana Velmurugan, Jawed Alam, Joe M McCord, Subbiah Pugazhenth

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4951) : AC(2343)

**Diseases** : Oxidative Stress : CK(3836) : AC(1369)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659)

**Additional Keywords** : Drug Synergy : CK(351) : AC(156)

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### A multi-herbal product called Protandim has chemopreventive properties against skin cancer.

**Pubmed Data** : PLoS One. 2009;4(4):e5284. Epub 2009 Apr 22. PMID: [19384424](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Jianfeng Liu, Xin Gu, Delira Robbins, Guohong Li, Runhua Shi, Joe M McCord, Yunfeng Zhao

**Study Type** : Animal Study

#### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4951) : AC(2343)

**Diseases** : Oxidative Stress : CK(3836) : AC(1369), Skin Cancer : CK(652) : AC(264)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), NF-kappa-B-inducing kinase (NIK) modulator : CK(3) : AC(2), Superoxide Dismutase Up-regulation : CK(508) : AC(171), Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202), Vascular Cell Adhesion Molecule-1 Inhibitor : CK(117) : AC(30)

---

### A multi-herbal product called Protandim has significant

## antioxidant properties in human subjects.

**Pubmed Data** : Arzneimittelforschung. 2006;56(6):387-93. PMID: [16413416](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Sally K Nelson, Swapan K Bose, Gary K Grunwald, Paul Myhill, Joe M McCord

**Study Type** : Human Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4951) : AC(2343)

**Diseases** : Oxidative Stress : CK(3836) : AC(1369)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), Catalase Up-Regulation : CK(118) : AC(42), Superoxide Dismutase Up-regulation : CK(508) : AC(171)

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## Withaferin A attenuates lipopolysaccharide-induced acute lung injury in neonatal rats.

**Pubmed Data** : Cell Mol Biol (Noisy-le-grand). 2015 ;61(3):102-6. Epub 2015 Jul 31. PMID: [26255139](#)

**Article Published Date** : Dec 31, 2014

**Authors** : S Gao, H Li, X-Q Zhou, J-B You, D-N Tu, G Xia, J-X Jiang, C Xin

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Lipopolysaccharide-Induced Toxicity : CK(358) : AC(217), Oxidative Stress : CK(3836) : AC(1369)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4615) : AC(1613), Antioxidants : CK(7261) : AC(2659)

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## Pancreatic Cancer (AC 1) (CK 2)

### Withaferin-A, a compound found within Ashwaganda, exhibits in vivo anticancer activity against pancreatic cancer.

**Pubmed Data** : Biochem Pharmacol. 2010 Feb 15;79(4):542-51. PMID: [19769945](#)

**Article Published Date** : Feb 15, 2010

**Authors** : Yanke Yu, Adel Hamza, Tao Zhang, Mancang Gu, Peng Zou, Bryan Newman, Yanyan Li, A A Leslie Gunatilaka, Chang-Guo Zhan, Duxin Sun

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Pancreatic Cancer : CK(887) : AC(259)

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## Parkinson's Disease (AC 1) (CK 2)

### Ashwaganda attenuates 6-hydroxydopamine induced Parkinsonism in rats.

**Pubmed Data** : Hum Exp Toxicol. 2005 Mar;24(3):137-47. PMID: [15901053](#)

**Article Published Date** : Mar 01, 2005

**Authors** : Muzamil Ahmad, Sofiyan Saleem, Abdullah Shafique Ahmad, Mubeen Ahmad Ansari, Seema Yousuf, Md Nasrul Hoda, Fakhrul Islam

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(154) : AC(74)

**Diseases** : Parkinson's Disease : CK(528) : AC(165)

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## Pesticide Toxicity (AC 1) (CK 2)

### Ashwaganda attenuates insecticide-induced inhibition and impairment of cognitive function.

**Pubmed Data** : Int Immunopharmacol. 2003 Sep;3(9):1313-24. PMID: [20521626](#)

**Article Published Date** : Sep 01, 2003

**Authors** : C S Yadav, V Kumar, S G Suke, R S Ahmed, P K Mediratta, B D Banerjee

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Cognitive Decline/Dysfunction : CK(1140) : AC(213), Pesticide Toxicity : CK(190) : AC(60)

**Pharmacological Actions** : Neuroprotective Agents : CK(2254) : AC(1063)

**Additional Keywords** : Plant Extracts : CK(7438) : AC(2449)

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## Prostate Cancer (AC 1) (CK 1)

### Withaferin A targets vimentin and promotes cell death in prostate cancer cells, but not in normal fibroblasts.

**Pubmed Data** : PLoS One. 2015 ;10(7):e0134137. Epub 2015 Jul 31. PMID: [26230090](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Yukihiro Nishikawa, Daisuke Okuzaki, Kohshiro Fukushima, Satomi Mukai, Shouichi Ohno, Yuki Ozaki, Norikazu Yabuta, Hiroshi Nojima

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Prostate Cancer](#) : CK(1488) : AC(436)

**Pharmacological Actions** : [Apoptotic](#) : CK(2952) : AC(2071), [Heat Shock Protein Inducer](#) : CK(83) : AC(30)

**Additional Keywords** : [Selective Cytotoxicity](#) : CK(158) : AC(112)

## Skin Cancer (AC 2) (CK 4)

### A multi-herbal product called Protandim exhibits chemopreventive properties in a mouse model of skin cancer.

**Pubmed Data** : PLoS One. 2010;5(7):e11902. Epub 2010 Jul 30. PMID: [20689586](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Delira Robbins, Xin Gu, Runhua Shi, Jianfeng Liu, Fei Wang, Jacquelyne Ponville, Joe M McCord, Yunfeng Zhao

**Study Type** : Animal Study

#### Additional Links

**Substances** : [Ashwagandha](#) : CK(136) : AC(68), [Bacopa](#) : CK(125) : AC(52), [Green Tea](#) : CK(1957) : AC(558), [Milk Thistle](#) : CK(281) : AC(64), [Protandim](#) : CK(20) : AC(7), [Turmeric](#) : CK(4968) : AC(2348)

**Diseases** : [Skin Cancer](#) : CK(652) : AC(264)

**Pharmacological Actions** : [Apoptotic](#) : CK(2952) : AC(2071), [Chemopreventive](#) : CK(2829) : AC(783), [Superoxide Dismutase Up-regulation](#) : CK(508) : AC(171), [Tumor Suppressor Protein p53](#)

Upregulation : CK(293) : AC(202)

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## A multi-herbal product called Protandim has chemopreventive properties against skin cancer.

**Pubmed Data** : PLoS One. 2009;4(4):e5284. Epub 2009 Apr 22. PMID: [19384424](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Jianfeng Liu, Xin Gu, Delira Robbins, Guohong Li, Runhua Shi, Joe M McCord, Yunfeng Zhao

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4951) : AC(2343)

**Diseases** : Oxidative Stress : CK(3836) : AC(1369), Skin Cancer : CK(652) : AC(264)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), NF-kappa-B-inducing kinase (NIK) modulator : CK(3) : AC(2), Superoxide Dismutase Up-regulation : CK(508) : AC(171), Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202), Vascular Cell Adhesion Molecule-1 Inhibitor : CK(117) : AC(30)

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## Skin Cancer: Prevention (AC 1) (CK 1)

### Withaferin A may have a potential in chemoprevention and ACC1 may serve as a critical target of WA

**Pubmed Data** : Mol Carcinog. 2015 Oct 16. Epub 2015 Oct 16. PMID: [26472150](#)

**Article Published Date** : Oct 15, 2015

**Authors** : Wenjuan Li, Chunjing Zhang, Hongyan Du, Vincent Huang, Brandi Sun, John P Harris, Quitin Richardson, Xinggui Shen, Rong Jin, Guohong Li, Christopher G Kevil, Xin Gu, Runhua Shi, Yunfeng Zhao

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Skin Cancer: Prevention : CK(20) : AC(4)

**Pharmacological Actions** : Anticarcinogenic Agents : CK(1095) : AC(517)

**Additional Keywords** : Gene Expression Regulation : CK(425) : AC(211), Risk Reduction : CK(6336) : AC(679)

---

## Stress (AC 2) (CK 3)

**Ashwagandha intervention resulted in greater score improvements (significantly in most cases) than placebo in outcomes on anxiety or stress scales.**

