CHINESE THERAPEUTIC ACTIONS

1. Tonifies Blood

Heart and Liver blood deficiencies: Symptoms of Heart and Liver blood deficiencies include anemia, pale complexion, brittle nails, dry hair, dizziness, blurred vision, and palpitations. Dang Gui (Radicis Angelicae Sinensis), warm in nature, is most suitable for cold-type blood-deficient patients. It also treats abdominal pain related to blood deficiency and coldness.

- Blood deficiency: combine Dang Gui with Shu Di Huang (Radix Rehmanniae Preparata), Bai Shao (Radix Paeoniae Alba), and Chuan Xiong (Rhizoma Ligustici Chuanxiong) to enhance the blood-tonifying effect. Exemplar Formula: Si Wu Tang (Four-Substance Decoction). This formula tonifies blood, regulates the menstrual cycle and is used for various patterns of blood deficiency.
- Blood and qi deficiencies: pair it with Huang Qi (Radix Astragali). Exemplar Formula: Dang Gui Bu Xue Tang (Tangkuei Decoction to Tonify the Blood). This formula is commonly used as a tonic for postpartum fatigue and weakness.
- Spleen and Heart deficiencies characterized by insomnia with excessive dreaming and worry, fatigue, palpitations, forgetfulness and difficulty falling asleep: combine Dang Gui with Ren Shen (Radix Ginseng), Bai Zhu (Rhizoma Atractylodis Macrocephalae), Long Yan Rou (Arillus Longan), Suan Zao Ren (Semen Zizyphi Spinosae), and similar tonics. Exemplar Formula: Gui Pi Tang (Restore the Spleen Decoction).
- Blood deficiency with deficiency-heat symptoms, hot flashes, irritability, flushed cheeks: use it with Mu Dan Pi (Cortex Moutan), Sheng Di Huang (Radix Rehmanniae), Chi Shao (Radix Paeoniae Rubrae), and Huang Qin (Radix Scutellariae).
- Epigastric and abdominal pain and coldness due to blood deficiency and Spleen and Stomach deficiencies: use Dang Gui with Sheng Jiang (Rhizoma Zingiberis Recens), Gui Zhi (Ramulus Cinnamomum), Bai Shao (Radix Paeoniae Alba) and Yi Tang (Saccharum Granorum). Dang Gui is commonly cooked with lamb to make soup.
2. Invigorates Blood Circulation and Relieves Pain

Menstrual disorders: Blood deficiency, blood stagnation or qi stagnation all result in menstrual disorders such as irregular menstrual cycle, dysmenorrhea, amenorrhea and other gynecological disorders. Because of the warm property of Dang Gui and its action to nourish the blood and invigorate circulation, it is most suitable for treatment of cold types of menstrual disorders with blood and qi stagnation.

- Amenorrhea due to blood deficiency and stagnation: combine Dang Gui with Hong Hua (Flos Carthami), Tao Ren (Semen Persicae), Chuan Xiong (Rhizoma Ligustici Chuanxiong), and Chi Shao (Radix Paeoniae Rubrae).

Exemplar Formulas: Tao Hong Si Wu Tang (Four-Substance Decoction with Safflower and Peach Pit) and Shao Fu Zhu Yu Tang (Drive Out Blood Stasis in the Lower Abdomen Decoction).

- Amenorrhea or irregular menstruation because of cold and deficiency: combine it with Wu Zhu Yu (Fructus Evodiae), Gui Zhi (Ramulus Cinnamomi), Ren Shen (Radix Ginseng), and Chuan Xiong (Rhizoma Ligustici Chuanxiong).

Exemplar Formula: Wen Jing Tang (Warm the Menses Decoction).

- Dysmenorrhea due to cold and deficiency: use this herb with Wu Ling Zhi (Excrementum Trogopteri seu Poria), Pu Huang (Pollen Typhae) and Yan Hu Suo (Rhizoma Corydalis).

Exemplar Formula: Shu Di Huang (Preserve Pregnancy and Care Free Decoction).

- Early menstruation, bloating during menstruation, irritability from heat and qi stagnation: add Dang Gui to Mu Dan Pi (Cortex Moutan), Zhi Zi (Fructus Gardeniae), Chai Hu (Radix Bupleuri) and Bai Shao (Radix Paeoniae Alba).

