

## Herbs that release the exterior

### Definition:

Substances that release the exterior act to dispel pathogenic factors from the external and superficial parts of the body.

### Symptoms:

-- Wind-cold: aversion to cold, fever, no sweating, nose congestion, headache, body aches and pain.

-- Wind-heat: fever, thirsty, sore & pain throat.

### Pharmacological effects:

Diaphoretic	Antipyretic	Sedative	Antibiotic
Metabolic	Diuretic	Cardiovascular	Antispasmodic
Analgesic	Anti-inflammatory		Antivenin

## Ma Huang (Warm) 麻黃



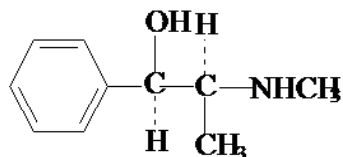
## Ma Huang (Warm) 麻黃



<b>Chemical Composition</b>	Ephedrine alkaloids, ephedroxane, essential oil		
<b>Pharmacological Effects</b>	<b>1. Diaphoresis</b>	<b>2. Respiratory</b>	<b>3. Diuresis</b>
	<b>4. Antibiotic</b>	<b>5. CNS stimulant</b>	<b>6. Antipyretic</b>
	<b>Cardiovascular</b>		
<b>Clinical studies and research</b>	<b>Infantile diarrhea</b>	<b>Coughing and wheezing</b>	
	<b>Asthma</b>		
<b>Herb-Drug Interaction</b>	<p><b>General effect:</b> stimulate the central nervous sys. &amp; the cardiovascular sys.: combined with cardiac glycosides may lead to cardiac arrhythmia. Not be combined with other sympathomimetic drugs.</p> <p><b>Beta Blockers:</b> The effect may be reduced (Tenormin, Lopressor/Toprol, Betapace, Inderal)</p> <p><b>Diuretics:</b></p>		
<b>Toxicology</b>	Mild toxic; May cause insomnia, exciting CNS too much; avoiding use in the patients with mental disorder, heart disease, pregnant women		

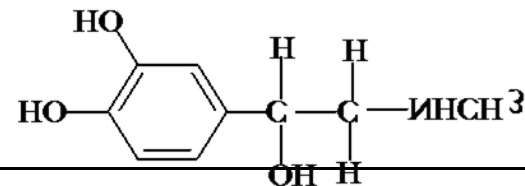
### Ephedrine

麻黃碱



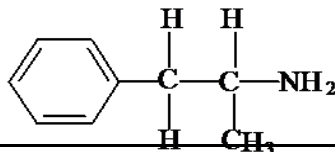
### Adrenaline

腎上腺素



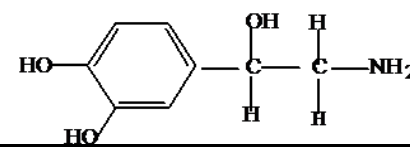
### Amphetamine

苯丙胺



### Noradrenaline

去甲腎上腺素

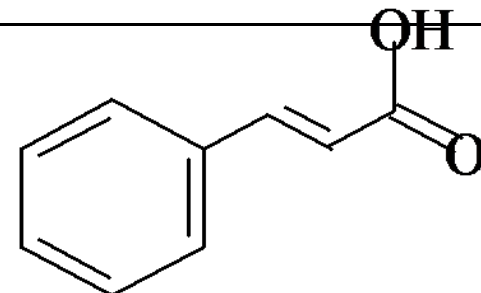


**Gui Zhi (Warm)**

桂枝



<b>Chemical Composition</b>	Essential oils; trans-cinnamic acid; coumarin, protocatechuic acid;		
<b>Pharmacological Effects</b>	<b>Antibiotic</b>	<b>Diuretic</b>	<b>Analgesic</b>
	<b>Diaphoretic &amp; antipyretic</b>	<b>Circulatory</b>	<b>Other</b>
<b>Clinical studies and research</b>	<b>Frostbite</b>		<b>Hypotension</b>
	<b>Facial numbness</b>		<b>Arthritis</b>
<b>Herb-Drug Interaction</b>	<b>Diuretics: may lead to increased elimination of water</b>		
<b>Cautions</b>	<ol style="list-style-type: none"> <li><b>Stimulate blood circulation: Should not be used with high risk of bleeding, pregnant women or women with hypermenorrhea</b></li> <li><b>Warm &amp; Acrid: Contraindicated in patients with febrile disorders</b></li> </ol>		