**Pubmed Data** : J Altern Complement Med. 2014 Dec ;20(12):901-8. PMID: [25405876](#)

**Article Published Date** : Nov 30, 2014

**Authors** : Morgan A Pratte, Kaushal B Nanavati, Virginia Young, Christopher P Morley

**Study Type** : Review

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Anxiety Disorders : CK(1215) : AC(180), Stress : CK(621) : AC(102)

**Additional Keywords** : Ayurveda : CK(4) : AC(4), Plant Extracts : CK(7438) : AC(2449)

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**W. somnifera has adaptogenic, anxiolytic and antidepressant activities.**

**Pubmed Data** : J Intercult Ethnopharmacol. 2016 Jun-Aug;5(3):274-7. Epub 2016 Apr 21. PMID: [27366354](#)

**Article Published Date** : May 31, 2016

**Authors** : Amitabha Dey, Shyam Sunder Chatterjee, Vikas Kumar

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Anxiety : CK(26) : AC(5), Depression : CK(1832) : AC(265), Stress : CK(621) : AC(102)

**Pharmacological Actions** : Anti-Anxiety Agents : CK(334) : AC(56), Antidepressive Agents : CK(992) : AC(160)

**Additional Keywords** : Plant Extracts : CK(7481) : AC(2461)

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## Tumors (AC 1) (CK 1)

**Ashwaganda leaf extract exhibits selective killing of cancer cells.**

**Pubmed Data** : Mol Carcinog. 2006 May;45(5):320-32. PMID: [17404115](#)

**Article Published Date** : May 01, 2006

**Authors** : Nashi Widodo, Kamaljit Kaur, Bhupal G Shrestha, Yasuomi Takagi, Tetsuro Ishii, Renu Wadhwa, Sunil C Kaul

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Tumors](#) : CK(203) : AC(119)

**Pharmacological Actions** : [Antineoplastic Agents](#) : CK(1158) : AC(639), [Apoptotic](#) : CK(2952) : AC(2071), [Tumor Suppressor Protein p53 Upregulation](#) : CK(293) : AC(202)

**Additional Keywords** : [Plant Extracts](#) : CK(7438) : AC(2449), [Selective Cytotoxicity](#) : CK(158) : AC(112)

## Vaccine-induced Toxicity (AC 1) (CK 2)

**Ashwaganda may positively counterbalance the TH2 overstimulation induced by vaccination while supporting TH1 mediated immunity.**

**Pubmed Data** : Vaccine. 2009 Jul 21. PMID: [19628058](#)

**Article Published Date** : Jul 21, 2009

**Authors** : Sheema Khan, Fayaz Malik, Krishan A Suri, Jaswant Singh

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(154) : AC(74)

**Diseases** : [Vaccine-induced Toxicity](#) : CK(1288) : AC(194)

## Category : Pharmacological Actions

## Analgesics (AC 1) (CK 2)

## Oral administration of WSR has analgesic and anti-inflammatory effects in fructose drinking water rats and causes improved insulin resistance index.

**Pubmed Data** : J Basic Clin Physiol Pharmacol. 2016 Jun 1 ;27(4):387-91. PMID: [27383871](#)

**Article Published Date** : May 31, 2016

**Authors** : Mohammad Reza Shahraki, Zahra Samadi Noshahr, Hassan Ahmadvand, Alireza Nakhaie

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : High Fructose Diet : CK(88) : AC(25) , Insulin Resistance : CK(1670) : AC(343)

**Pharmacological Actions** : Analgesics : CK(1315) : AC(215) , Anti-Inflammatory Agents : CK(4615) : AC(1613) , Antinoceptive : CK(189) : AC(49) , Interleukin-6 Downregulation : CK(1081) : AC(339) , Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1766) : AC(649)

## Anti-Angiogenic (AC 1) (CK 1)

### Ashwaganda has significant anti-angiogenesis activity, indicating its possible utility for treating cancer.

**Pubmed Data** : Angiogenesis. 2004;7(2):115-22. PMID: [15516832](#)

**Article Published Date** : Jan 01, 2004

**Authors** : Royce Mohan, Hans J Hammers, Paola Bargagna-Mohan, Xiaoguo H Zhan, Christopher J Herbstritt, Antonio Ruiz, Li Zhang, Art D Hanson, Barry P Conner, John Rougas, Victor S Pribluda

**Study Type** : Commentary

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Cancers: All : CK(14469) : AC(4575)

**Pharmacological Actions** : Anti-Angiogenic : CK(195) : AC(136)

## Anti-Anxiety Agents (AC 1) (CK 2)



## W. somnifera has adaptogenic, anxiolytic and antidepressant activities.

**Pubmed Data** : J Intercult Ethnopharmacol. 2016 Jun-Aug;5(3):274-7. Epub 2016 Apr 21. PMID: [27366354](#)

**Article Published Date** : May 31, 2016

**Authors** : Amitabha Dey, Shyam Sunder Chatterjee, Vikas Kumar

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Anxiety : CK(26) : AC(5), Depression : CK(1832) : AC(265), Stress : CK(621) : AC(102)

**Pharmacological Actions** : Anti-Anxiety Agents : CK(334) : AC(56), Antidepressive Agents : CK(992) : AC(160)

**Additional Keywords** : Plant Extracts : CK(7481) : AC(2461)

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## Anti-Fibrotic (AC 1) (CK 2)

### A multi-herbal product called Protandim prevents fibrosis and capillary loss and preserves right ventricular function in rats.

**Pubmed Data** : Circulation. 2009 Nov 17;120(20):1951-60. Epub 2009 Nov 2. PMID: [19884466](#)

**Article Published Date** : Nov 17, 2009

**Authors** : Harm J Bogaard, Ramesh Natarajan, Scott C Henderson, Carlin S Long, Donatas Kraskauskas, Lisa Smithson, Ramzi Ockaili, Joe M McCord, Norbert F Voelkel

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4968) : AC(2348)

**Diseases** : Heart Failure : CK(918) : AC(124), Hypertension : CK(2944) : AC(404), Hypertension: Pulmonary : CK(92) : AC(35)

**Pharmacological Actions** : Anti-Fibrotic : CK(44) : AC(28), Vascular Endothelial Growth Factor A Inhibitor : CK(132) : AC(71)

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# Anti-Inflammatory Agents (AC 3) (CK 6)

**An extract of *Withania somnifera* reduced the number of mammary carcinomas that developed and reduced the rate of cell division in the carcinomas.**

**Pubmed Data** : Anticancer Res. 2014 Nov ;34(11):6327-32. PMID: [25368231](#)

**Article Published Date** : Oct 31, 2014

**Authors** : Kamel F Khazal, Donald L Hill, Clinton J Grubbs

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Breast Cancer : CK(3505) : AC(1056), Breast Cancer: Triple Negative : CK(257) : AC(139)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4578) : AC(1604), Antiproliferative : CK(2471) : AC(1680), Chemopreventive : CK(2829) : AC(783)

**Additional Keywords** : Phytotherapy : CK(1186) : AC(218), Plant Extracts : CK(7438) : AC(2449)

**Problem Substances** : Mouse Mammary Tumour Viruses (MMTV) : CK(11) : AC(2)

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**Oral administration of WSR has analgesic and anti-inflammatory effects in fructose drinking water rats and causes improved insulin resistance index.**

**Pubmed Data** : J Basic Clin Physiol Pharmacol. 2016 Jun 1 ;27(4):387-91. PMID: [27383871](#)

**Article Published Date** : May 31, 2016

**Authors** : Mohammad Reza Shahraki, Zahra Samadi Noshahr, Hassan Ahmadvand, Alireza Nakhaie

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : High Fructose Diet : CK(88) : AC(25), Insulin Resistance : CK(1670) : AC(343)

**Pharmacological Actions** : Analgesics : CK(1315) : AC(215), Anti-Inflammatory Agents : CK(4615) : AC(1613), Antinoceptive : CK(189) : AC(49), Interleukin-6 Downregulation : CK(1081) : AC(339), Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1766) : AC(649)

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**Withaferin A attenuates lipopolysaccharide-induced acute lung injury in neonatal rats.**