Exemplar Formula: Xiao Yao San (Rambling Powder).

- General menstrual disorders with fatigue and weakness due to qi and blood deficiencies: combine this herb with Ren Shen (Radix Ginseng), Bai Zhu (Rhizoma Atractylodis Macrocephalae) and Bai Shao (Radix Paeoniae Alba).

Exemplar Formula: Ba Zhen Tang (Eight-Treasure Decoction).

- Menopausal symptoms due to yin deficiency with heat: use Dang Gui with Xian Mao (Rhizoma Curculiginis), Yin Yang Huo (Herba Epimedi), Zhi Mu (Radix Anemarrhenae), Huang Bai (Cortex Phellodendri), and Ba Ji Tian (Radix Morindae Officinalis).

Exemplar Formula: Er Xian Tang (Two-Immortal Decoction).

Gestational and postpartum disorders: Dang Gui enters the xue (blood) level. It functions to tonify yet does not have the stagnant side effects seen in other tonic herbs. It is also frequently used to treat disorders caused by cold, blood deficiency and blood stagnation before or after deliveries.

- Abdominal pain during pregnancy: combine Dang Gui with Chuan Xiong (Rhizoma Ligustici Chuanxiong).

- Pain and diarrhea during pregnancy: use it with Bai Shao (Radix Paeoniae Alba), Fu Ling (Poria), Bai Zhu (Rhizoma Atractylodis Macrocephalae), and Ze Xie (Rhizoma Alismatis).

- Restless fetus, lower back soreness, abdominal pain and breech presentation of the fetus: incorporate it with Chuan Xiong (Rhizoma Ligustici Chuanxiong), Jiu Jie (Herba Schizonepetae), Tu Si Zi (Semen Cuscutae), Ai Ye (Foliun Artemisiae Argyi), and Hou Po (Cortex Magnoliae Officinalis).

Exemplar Formula: Bao Chan Wu Yu Fang (Preserve Pregnancy and Care Free Decoction).

- Postpartum spontaneous sweating, fever, shortness of breath, and back and leg pain accompanied by an inability to turn from side to side: combine this herb with Huang Qi (Radix Astragali), Bai Shao (Radix Paeoniae Alba), and Sheng Jiang (Rhizoma Zingiberis Recens).

- Postpartum bleeding, lower abdominal coldness and pain caused by blood deficiency with cold: use it with Chuan Xiong (Rhizoma Ligustici Chuanxiong), Tao Ren (Semen Persicae), Pao Jiang (Rhizoma Zingiberis Preparatum), and Gan Cao (Radix Glycyrrhizae).

Exemplar Formula: Sheng Hua Tang (Generation and Transformation Decoction).

- Insufficient milk due to blood and qi deficiencies: add this herb to Ren Shen (Radix Ginseng), Huang Qi (Radix Astragali), Mai Men Dong (Radix Ophiopogonis), Chuan Mu Tong (Caulis Clematidis Armandii), peanuts and pig’s feet.

- Postpartum bi zheng (painful obstruction syndrome): combine Dang Gui with Qiang Hua (Rhizoma et Radix Notopterygii), Chuan Xiong (Rhizoma Ligustici Chuanxiong), and Qin Jiao (Radix Gentianae Macrophyllae).

Traumatic Injuries: Dang Gui, acrid in taste, activates blood circulation and disperses blood stagnation. If blood stagnation is dispersed, swelling will automatically subside. Dang Gui is commonly used in trauma departments in hospitals in China, along with blood-activating herbs, to treat the following symptoms: bruises, fractured or broken bones, swelling, and injuries of the tendons.

- Traumatic injuries of the thoracic cavity: combine Dang Gui with Chai Hu (Radix Bupleuri), Chuan Shan Jia (Squama Manis), Da Huang (Radix et Rhizoma Rhei), and Hong Hua (Flos Carthami). Exemplar Formulas:
Xue Fu Zhu Yu Tang (Drive Out Stasis in the Mansion of Blood Decoction) or Fu Yuan Hua Xue Tang (Revive Health by Invigorating the Blood Decoction).