# Herb Pharmacology

中藥藥理學

Zi Su Ye (Warm)  
紫苏叶



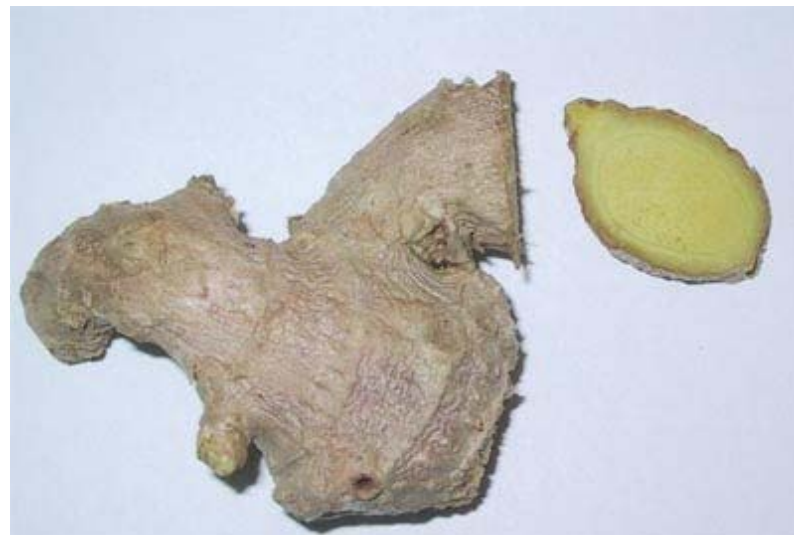
Chemical Composition	Essential oils; apigenin; scutellarin; vicenin, shisonin		
Pharmacological Effects	Antipyretic & diaphoretic	Respiratory	Antibiotic
	Gastrointestinal	Hyperglycemic	
Clinical studies and research	Common warts		
	Cervical bleeding		



Sheng Jiang (Warm)



Chemical Composition	Essential oils; geraniol; geranial...			
Pharmacological Effects	Gastrointestinal	Cardiovascular	Antibiotic	
Clinical studies and research	Arthritis and low back pain;		Arthritis;	
	Intestinal obstruction due to parasites		Nausea & vomiting	
	Severe nausea & vomiting	Motion sickness	Vitiligo	Burn



Jing Jie (Warm)  
荊芥



Chemical Composition	Essential oils; schizomodiol, schizonepetoside A-E		
Pharmacological Effects	Antipyretic and diaphoretic	Antibiotic	Hemostatic
	Analgesic	Respiratory	
Clinical studies and research	Dermatological disorders		



Fang Feng (Warm)

防风



Chemical Composition	Essential oils; saccharides; imperatorin; phellopterin...		
Pharmacological Effects	Antipyretic	Antibiotic	
Clinical studies and research	Antidote for arsenic poisoning		
	Chronic low back pain		





**Bai Zhi (Warm)**  
白芷



<b>Chemical Composition</b>	Coumarins, byak-angelicin, byak-angelicol, anhydrobyakangelicin...		
<b>Pharmacological Effects</b>	<b>Antibiotic</b>	<b>Anti-inflammatory</b>	<b>Analgesic &amp; antipyretic</b>
	<b>Antispasmodic</b>	<b>Other</b>	
<b>Clinical studies and research</b>	<b>Headache</b>		
	<b>Vitiligo</b>		
	<b>Psoriasis</b>		
<b>Herb-Drug interaction</b>	<b>Liver metabolism: Concurrent use of the herb may lead to increased plasma concentration of other drugs, such as testosterone, tolbutamide, nifedipine, bufuralol and diazepam</b>		