**Pubmed Data** : Cell Mol Biol (Noisy-le-grand). 2015 ;61(3):102-6. Epub 2015 Jul 31. PMID: [26255139](#)

**Article Published Date** : Dec 31, 2014

**Authors** : S Gao, H Li, X-Q Zhou, J-B You, D-N Tu, G Xia, J-X Jiang, C Xin

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Lipopolysaccharide-Induced Toxicity](#) : CK(358) : AC(217) , [Oxidative Stress](#) : CK(3836) : AC(1369)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4615) : AC(1613) , [Antioxidants](#) : CK(7261) : AC(2659)

## Anti-metastatic (AC 1) (CK 1)

**Withaferin A combined with cisplatin resulted in a 70 to 80% reduction in tumor growth and complete inhibition of metastasis.**

**Pubmed Data** : PLoS One. 2014 ;9(9):e107596. Epub 2014 Sep 29. PMID: [25264898](#)

**Article Published Date** : Dec 31, 2013

**Authors** : Sham S Kakar, Mariusz Z Ratajczak, Karen S Powell, Mana Moghadamfalahi, Donald M Miller, Surinder K Batra, Sanjay K Singh

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Ovarian Cancer](#) : CK(360) : AC(128)

**Pharmacological Actions** : [Anti-metastatic](#) : CK(613) : AC(410) , [Antiproliferative](#) : CK(2471) : AC(1680)

**Additional Keywords** : [Cancer Stem Cells](#) : CK(133) : AC(87) , [Chemotherapeutic Synergy: Cisplatin](#) : CK(79) : AC(56)

## Anticarcinogenic Agents (AC 1) (CK 1)

## Withaferin A may have a potential in chemoprevention and ACC1 may serve as a critical target of WA

**Pubmed Data** : Mol Carcinog. 2015 Oct 16. Epub 2015 Oct 16. PMID: [26472150](#)

**Article Published Date** : Oct 15, 2015

**Authors** : Wenjuan Li, Chunjing Zhang, Hongyan Du, Vincent Huang, Brandi Sun, John P Harris, Quitin Richardson, Xinggui Shen, Rong Jin, Guohong Li, Christopher G Kevil, Xin Gu, Runhua Shi, Yunfeng Zhao

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Skin Cancer: Prevention](#) : CK(20) : AC(4)

**Pharmacological Actions** : [Anticarcinogenic Agents](#) : CK(1095) : AC(517)

**Additional Keywords** : [Gene Expression Regulation](#) : CK(425) : AC(211) , [Risk Reduction](#) : CK(6336) : AC(679)

## Antidepressive Agents (AC 1) (CK 2)

### W. somnifera has adaptogenic, anxiolytic and antidepressant activities.

**Pubmed Data** : J Intercult Ethnopharmacol. 2016 Jun-Aug;5(3):274-7. Epub 2016 Apr 21. PMID: [27366354](#)

**Article Published Date** : May 31, 2016

**Authors** : Amitabha Dey, Shyam Sunder Chatterjee, Vikas Kumar

**Study Type** : Animal Study

### Additional Links

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Anxiety](#) : CK(26) : AC(5) , [Depression](#) : CK(1832) : AC(265) , [Stress](#) : CK(621) : AC(102)

**Pharmacological Actions** : [Anti-Anxiety Agents](#) : CK(334) : AC(56) , [Antidepressive Agents](#) : CK(992) : AC(160)

**Additional Keywords** : [Plant Extracts](#) : CK(7481) : AC(2461)

## Antimicrobial (AC 1) (CK 1)

## This study confirmed the potential of selected extracts of spices as effective natural food preservative in juices.

**Pubmed Data** : Int J Microbiol. 2016 ;2016:9015802. Epub 2016 Jan 4. PMID: [26880927](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Romika Dhiman, Neeraj Aggarwal, Kamal Rai Aneja, Manpreet Kaur

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Ginger : CK(676) : AC(175), Gotu Kola : CK(50) : AC(20), Indian Gooseberry : CK(1) : AC(1), Mint : CK(380) : AC(60), Terminalia : CK(25) : AC(16), Turmeric : CK(4951) : AC(2343)

**Diseases** : Foodborne Pathogens: Prevention/Food Preservation : CK(19) : AC(18)

**Pharmacological Actions** : Antimicrobial : CK(292) : AC(127), Food Preservatives : CK(1) : AC(1)

**Additional Keywords** : Fruit Juice : CK(85) : AC(11), Plant Extracts : CK(7438) : AC(2449)

## Antineoplastic Agents (AC 1) (CK 1)

### Ashwaganda leaf extract exhibits selective killing of cancer cells.

**Pubmed Data** : Mol Carcinog. 2006 May;45(5):320-32. PMID: [17404115](#)

**Article Published Date** : May 01, 2006

**Authors** : Nashi Widodo, Kamaljit Kaur, Bhupal G Shrestha, Yasuomi Takagi, Tetsuro Ishii, Renu Wadhwa, Sunil C Kaul

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Tumors : CK(203) : AC(119)

**Pharmacological Actions** : Antineoplastic Agents : CK(1158) : AC(639), Apoptotic : CK(2952) : AC(2071), Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202)

**Additional Keywords** : Plant Extracts : CK(7438) : AC(2449), Selective Cytotoxicity : CK(158) : AC(112)

## Antinoceptive (AC 1) (CK 2)

## Oral administration of WSR has analgesic and anti-inflammatory effects in fructose drinking water rats and causes improved insulin resistance index.

**Pubmed Data** : J Basic Clin Physiol Pharmacol. 2016 Jun 1 ;27(4):387-91. PMID: [27383871](#)

**Article Published Date** : May 31, 2016

**Authors** : Mohammad Reza Shahraki, Zahra Samadi Noshahr, Hassan Ahmadvand, Alireza Nakhaie

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : High Fructose Diet : CK(88) : AC(25) , Insulin Resistance : CK(1670) : AC(343)

**Pharmacological Actions** : Analgesics : CK(1315) : AC(215) , Anti-Inflammatory Agents : CK(4615) : AC(1613) , Antinoceptive : CK(189) : AC(49) , Interleukin-6 Downregulation : CK(1081) : AC(339) , Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1766) : AC(649)

## Antioxidants (AC 9) (CK 23)

### A multi-herbal product called Protandim attenuates intima hyperplasia.

**Pubmed Data** : Free Radic Biol Med. 2011 Mar 15;50(6):700-9. Epub 2010 Dec 15. PMID: [21167278](#)

**Article Published Date** : Mar 15, 2011

**Authors** : Binata Joddar, Rashmeet K Reen, Michael S Firstenberg, Saradhadevi Varadharaj, Joe M McCord, Jay L Zweier, Keith J Gooch

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68) , Bacopa : CK(125) : AC(52) , Green Tea : CK(1957) : AC(558) , Milk Thistle : CK(281) : AC(64) , Protandim : CK(20) : AC(7) , Turmeric : CK(4968) : AC(2348)

**Diseases** : Intima Media Thickening : CK(153) : AC(34)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659) , Catalase Up-Regulation : CK(118) : AC(42) , Superoxide Dismutase Up-regulation : CK(508) : AC(171)

### A multi-herbal product called Protandim has antioxidant properties.

**Pubmed Data** : Free Radic Biol Med. 2009 Feb 1;46(3):430-40. Epub 2008 Nov 17. PMID: [19056485](#)

**Article Published Date** : Feb 01, 2009

**Authors** : Kalpana Velmurugan, Jawed Alam, Joe M McCord, Subbiah Pugazhenth

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4951) : AC(2343)

**Diseases** : Oxidative Stress : CK(3836) : AC(1369)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659)

**Additional Keywords** : Drug Synergy : CK(351) : AC(156)

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## A multi-herbal product called Protandim has chemopreventive properties against skin cancer.

**Pubmed Data** : PLoS One. 2009;4(4):e5284. Epub 2009 Apr 22. PMID: [19384424](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Jianfeng Liu, Xin Gu, Delira Robbins, Guohong Li, Runhua Shi, Joe M McCord, Yunfeng Zhao

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4951) : AC(2343)

**Diseases** : Oxidative Stress : CK(3836) : AC(1369), Skin Cancer : CK(652) : AC(264)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), NF-kappa-B-inducing kinase (NIK) modulator : CK(3) : AC(2), Superoxide Dismutase Up-regulation : CK(508) : AC(171), Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202), Vascular Cell Adhesion Molecule-1 Inhibitor : CK(117) : AC(30)

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## A multi-herbal product called Protandim has significant antioxidant properties in human subjects.