- Bruises, swelling and redness from traumatic injuries: add this herb to Su Mu (Lignum Sappan), Ru Xiang (Gummi Olibanum), Mo Yao (Myrrha), and Di Bie Chong (Eupolyphaga).
- Broken or fractured bones: use it with Ru Xiang (Gummi Olibanum), Mo Yao (Myrrha), Zì Ran Tong (Pyritum), and Gu Sui Bu (Rhzizoma Drynariae).

Bi zheng (painful obstruction syndrome) with numbness and pain: Besides tonifying blood and invigorating circulation, Dang Gui stops pain and disperses coldness. By dispersing stagnation and promoting nourishment in the channels and tendons, Dang Gui treats numbness and pain in the limbs and extremities. It is used for pain caused by blood deficiency, blood deficiency complicating qi and coldness, and qi and blood deficiencies.

- Numbness due to blood deficiency: combine Dang Gui with Huang Qi (Radix Astragali), Chi Shao (Radix Paeoniae Rubrae), Shu Di Huang (Radix Rehmanniae Preparata), and Chuan Xiong (Rhzizoma Ligustici Chuanxiong).
- Coldness of the extremities, back, and/or buttocks due to blood deficiency: combine this herb with Gui Zhi (Ramulus Cinnamomi), Bai Shao (Radix Paeoniae Alba), Xi Xin (Herba Asari), and Chuan Mu Tong (Caulis Clematidis Armandii). Exemplar Formula: Dang Gui Si Ni Tang (Tangkuei Decoction for Frigid Extremities).
- Bi zheng (painful obstruction syndrome), painful joints, and/or numbness due to ying (nutritive) and wei (defensive) deficiencies: combine this herb with Huang Qi (Radix Astragali), Ji Shu (Radix Scrophulariae), Tian Hua Fen (Radix Trichosanthis), and Chuan Shan Jia (Squama Manis). Exemplar Formula: Ji Shu Zhuang (Four-Valiant Decoction for Well-Being).
- Chronic non-healing ulcers caused by qi and blood deficiencies: use Dang Gui with Huang Qi (Radix Astragali), Rou Gui (Cortex Cinnamomi), Shu Di Huang (Radix Rehmanniae Preparata) and Ren Shen (Radix Ginseng). Exemplar Formula: Shi Quan Da Bu Tang (All-Inclusive Great Tonifying Decoction).

3. Moistens Intestines and Unblocks the Bowels

Constipation due to blood deficiency: When the bowels are not properly nourished by blood, constipation or dry stools result. Usually the elderly, or those who have chronic constipation, or are postpartum women, or are in late or recovery stages of chronic disorders suffer this type of constipation. Dang Gui nourishes the blood and moistens the intestines to promote bowel movement.

- Constipation due to blood deficiency: combine Dang Gui with He Shou Wu (Radix Polygoni Multiflori), Huo Ma Ren (Fructus Cannabis), Tao Ren (Semen Persicaceae), Rou Cong Rong (Herba Cistancheae), Sheng Di Huang (Radix Rehmanniae), Shu Di Huang (Radix Rehmanniae Preparata), and Da Huang (Radix et Rhizoma Rhei). Exemplar Formula: Ji Chuan Jian (Benefit the River [Flow] Decoction).

4. Stops Cough and Treats Dyspnea

Cough and dyspnea: Dang Gui is often used with herbs that transform phlegm and stop cough.

- Cough, dyspnea, shortness of breath, and profuse spurtum: combine this herb with Su Zi (Fructus Perillae), Ban Xia (Rhzizoma Pinelliae), Hou Po (Cortex Magnoliae Officinalis), and Qian Hu (Radix Peucedani). Exemplar Formula: Su Zi Jiang Qi Tang (Perilla Fruit Decoction for Directing Qi Downward).
Dang Gui (Radicis Angelicae Sinensis)

- Coughing during the night, dyspnea, profuse, salty-tasting sputum caused by Kidney and Lung yin deficiencies: combine Dang Gui with a large dose of Chen Pi (Pericarpium Citri Reticulatae), Ban Xia (Rhizoma Pinelliae), Fu Ling (Poria), and Gan Cao (Radix Glycyrrhizae).