Xin Yi Hua (Warm)  
辛夷花



Chemical Composition	Essential oils; lignans, pinosresinol bimethyl ether; ....		
Pharmacological Effects	Effect on nasal mucosa	Antihypertensive	Analgesic
	Uterine stimulant	Antibiotic	
Clinical studies and research	Sinusitis		
	Sinusitis and rhinitis		





Bo He (Cool)  
薄荷



Chemical Composition	Essential oils; lipophilic flavones, coumarins...		
Pharmacological Effects	Dermatologic	Others	
Clinical studies and research	Fever		
	Acute mastitis		



Sang Ye (Cold)  
桑葉



Chemical Composition	Flavonoids; moracetin, campesterol, lupeol, myoinositol...		
Pharmacological Effects	Antibiotic	Metabolic	
	.		
Clinical studies and research	Elephantiasis		
	psoriasis		



Ju Hua 菊花  
(slightly Cold)



Chemical Composition	Essential oils; flavone; chrysanthemin A, B;...		
Pharmacological Effects	Vasodilative	Antibiotic	
Clinical studies and research	Coronary artery disease		
	Hypertension		

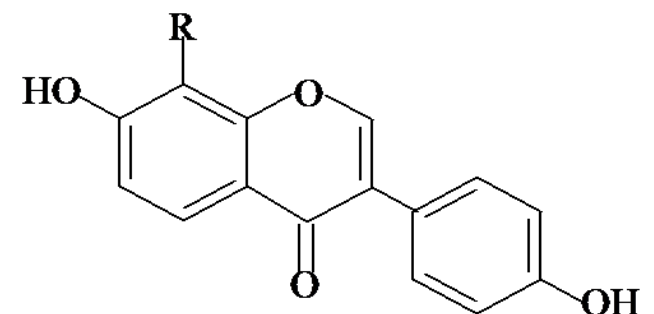




**Ge Geng (Cool)**  
葛根



<b>Chemical Composition</b>	Isoflavonoids; triterpenoid saponols;...		
<b>Pharmacological Effects</b>	<b>Cardiovascular</b>	<b>Antiplatelet</b>	<b>Antihypertensive</b>
	<b>Antipyretic</b>	<b>Antidiabetic</b>	<b>Antispasmodic</b>
	<b>Antialcoholic</b>		
<b>Clinical studies and research</b>	<b>Coronary artery disorder</b>		
	<b>hypertension</b>	<b>Sudden deafness</b>	<b>Migraine headache</b>



R 为葡萄糖



**Sheng Ma**  
(slightly cold) 升麻



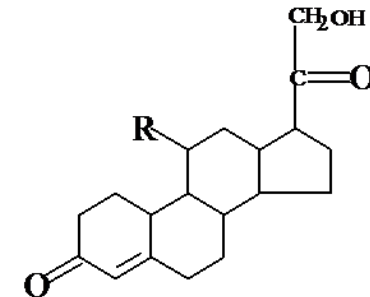
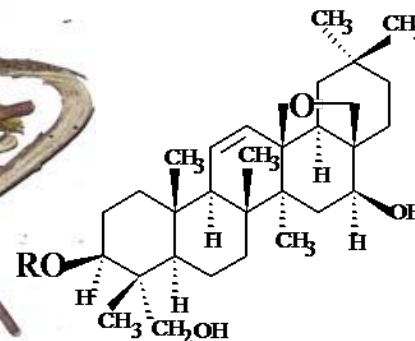
<b>Chemical Composition</b>	Triterpenoids; visnagin; visamminol; norvisnagin		
<b>Pharmacological Effects</b>	<b>Cardiovascular</b>	<b>Antibiotic</b>	<b>Antipyretic</b>
	<b>Others</b>		
<b>Clinical studies and research</b>	<b>Gastric prolapse</b>		
	<b>Severe rectal prolapse</b>		