**Pubmed Data** : Arzneimittelforschung. 2006;56(6):387-93. PMID: [16413416](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Sally K Nelson, Swapan K Bose, Gary K Grunwald, Paul Myhill, Joe M McCord

**Study Type** : Human Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4951) : AC(2343)

**Diseases** : Oxidative Stress : CK(3836) : AC(1369)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), Catalase Up-Regulation : CK(118) : AC(42), Superoxide Dismutase Up-regulation : CK(508) : AC(171)

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## A poly-herbal formula named Protandim reduces

## oxidative stress in a mouse model of Duchenne muscular dystrophy.

**Pubmed Data** : J Diet Suppl. 2010 Jun 1;7(2):159-178. PMID: [20740052](#)

**Article Published Date** : Jun 01, 2010

**Authors** : Muhammad Muddasir Qureshi, Warren C McClure, Nicole L Arevalo, Rick E Rabon, Benjamin Mohr, Swapan K Bose, Joe M McCord, Brian S Tseng

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68) , Bacopa : CK(125) : AC(52) , Green Tea : CK(1957) : AC(558) , Milk Thistle : CK(281) : AC(64) , Protandim : CK(20) : AC(7) , Turmeric : CK(4968) : AC(2348)

**Diseases** : Duchenne's Muscular Dystrophy : CK(12) : AC(6)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659)

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## This reviews natural plants as breast cancer preventatives or use in treatments.

**Pubmed Data** : Saudi Pharm J. 2016 May ;24(3):233-40. Epub 2016 May 5. PMID: [27275107](#)

**Article Published Date** : Apr 30, 2016

**Authors** : Munazza Shareef, Muhammad Aqeel Ashraf, Maliha Sarfraz

**Study Type** : Review

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68) , Black Cohosh : CK(61) : AC(20) , Burdock : CK(42) : AC(26) , Echinacea : CK(529) : AC(99) , Flavonoids : CK(1215) : AC(379) , Flaxseed : CK(453) : AC(90) , Garlic : CK(712) : AC(225) , Ginseng : CK(473) : AC(133) , Polyphenols : CK(930) : AC(334) , Turmeric : CK(4951) : AC(2343)

**Diseases** : Breast Cancer : CK(3505) : AC(1056)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659) , Antiproliferative : CK(2471) : AC(1680) , Chemopreventive : CK(2829) : AC(783)

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## Withaferin A attenuates lipopolysaccharide-induced acute lung injury in neonatal rats.

**Pubmed Data** : Cell Mol Biol (Noisy-le-grand). 2015 ;61(3):102-6. Epub 2015 Jul 31. PMID: [26255139](#)

**Article Published Date** : Dec 31, 2014

**Authors** : S Gao, H Li, X-Q Zhou, J-B You, D-N Tu, G Xia, J-X Jiang, C Xin

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Lipopolysaccharide-Induced Toxicity : CK(358) : AC(217) , Oxidative Stress : CK(3836) : AC(1369)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4615) : AC(1613) , Antioxidants : CK(7261) : AC(2659)



## Withaferin-A, a compound found within Ashwaganda, has a protective effect against DMBA-induced oral cancer in hamsters.

**Pubmed Data** : Indian J Exp Biol. 2009 Jan;47(1):16-23. PMID: [19317347](#)

**Article Published Date** : Jan 01, 2009

**Authors** : S Manoharan, K Panjamurthy, Venugopal P Menon, S Balakrishnan, Linsa Mary Alias

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Oral Cancer : CK(214) : AC(79)

**Pharmacological Actions** : Antioxidants : CK(7275) : AC(2666), Chemopreventive : CK(2829) : AC(783)

## Withania somnifera possesses phyto remedial effect and it is one of the best antidotes against arsenic-induced reproductive toxicity.

**Pubmed Data** : Avicenna J Phytomed. 2015 Jul-Aug;5(4):355-64. PMID: [26445714](#)

**Article Published Date** : Jun 30, 2015

**Authors** : Arun Kumar, Ranjit Kumar, Mohammad Samuir Rahman, Mohammad Asif Iqbal, Gautam Anand, Pintoo Kumar Niraj, Mohammad Ali

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Arsenic Poisoning : CK(160) : AC(49)

**Pharmacological Actions** : Antioxidants : CK(7275) : AC(2666), Cytoprotective : CK(184) : AC(92)

## Antiproliferative (AC 6) (CK 9)

### A ashwagandha water extract suppressed the tumor growth of glioma cells.

**Pubmed Data** : Mol Neurobiol. 2015 Jul 26. Epub 2015 Jul 26. PMID: [26208698](#)

**Article Published Date** : Jul 25, 2015

**Authors** : Hardeep Kataria, Sushil Kumar, Harshita Chaudhary, Gurcharan Kaur

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Glioma : CK(174) : AC(84)

**Pharmacological Actions** : Antiproliferative : CK(2471) : AC(1680), Heat Shock Protein Down-Regulation : CK(1) : AC(1), NF-kappaB Inhibitor : CK(1113) : AC(693), Vascular Endothelial Growth Factor Inhibitors : CK(123) : AC(61)

**Additional Keywords** : Plant Extracts : CK(7438) : AC(2449)

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## **An extract of *Withania somnifera* reduced the number of mammary carcinomas that developed and reduced the rate of cell division in the carcinomas.**

**Pubmed Data** : Anticancer Res. 2014 Nov ;34(11):6327-32. PMID: [25368231](#)

**Article Published Date** : Oct 31, 2014

**Authors** : Kamel F Khazal, Donald L Hill, Clinton J Grubbs

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Breast Cancer : CK(3505) : AC(1056), Breast Cancer: Triple Negative : CK(257) : AC(139)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4578) : AC(1604), Antiproliferative : CK(2471) : AC(1680), Chemopreventive : CK(2829) : AC(783)

**Additional Keywords** : Phytotherapy : CK(1186) : AC(218), Plant Extracts : CK(7438) : AC(2449)

**Problem Substances** : Mouse Mammary Tumour Viruses (MMTV) : CK(11) : AC(2)

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## **The present study demonstrated the antiproliferative effects of withaferin A on the human osteosarcoma cell lines MG-63 and U2OS.**

**Pubmed Data** : Exp Ther Med. 2015 Jul ;10(1):323-329. Epub 2015 May 7. PMID: [26170956](#)

**Article Published Date** : Jun 30, 2015

**Authors** : Ting-Zhuo Lv, Guang-Shun Wang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Osteosarcoma : CK(133) : AC(69)

**Pharmacological Actions** : Antiproliferative : CK(2475) : AC(1682), Cell cycle arrest : CK(808) : AC(610)

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## **This reviews natural plants as breast cancer preventatives or use in treatments.**

**Pubmed Data** : Saudi Pharm J. 2016 May ;24(3):233-40. Epub 2016 May 5. PMID: [27275107](#)

**Article Published Date** : Apr 30, 2016

**Authors** : Munazza Shareef, Muhammad Aqeel Ashraf, Maliha Sarfraz

**Study Type** : Review

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68), Black Cohosh : CK(61) : AC(20), Burdock : CK(42) : AC(26), Echinacea : CK(529) : AC(99), Flavonoids : CK(1215) : AC(379), Flaxseed : CK(453) : AC(90), Garlic : CK(712) : AC(225), Ginseng : CK(473) : AC(133), Polyphenols : CK(930) : AC(334), Turmeric : CK(4951) : AC(2343)

**Diseases** : Breast Cancer : CK(3505) : AC(1056)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), Antiproliferative : CK(2471) : AC(1680), Chemopreventive : CK(2829) : AC(783)

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## Withaferin A combined with cisplatin resulted in a 70 to 80% reduction in tumor growth and complete inhibition of metastasis.

**Pubmed Data** : PLoS One. 2014 ;9(9):e107596. Epub 2014 Sep 29. PMID: [25264898](#)

**Article Published Date** : Dec 31, 2013

**Authors** : Sham S Kakar, Mariusz Z Ratajczak, Karen S Powell, Mana Moghadamfalahi, Donald M Miller, Surinder K Batra, Sanjay K Singh

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Ovarian Cancer : CK(360) : AC(128)

**Pharmacological Actions** : Anti-metastatic : CK(613) : AC(410), Antiproliferative : CK(2471) : AC(1680)

**Additional Keywords** : Cancer Stem Cells : CK(133) : AC(87), Chemotherapeutic Synergy: Cisplatin : CK(79) : AC(56)

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## Withaferin-A is able to inhibit not only the proliferation of HCT116 cells but also attenuated the tumor growth in vivo by suppressing STAT3 signaling pathways.

**Pubmed Data** : J Cancer Prev. 2015 Sep ;20(3):185-92. PMID: [26473157](#)

**Article Published Date** : Aug 31, 2015

**Authors** : Bu Young Choi, Bong-Woo Kim

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Colon Cancer : CK(746) : AC(428)

**Pharmacological Actions** : Antiproliferative : CK(2471) : AC(1680), STAT3 Inhibitor : CK(53) : AC(31)

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## Apoptotic (AC 6) (CK 12)

### A multi-herbal product called Protandim exhibits chemopreventive properties in a mouse model of skin cancer.

**Pubmed Data** : PLoS One. 2010;5(7):e11902. Epub 2010 Jul 30. PMID: [20689586](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Delira Robbins, Xin Gu, Runhua Shi, Jianfeng Liu, Fei Wang, Jacquelyne Ponville, Joe M McCord, Yunfeng Zhao

**Study Type** : Animal Study

#### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68) , Bacopa : CK(125) : AC(52) , Green Tea : CK(1957) : AC(558) , Milk Thistle : CK(281) : AC(64) , Protandim : CK(20) : AC(7) , Turmeric : CK(4968) : AC(2348)

**Diseases** : Skin Cancer : CK(652) : AC(264)

**Pharmacological Actions** : Apoptotic : CK(2952) : AC(2071) , Chemopreventive : CK(2829) : AC(783) , Superoxide Dismutase Up-regulation : CK(508) : AC(171) , Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202)

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### A water extract of Withania somnifera has potent cytotoxic effect on human malignant melanoma A375 cells.

**Pubmed Data** : PLoS One. 2015 ;10(9):e0137498. Epub 2015 Sep 3. PMID: [26334881](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Babli Halder, Shruti Singh, Suman S Thakur

**Study Type** : Human In Vitro

#### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Malignant Melanoma : CK(189) : AC(8)

**Pharmacological Actions** : Apoptotic : CK(2952) : AC(2071)

**Additional Keywords** : Dose Response : CK(1039) : AC(403) , Plant Extracts : CK(7438) : AC(2449)

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### Ashwaganda leaf extract exhibits selective killing of cancer cells.

**Pubmed Data** : Mol Carcinog. 2006 May;45(5):320-32. PMID: [17404115](#)

**Article Published Date** : May 01, 2006

**Authors** : Nashi Widodo, Kamaljit Kaur, Bhupal G Shrestha, Yasuomi Takagi, Tetsuro Ishii, Renu

Wadhwa, Sunil C Kaul

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Tumors : CK(203) : AC(119)

**Pharmacological Actions** : Antineoplastic Agents : CK(1158) : AC(639), Apoptotic : CK(2952) : AC(2071), Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202)

**Additional Keywords** : Plant Extracts : CK(7438) : AC(2449), Selective Cytotoxicity : CK(158) : AC(112)

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**The present review summarizes the key preclinical studies demonstrating anticancer effects of withaferin along with its molecular targets and mechanisms related to its anticancer effects.**

**Pubmed Data** : Enzymes. 2015 ;37:73-94. Epub 2015 Jul 29. PMID: [26298456](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Abbas K Samadi

**Study Type** : Review

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Cancers: All : CK(14469) : AC(4575)

**Pharmacological Actions** : Apoptotic : CK(2952) : AC(2071)

**Additional Keywords** : Ayurveda : CK(4) : AC(4)

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**Withaferin A targets vimentin and promotes cell death in prostate cancer cells, but not in normal fibroblasts.**

**Pubmed Data** : PLoS One. 2015 ;10(7):e0134137. Epub 2015 Jul 31. PMID: [26230090](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Yukihiro Nishikawa, Daisuke Okuzaki, Kohshiro Fukushima, Satomi Mukai, Shouichi Ohno, Yuki Ozaki, Norikazu Yabuta, Hiroshi Nojima

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Prostate Cancer : CK(1488) : AC(436)

**Pharmacological Actions** : Apoptotic : CK(2952) : AC(2071), Heat Shock Protein Inducer : CK(83) : AC(30)

**Additional Keywords** : Selective Cytotoxicity : CK(158) : AC(112)

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**Withaferin-A, a compound found within Ashwaganda, exhibits in vivo anticancer activity in human breast**

## cancer cells.

**Pubmed Data** : Cancer Res. 2008 Sep 15;68(18):7661-9. PMID: [18794155](#)

**Article Published Date** : Sep 15, 2008

**Authors** : Silvia D Stan, Eun-Ryeong Hahm, Renaud Warin, Shivendra V Singh

**Study Type** : Animal Study

### Additional Links

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Breast Cancer](#) : CK(3505) : AC(1056)

**Pharmacological Actions** : [Apoptotic](#) : CK(2952) : AC(2071)

## Cardioprotective (AC 1) (CK 1)

### Withaferin A is a potent lead compound against multiple targets associated with cardiovascular disease.

**Pubmed Data** : Curr Comput Aided Drug Des. 2015 Nov 5. Epub 2015 Nov 5. PMID: [26548552](#)

**Article Published Date** : Nov 04, 2015

**Authors** : Rekha Ravindran, Nitika Sharma, Sujata Roy, A R Thakur, G Subhadra, K Sriram, Jamuna Devi, Johanna Rajkumar

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Cardiovascular Disease: Prevention](#) : CK(3187) : AC(425) , [Cardiovascular Diseases](#) : CK(7145) : AC(903)

**Pharmacological Actions** : [Cardioprotective](#) : CK(1594) : AC(408)

## Catalase Up-Regulation (AC 2) (CK 11)

### A multi-herbal product called Protandim attenuates intima hyperplasia.

**Pubmed Data** : Free Radic Biol Med. 2011 Mar 15;50(6):700-9. Epub 2010 Dec 15. PMID: [21167278](#)

**Article Published Date** : Mar 15, 2011

**Authors** : Binata Joddar, Rashmeet K Reen, Michael S Firstenberg, Saradhadevi Varadharaj, Joe M McCord, Jay L Zweier, Keith J Gooch

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4968) : AC(2348)

**Diseases** : Intima Media Thickening : CK(153) : AC(34)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), Catalase Up-Regulation : CK(118) : AC(42), Superoxide Dismutase Up-regulation : CK(508) : AC(171)

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## A multi-herbal product called Protandim has significant antioxidant properties in human subjects.

**Pubmed Data** : Arzneimittelforschung. 2006;56(6):387-93. PMID: [16413416](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Sally K Nelson, Swapan K Bose, Gary K Grunwald, Paul Myhill, Joe M McCord

**Study Type** : Human Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4951) : AC(2343)

**Diseases** : Oxidative Stress : CK(3836) : AC(1369)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), Catalase Up-Regulation : CK(118) : AC(42), Superoxide Dismutase Up-regulation : CK(508) : AC(171)

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## Cell cycle arrest (AC 1) (CK 1)

### The present study demonstrated the antiproliferative effects of withaferin A on the human osteosarcoma cell lines MG-63 and U2OS.