**Chai Hu (Cool)**  
柴胡



<b>Chemical Composition</b>	Triterpenoids( saikosaponin A, B, C, D,E); essential oils; carbohydrates, flavone, coumarin;		
<b>Pharmacological Effects</b>	<b>Analgesic &amp; antipyretic</b>	<b>Sedative</b>	<b>Anti-inflammatory</b>
	<b>Hepatoprotective</b>	<b>Cholagogic</b>	<b>antihyperlipidemic</b>
	<b>Immunostimulant</b>	<b>antibiotic</b>	
<b>Clinical studies and research</b>	<b>Common cold</b>	<b>Cough</b>	<b>Infectious hepatitis</b>
	<b>Liver cirrhosis</b>	<b>Hyperlipidemia</b>	<b>Erythema</b>
	<b>Globus hystericus</b>		
<b>Herb-Drug interaction</b>	<b>Tolbutamide:</b> <b>Ofloxacin:</b> <b>Interferon:</b>		







Shi Gao (very Cold)

石膏



Chemical Composition	CaSO <sub>4</sub> + 2H <sub>2</sub> O, CaO, SO <sub>3</sub> , Al, Mg, Fe, Mn, Zn, Cu		
Pharmacological Effects	Antipyretic	Immunostimulant	Effect on healing
	Others		
Clinical studies and research	Osteoarthritis deformans endemica		Lobar pneumonia
	Acute inflammation	Burns	Acute sprain
	Fever	Fever due to common cold	





## Zhi Mu (Cold)

知母



Chemical Composition	Timosaponin, mangiferin, sarsasapogenin, markogenin		
Pharmacological Effects	Antidiabetic	Antipyretic	Antibiotic
	Others		
Clinical studies and research	Prostatic hypertrophy		
	Acute rheumatism		
Herb-Drug Interaction	Antidiabetics: Use Zhi Mu with caution with insulin, sulfonylureas, and other antidiabetic medication: may have a synergistic effect, leading to hypoglycemia.		





**Tian Hua Fen** 天花粉  
(Cold)



<b>Chemical Composition</b>	Trichosanthin, stigmasterol		
<b>Pharmacological Effects</b>	<b>Abortifacient</b>	<b>Antineoplastic</b>	<b>Hyperglycemic</b>
	<b>Antibiotic</b>		
<b>Clinical studies and research</b>	<b>Abortion</b>		
	<b>Abortifacient</b>		





**Zhi Zi (Cold)**  
梔子



<b>Chemical Composition</b>	Gardenoside, geniposide, jeminoidin, shanzhiside		
<b>Pharmacological Effects</b>	<b>Analgesic and sdeative</b>	<b>Antihypertensive</b>	<b>Hepatoprotective</b>
	<b>Cholagogic</b>	<b>Gastrointestinal</b>	<b>CNS suppressant</b>
<b>Clinical studies and research</b>	<b>Musculoskeletal</b>		
	<b>Analgesic</b>		
	<b>Coronary artery discorders</b>		
<b>Herb-Drug Interaction</b>	<b>Sedatives effect</b>		





**Lu Gen (Cold)**

蘆根



Chemical Composition	Amino acids, fatty acids, sterols, tocopherols, polyphenols, caffeic		
Pharmacological Effects	Gastrointestinal	CNS suppressant	
Clinical studies and research			



Xia Ku Cao (Cold)

夏枯草



Chemical Composition	Prunellin, oleanolic acid, ursolic acid, carotene, camphor		
Pharmacological Effects	Antihypertensive	Anti-inflammatory	Antibiotic
	Effect on lipoma	Smooth muscle stimulant	
Clinical studies and research	Hypertension		
	Pulmonary tuberculosis		



# Herb Pharmacology

中藥藥理學

Dan Zhu Ye (Cold)

淡竹葉



Chemical Composition	Arundoin, cylindrin, taraxerol, friedelin, organic acids, amino acids		
Pharmacological Effects	Antipyretic	Diuretic	
Herb-Drug interaction	Diuretics:		