**Pubmed Data** : Exp Ther Med. 2015 Jul ;10(1):323-329. Epub 2015 May 7. PMID: [26170956](#)

**Article Published Date** : Jun 30, 2015

**Authors** : Ting-Zhuo Lv, Guang-Shun Wang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Osteosarcoma : CK(133) : AC(69)

**Pharmacological Actions** : Antiproliferative : CK(2475) : AC(1682), Cell cycle arrest : CK(808) :

## Chemopreventive (AC 4) (CK 7)

### A multi-herbal product called Protandim exhibits chemopreventive properties in a mouse model of skin cancer.

**Pubmed Data** : PLoS One. 2010;5(7):e11902. Epub 2010 Jul 30. PMID: [20689586](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Delira Robbins, Xin Gu, Runhua Shi, Jianfeng Liu, Fei Wang, Jacquelyne Ponville, Joe M McCord, Yunfeng Zhao

**Study Type** : Animal Study

#### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68) , Bacopa : CK(125) : AC(52) , Green Tea : CK(1957) : AC(558) , Milk Thistle : CK(281) : AC(64) , Protandim : CK(20) : AC(7) , Turmeric : CK(4968) : AC(2348)

**Diseases** : Skin Cancer : CK(652) : AC(264)

**Pharmacological Actions** : Apoptotic : CK(2952) : AC(2071) , Chemopreventive : CK(2829) : AC(783) , Superoxide Dismutase Up-regulation : CK(508) : AC(171) , Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202)

### An extract of Withania somnifera reduced the number of mammary carcinomas that developed and reduced the rate of cell division in the carcinomas.

**Pubmed Data** : Anticancer Res. 2014 Nov ;34(11):6327-32. PMID: [25368231](#)

**Article Published Date** : Oct 31, 2014

**Authors** : Kamel F Khazal, Donald L Hill, Clinton J Grubbs

**Study Type** : Transgenic Animal Study

#### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Breast Cancer : CK(3505) : AC(1056) , Breast Cancer: Triple Negative : CK(257) : AC(139)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4578) : AC(1604) , Antiproliferative : CK(2471) : AC(1680) , Chemopreventive : CK(2829) : AC(783)

**Additional Keywords** : Phytotherapy : CK(1186) : AC(218) , Plant Extracts : CK(7438) : AC(2449)

**Problem Substances** : Mouse Mammary Tumour Viruses (MMTV) : CK(11) : AC(2)



## This reviews natural plants as breast cancer preventatives or use in treatments.

**Pubmed Data** : Saudi Pharm J. 2016 May ;24(3):233-40. Epub 2016 May 5. PMID: [27275107](#)

**Article Published Date** : Apr 30, 2016

**Authors** : Munazza Shareef, Muhammad Aqeel Ashraf, Maliha Sarfraz

**Study Type** : Review

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Black Cohosh : CK(61) : AC(20), Burdock : CK(42) : AC(26), Echinacea : CK(529) : AC(99), Flavonoids : CK(1215) : AC(379), Flaxseed : CK(453) : AC(90), Garlic : CK(712) : AC(225), Ginseng : CK(473) : AC(133), Polyphenols : CK(930) : AC(334), Turmeric : CK(4951) : AC(2343)

**Diseases** : Breast Cancer : CK(3505) : AC(1056)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), Antiproliferative : CK(2471) : AC(1680), Chemopreventive : CK(2829) : AC(783)

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## Withaferin-A, a compound found within Ashwaganda, has a protective effect against DMBA-induced oral cancer in hamsters.

**Pubmed Data** : Indian J Exp Biol. 2009 Jan;47(1):16-23. PMID: [19317347](#)

**Article Published Date** : Jan 01, 2009

**Authors** : S Manoharan, K Panjamurthy, Venugopal P Menon, S Balakrishnan, Linsa Mary Alias

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Oral Cancer : CK(214) : AC(79)

**Pharmacological Actions** : Antioxidants : CK(7275) : AC(2666), Chemopreventive : CK(2829) : AC(783)

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## Cytoprotective (AC 1) (CK 2)

### Withania somnifera possesses phyto remedial effect and it is one of the best antidotes against arsenic-induced reproductive toxicity.

**Pubmed Data** : Avicenna J Phytomed. 2015 Jul-Aug;5(4):355-64. PMID: [26445714](#)

**Article Published Date** : Jun 30, 2015

**Authors** : Arun Kumar, Ranjit Kumar, Mohammad Samuir Rahman, Mohammad Asif Iqbal, Gautam Anand, Pintoo Kumar Niraj, Mohammad Ali

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Arsenic Poisoning](#) : CK(160) : AC(49)

**Pharmacological Actions** : [Antioxidants](#) : CK(7275) : AC(2666), [Cytoprotective](#) : CK(184) : AC(92)

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## Food Preservatives (AC 1) (CK 1)

**This study confirmed the potential of selected extracts of spices as effective natural food preservative in juices.**

**Pubmed Data** : Int J Microbiol. 2016 ;2016:9015802. Epub 2016 Jan 4. PMID: [26880927](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Romika Dhiman, Neeraj Aggarwal, Kamal Rai Aneja, Manpreet Kaur

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(136) : AC(68), [Ginger](#) : CK(676) : AC(175), [Gotu Kola](#) : CK(50) : AC(20), [Indian Gooseberry](#) : CK(1) : AC(1), [Mint](#) : CK(380) : AC(60), [Terminalia](#) : CK(25) : AC(16), [Turmeric](#) : CK(4951) : AC(2343)

**Diseases** : [Foodborne Pathogens: Prevention/Food Preservation](#) : CK(19) : AC(18)

**Pharmacological Actions** : [Antimicrobial](#) : CK(292) : AC(127), [Food Preservatives](#) : CK(1) : AC(1)

**Additional Keywords** : [Fruit Juice](#) : CK(85) : AC(11), [Plant Extracts](#) : CK(7438) : AC(2449)

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## Heat Shock Protein Down-Regulation (AC 1) (CK 2)

**A ashwagandha water extract suppressed the tumor growth of glioma cells.**

**Pubmed Data** : Mol Neurobiol. 2015 Jul 26. Epub 2015 Jul 26. PMID: [26208698](#)

**Article Published Date** : Jul 25, 2015

**Authors** : Hardeep Kataria, Sushil Kumar, Harshita Chaudhary, Gurcharan Kaur

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Glioma : CK(174) : AC(84)

**Pharmacological Actions** : Antiproliferative : CK(2471) : AC(1680), Heat Shock Protein Down-Regulation : CK(1) : AC(1), NF-kappaB Inhibitor : CK(1113) : AC(693), Vascular Endothelial Growth Factor Inhibitors : CK(123) : AC(61)

**Additional Keywords** : Plant Extracts : CK(7438) : AC(2449)

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## Heat Shock Protein Inducer (AC 1) (CK 1)

**Withaferin A targets vimentin and promotes cell death in prostate cancer cells, but not in normal fibroblasts.**

**Pubmed Data** : PLoS One. 2015 ;10(7):e0134137. Epub 2015 Jul 31. PMID: [26230090](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Yukihiro Nishikawa, Daisuke Okuzaki, Kohshiro Fukushima, Satomi Mukai, Shouichi Ohno, Yuki Ozaki, Norikazu Yabuta, Hiroshi Nojima

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Prostate Cancer : CK(1488) : AC(436)

**Pharmacological Actions** : Apoptotic : CK(2952) : AC(2071), Heat Shock Protein Inducer : CK(83) : AC(30)

**Additional Keywords** : Selective Cytotoxicity : CK(158) : AC(112)

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## Hepatoprotective (AC 1) (CK 2)

**Ashwaganda's hepatoprotective properties protects**

## against iron overload toxicity.

**Pubmed Data** : Phytother Res. 2000 Nov;14(7):568-70. PMID: [11054855](#)

**Article Published Date** : Nov 01, 2000

**Authors** : A Bhattacharya, M Ramanathan, S Ghosal, S K Bhattacharya

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Iron Overload : CK(31) : AC(17)

**Pharmacological Actions** : Hepatoprotective : CK(1383) : AC(592)

## Hypolipidemic (AC 1) (CK 2)

**Ashwaganda has significant cholesterol lowering and blood lipid modulating effects in the rat experimental model.**

**Pubmed Data** : Caries Res. 2001 Mar-Apr;35(2):125-8. PMID: [16713218](#)

**Article Published Date** : Mar 01, 2001

**Authors** : Nishant P Visavadiya, A V R L Narasimhacharya

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Cholesterol: High : CK(1226) : AC(195)

**Pharmacological Actions** : Hypolipidemic : CK(1173) : AC(248)

## Immunomodulatory (AC 1) (CK 1)

**This study identified five bioactives that are capable of regulating 15 immune system pathways through 16 target proteins.**

**Pubmed Data** : J Ethnopharmacol. 2016 Jul 31. Epub 2016 Jul 31. PMID: [27487266](#)

**Article Published Date** : Jul 30, 2016

**Authors** : Uma Chandran, Bhushan Patwardhan

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Pharmacological Actions** : [Immunomodulatory](#) : CK(1285) : AC(356)

**Additional Keywords** : [Plant Extracts](#) : CK(7481) : AC(2461)

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## Interleukin-6 Downregulation (AC 1) (CK 2)

**Oral administration of WSR has analgesic and anti-inflammatory effects in fructose drinking water rats and causes improved insulin resistance index.**

**Pubmed Data** : J Basic Clin Physiol Pharmacol. 2016 Jun 1 ;27(4):387-91. PMID: [27383871](#)

**Article Published Date** : May 31, 2016

**Authors** : Mohammad Reza Shahraki, Zahra Samadi Noshahr, Hassan Ahmadvand, Alireza Nakhaie

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [High Fructose Diet](#) : CK(88) : AC(25) , [Insulin Resistance](#) : CK(1670) : AC(343)

**Pharmacological Actions** : [Analgesics](#) : CK(1315) : AC(215) , [Anti-Inflammatory Agents](#) : CK(4615) : AC(1613) , [Antinoceptive](#) : CK(189) : AC(49) , [Interleukin-6 Downregulation](#) : CK(1081) : AC(339) , [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1766) : AC(649)

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## NF-kappa-B-inducing kinase (NIK) modulator (AC 1) (CK 2)

**A multi-herbal product called Protandim has**

## chemopreventive properties against skin cancer.

**Pubmed Data** : PLoS One. 2009;4(4):e5284. Epub 2009 Apr 22. PMID: [19384424](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Jianfeng Liu, Xin Gu, Delira Robbins, Guohong Li, Runhua Shi, Joe M McCord, Yunfeng Zhao

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4951) : AC(2343)

**Diseases** : Oxidative Stress : CK(3836) : AC(1369), Skin Cancer : CK(652) : AC(264)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), NF-kappa-B-inducing kinase (NIK) modulator : CK(3) : AC(2), Superoxide Dismutase Up-regulation : CK(508) : AC(171), Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202), Vascular Cell Adhesion Molecule-1 Inhibitor : CK(117) : AC(30)

## NF-kappaB Inhibitor (AC 2) (CK 3)

### A ashwagandha water extract suppressed the tumor growth of glioma cells.

**Pubmed Data** : Mol Neurobiol. 2015 Jul 26. Epub 2015 Jul 26. PMID: [26208698](#)

**Article Published Date** : Jul 25, 2015

**Authors** : Hardeep Kataria, Sushil Kumar, Harshita Chaudhary, Gurcharan Kaur

**Study Type** : Animal Study, In Vitro Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Glioma : CK(174) : AC(84)

**Pharmacological Actions** : Antiproliferative : CK(2471) : AC(1680), Heat Shock Protein Down-Regulation : CK(1) : AC(1), NF-kappaB Inhibitor : CK(1113) : AC(693), Vascular Endothelial Growth Factor Inhibitors : CK(123) : AC(61)

**Additional Keywords** : Plant Extracts : CK(7438) : AC(2449)

### Ashwaganda induces programmed cell death in human leukemia cells.

**Pubmed Data** : Apoptosis. 2008 Nov 11. [Epub ahead of print] PMID: [19002588](#)

**Article Published Date** : Nov 11, 2008

**Authors** : Jung Hwa Oh, Tae-Jin Lee, Sang Hyun Kim, Yung Hyun Choi, Sang Han Lee, Jin Man Lee,

Young-Ho Kim, Jong-Wook Park, Taeg Kyu Kwon

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : [Leukemia](#) : CK(965) : AC(385)

**Pharmacological Actions** : [NF-kappaB Inhibitor](#) : CK(1113) : AC(693)

## Neuritogenic (AC 1) (CK 1)

**Ashwaganda contains compounds with significant neurologically regenerative properties, capable of reconstructing neuronal networks.**

**Pubmed Data** : Br J Pharmacol. 2005 Apr;144(7):961-71. PMID: [15711595](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Tomoharu Kuboyama, Chihiro Tohda, Katsuko Komatsu

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(154) : AC(74)

**Diseases** : [Memory Disorders](#) : CK(340) : AC(103) , [Neurodegenerative Diseases](#) : CK(3376) : AC(850)

**Pharmacological Actions** : [Neuritogenic](#) : CK(133) : AC(59)

## Neuroprotective Agents (AC 1) (CK 2)

**Ashwaganda attenuates insecticide-induced inhibition and impairment of cognitive function.**

**Pubmed Data** : Int Immunopharmacol. 2003 Sep;3(9):1313-24. PMID: [20521626](#)

**Article Published Date** : Sep 01, 2003

**Authors** : C S Yadav, V Kumar, S G Suke, R S Ahmed, P K Mediratta, B D Banerjee

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(136) : AC(68)

**Diseases** : Cognitive Decline/Dysfunction : CK(1140) : AC(213), Pesticide Toxicity : CK(190) : AC(60)  
**Pharmacological Actions** : Neuroprotective Agents : CK(2254) : AC(1063)  
**Additional Keywords** : Plant Extracts : CK(7438) : AC(2449)

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## Neurorestorative (AC 1) (CK 1)

**Ashwaganda contains compounds which promote the formation of dendrites, indicating its therapeutic potential in the dementia brain.**

**Pubmed Data** : Neuroreport. 2000 Jun 26;11(9):1981-5. PMID: [10884056](#)

**Article Published Date** : Jun 26, 2000

**Authors** : C Tohda, T Kuboyama, K Komatsu

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(154) : AC(74)

**Diseases** : Dementia : CK(571) : AC(79)

**Pharmacological Actions** : Neurorestorative : CK(71) : AC(21)

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## Radiation-Sensitizing Agents (AC 1) (CK 1)

**Ashwaganda is a potent and relatively safe radiosensitizer/chemotherapeutic agent.**

**Pubmed Data** : Indian J Exp Biol. 1996 Oct;34(10):927-32. PMID: [9055640](#)

**Article Published Date** : Oct 01, 1996

**Authors** : P U Devi

**Study Type** : Commentary

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Cancers: All : CK(14469) : AC(4575)



**Pharmacological Actions** : Radiation-Sensitizing Agents : CK(1) : AC(1)  
**Additional Keywords** : Drug-Plant-Vitamin Synergies : CK(965) : AC(266)

## STAT3 Inhibitor (AC 1) (CK 2)

**Withaferin-A is able to inhibit not only the proliferation of HCT116 cells but also attenuated the tumor growth in vivo by suppressing STAT3 signaling pathways.**

**Pubmed Data** : J Cancer Prev. 2015 Sep ;20(3):185-92. PMID: [26473157](#)

**Article Published Date** : Aug 31, 2015

**Authors** : Bu Young Choi, Bong-Woo Kim

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Colon Cancer : CK(746) : AC(428)

**Pharmacological Actions** : Antiproliferative : CK(2471) : AC(1680), STAT3 Inhibitor : CK(53) : AC(31)

## Superoxide Dismutase Up-regulation (AC 4) (CK 15)

**A multi-herbal product called Protandim attenuates intima hyperplasia.**

**Pubmed Data** : Free Radic Biol Med. 2011 Mar 15;50(6):700-9. Epub 2010 Dec 15. PMID: [21167278](#)

**Article Published Date** : Mar 15, 2011

**Authors** : Binata Joddar, Rashmeet K Reen, Michael S Firstenberg, Saradhadevi Varadharaj, Joe M McCord, Jay L Zweier, Keith J Gooch

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4968) : AC(2348)

**Diseases** : Intima Media Thickening : CK(153) : AC(34)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), Catalase Up-Regulation : CK(118) : AC(42), Superoxide Dismutase Up-regulation : CK(508) : AC(171)

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## A multi-herbal product called Protandim exhibits chemopreventive properties in a mouse model of skin cancer.

**Pubmed Data** : PLoS One. 2010;5(7):e11902. Epub 2010 Jul 30. PMID: [20689586](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Delira Robbins, Xin Gu, Runhua Shi, Jianfeng Liu, Fei Wang, Jacquelyne Ponville, Joe M McCord, Yunfeng Zhao

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4968) : AC(2348)

**Diseases** : Skin Cancer : CK(652) : AC(264)

**Pharmacological Actions** : Apoptotic : CK(2952) : AC(2071), Chemopreventive : CK(2829) : AC(783), Superoxide Dismutase Up-regulation : CK(508) : AC(171), Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202)

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## A multi-herbal product called Protandim has chemopreventive properties against skin cancer.

**Pubmed Data** : PLoS One. 2009;4(4):e5284. Epub 2009 Apr 22. PMID: [19384424](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Jianfeng Liu, Xin Gu, Delira Robbins, Guohong Li, Runhua Shi, Joe M McCord, Yunfeng Zhao

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4951) : AC(2343)

**Diseases** : Oxidative Stress : CK(3836) : AC(1369), Skin Cancer : CK(652) : AC(264)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), NF-kappa-B-inducing kinase (NIK) modulator : CK(3) : AC(2), Superoxide Dismutase Up-regulation : CK(508) : AC(171), Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202), Vascular Cell Adhesion Molecule-1 Inhibitor : CK(117) : AC(30)

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## A multi-herbal product called Protandim has significant antioxidant properties in human subjects.

**Pubmed Data** : Arzneimittelforschung. 2006;56(6):387-93. PMID: [16413416](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Sally K Nelson, Swapan K Bose, Gary K Grunwald, Paul Myhill, Joe M McCord

**Study Type** : Human Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4951) : AC(2343)

**Diseases** : Oxidative Stress : CK(3836) : AC(1369)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), Catalase Up-Regulation : CK(118) : AC(42), Superoxide Dismutase Up-regulation : CK(508) : AC(171)

## Tumor Necrosis Factor (TNF) Alpha Inhibitor (AC 1) (CK 2)

**Oral administration of WSR has analgesic and anti-inflammatory effects in fructose drinking water rats and causes improved insulin resistance index.**

**Pubmed Data** : J Basic Clin Physiol Pharmacol. 2016 Jun 1 ;27(4):387-91. PMID: [27383871](#)

**Article Published Date** : May 31, 2016

**Authors** : Mohammad Reza Shahraki, Zahra Samadi Noshahr, Hassan Ahmadvand, Alireza Nakhaie

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : High Fructose Diet : CK(88) : AC(25), Insulin Resistance : CK(1670) : AC(343)

**Pharmacological Actions** : Analgesics : CK(1315) : AC(215), Anti-Inflammatory Agents : CK(4615) : AC(1613), Antinoceptive : CK(189) : AC(49), Interleukin-6 Downregulation : CK(1081) : AC(339), Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1766) : AC(649)

## Tumor Suppressor Protein p53 Upregulation (AC 3) (CK 5)

## A multi-herbal product called Protandim exhibits chemopreventive properties in a mouse model of skin cancer.

**Pubmed Data** : PLoS One. 2010;5(7):e11902. Epub 2010 Jul 30. PMID: [20689586](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Delira Robbins, Xin Gu, Runhua Shi, Jianfeng Liu, Fei Wang, Jacquelyne Ponville, Joe M McCord, Yunfeng Zhao

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4968) : AC(2348)

**Diseases** : Skin Cancer : CK(652) : AC(264)

**Pharmacological Actions** : Apoptotic : CK(2952) : AC(2071), Chemopreventive : CK(2829) : AC(783), Superoxide Dismutase Up-regulation : CK(508) : AC(171), Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202)

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## A multi-herbal product called Protandim has chemopreventive properties against skin cancer.

**Pubmed Data** : PLoS One. 2009;4(4):e5284. Epub 2009 Apr 22. PMID: [19384424](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Jianfeng Liu, Xin Gu, Delira Robbins, Guohong Li, Runhua Shi, Joe M McCord, Yunfeng Zhao

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4951) : AC(2343)

**Diseases** : Oxidative Stress : CK(3836) : AC(1369), Skin Cancer : CK(652) : AC(264)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), NF-kappa-B-inducing kinase (NIK) modulator : CK(3) : AC(2), Superoxide Dismutase Up-regulation : CK(508) : AC(171), Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202), Vascular Cell Adhesion Molecule-1 Inhibitor : CK(117) : AC(30)

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## Ashwaganda leaf extract exhibits selective killing of cancer cells.

**Pubmed Data** : Mol Carcinog. 2006 May;45(5):320-32. PMID: [17404115](#)

**Article Published Date** : May 01, 2006

**Authors** : Nashi Widodo, Kamaljit Kaur, Bhupal G Shrestha, Yasuomi Takagi, Tetsuro Ishii, Renu Wadhwa, Sunil C Kaul

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Tumors : CK(203) : AC(119)

**Pharmacological Actions** : Antineoplastic Agents : CK(1158) : AC(639), Apoptotic : CK(2952) : AC(2071), Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202)

**Additional Keywords** : Plant Extracts : CK(7438) : AC(2449), Selective Cytotoxicity : CK(158) : AC(112)

## Vascular Cell Adhesion Molecule-1 Inhibitor (AC 1) (CK 2)

**A multi-herbal product called Protandim has chemopreventive properties against skin cancer.**

**Pubmed Data** : PLoS One. 2009;4(4):e5284. Epub 2009 Apr 22. PMID: [19384424](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Jianfeng Liu, Xin Gu, Delira Robbins, Guohong Li, Runhua Shi, Joe M McCord, Yunfeng Zhao

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4951) : AC(2343)

**Diseases** : Oxidative Stress : CK(3836) : AC(1369), Skin Cancer : CK(652) : AC(264)

**Pharmacological Actions** : Antioxidants : CK(7261) : AC(2659), NF-kappa-B-inducing kinase (NIK) modulator : CK(3) : AC(2), Superoxide Dismutase Up-regulation : CK(508) : AC(171), Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202), Vascular Cell Adhesion Molecule-1 Inhibitor : CK(117) : AC(30)

## Vascular Endothelial Growth Factor A Inhibitor (AC 1) (CK 2)

**A multi-herbal product called Protandim prevents fibrosis and capillary loss and preserves right ventricular function**

## in rats.

**Pubmed Data** : Circulation. 2009 Nov 17;120(20):1951-60. Epub 2009 Nov 2. PMID: [19884466](#)

**Article Published Date** : Nov 17, 2009

**Authors** : Harm J Bogaard, Ramesh Natarajan, Scott C Henderson, Carlin S Long, Donatas Kraskauskas, Lisa Smithson, Ramzi Ockaili, Joe M McCord, Norbert F Voelkel

**Study Type** : Animal Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68), Bacopa : CK(125) : AC(52), Green Tea : CK(1957) : AC(558), Milk Thistle : CK(281) : AC(64), Protandim : CK(20) : AC(7), Turmeric : CK(4968) : AC(2348)

**Diseases** : Heart Failure : CK(918) : AC(124), Hypertension : CK(2944) : AC(404), Hypertension: Pulmonary : CK(92) : AC(35)

**Pharmacological Actions** : Anti-Fibrotic : CK(44) : AC(28), Vascular Endothelial Growth Factor A Inhibitor : CK(132) : AC(71)

# Vascular Endothelial Growth Factor Inhibitors (AC 1) (CK 2)

## A ashwagandha water extract suppressed the tumor growth of glioma cells.

**Pubmed Data** : Mol Neurobiol. 2015 Jul 26. Epub 2015 Jul 26. PMID: [26208698](#)

**Article Published Date** : Jul 25, 2015

**Authors** : Hardeep Kataria, Sushil Kumar, Harshita Chaudhary, Gurcharan Kaur

**Study Type** : Animal Study, In Vitro Study

### Additional Links

**Substances** : Ashwagandha : CK(136) : AC(68)

**Diseases** : Glioma : CK(174) : AC(84)

**Pharmacological Actions** : Antiproliferative : CK(2471) : AC(1680), Heat Shock Protein Down-Regulation : CK(1) : AC(1), NF-kappaB Inhibitor : CK(1113) : AC(693), Vascular Endothelial Growth Factor Inhibitors : CK(123) : AC(61)

**Additional Keywords** : Plant Extracts : CK(7438) : AC(2449)

This document is for information purposes only. By providing the information contained herein we are not diagnosing, treating, curing, mitigating, or preventing any type of disease or medical condition. Before beginning any type of natural, integrative or conventional treatment regimen, it is advisable to seek the advice of a licensed healthcare professional.