**DOSAGE**

5 to 15 grams. Dang Gui is used in decoctions, herbal tincture, plasters, pills, or powder. Unprocessed Dang Gui is commonly used to tonify the blood, regulate menstruation, and lubricate the bowels. Dang Gui dry-fried with grain-based liquor more strongly moves the blood, and is commonly used to treat menstrual pain, traumatic bruises and pain, bi zheng (painful obstruction syndrome), and cases of blood stagnation. Dry-frying increases its warmth, which makes it an ideal agent to tonify the blood without causing diarrhea. The charred herb stops bleeding.

**CAUTIONS / CONTRAINDICATIONS**

- Use Dang Gui with caution for patients with abdominal distention, Spleen deficiency, or those with loose stools or diarrhea.
- Dang Gui is contraindicated in excess conditions, or for patients with yin-deficient heat signs.

**CHEMICAL COMPOSITION**

Essential oils 0.2 to 0.4% (ligustilide, n-butyldiene phthalide, n-butylnaphthalide, n-valero-phenone-O-carboxylic acid); ferulic acid, scopletin.1,2

![Ferulic Acid](image)

**PHARMACOLOGICAL EFFECTS**

- **Effects on the uterus:** Administration of Dang Gui is associated with both stimulating and inhibiting effects on the smooth muscle of the uterus. Laboratory studies have shown that water and alcohol extracts tend to stimulate the uterus, while the essential oil inhibits it.3 Furthermore, clinical studies have shown that when the uterus is in a state of relaxation, Dang Gui can induce contraction. Conversely, if the uterus is in a contracted state, then Dang Gui promotes relaxation. This dual action is credited for the therapeutic effect of relieving spasms and stopping pain.4
- **Cardiovascular:** In one laboratory study using frog specimens, intravenous injection of Dang Gui was associated initially with an inhibitory influence on the heart, followed by a negative chronotropic effect and positive inotropic effect. It improves overall blood circulation by decreasing the whole blood specific viscosity, or improving the hemorrheological changes in “blood stagnation.” It also has an antiarrhythmic effect, especially against arrhythmia induced by epinephrine, cardiac glycosides, aconitine, and barium chloride. Administration of Dang Gui is associated with reduction of plasma cholesterol and triglyceride levels, and a decreased risk of atherosclerosis, as demonstrated in laboratory studies.5,6,7,8
- **Antiplatelet:** Administration of Dang Gui in rats is associated with a marked antiplatelet effect, similar to that of aspirin.9 Other studies have demonstrated that Dang Gui also inhibits thrombus formation.10
- **Immunostimulant:** Administration of Dang Gui is associated with an increase in phagocytic activity by the macrophages.11
- **Respiratory:** Dang Gui has demonstrated a beneficial effect in treating wheezing and dyspnea caused by bronchospasm.12
- **Hepatoprotective:** Dang Gui promotes the generation of hepatocytes and has demonstrated a marked hepatoprotective effect.13
- **Antibiotic:** It shows inhibitory activity against Salmonella typhi, E. coli, Corynebacterium diphtheriae, Vibrio cholerae, α-hemolytic streptococcus and β-hemolytic streptococcus.14
- **Analgesic and anti-inflammatory:** Extract of Dang Gui has analgesic and anti-inflammatory effects similar to those of acetylsalicylic acid. It decreases vascular permeability to reduce inflammation.15 Its anti-inflammatory effect is approximately 1.1 times stronger than acetylsalicylic acid, and its analgesic effect is approximately 1.7 times stronger than acetylsalicylic acid.16,17

**CLINICAL STUDIES AND RESEARCH**

- **Cough and wheezing:** In one clinical study, essential oil of Dang Gui given three times daily for 7 days was found to be 90.2% effective in treating 51 patients with coughing and wheezing. Most patients began to respond to the herbal treatment within 2 to 3 hours, with maximum effect shown at 8 to 24 hours.18
- **Low back and leg pain:** An herbal injection containing Dang Gui and Chuan Xiong (Rhizoma Ligustici Chaunxiong) was found to be 97% effective in relieving pain when administered to the affected area once daily or every other day for 10 days.19
- **Arrhythmia:** According to one report, 100 patients with arrhythmia were treated with two Dang Gui preparations, with 83.3% rate of effectiveness. The first preparation was intravenous infusion of 60 to 120 ml of 25 to 50% Dang Gui preparation once daily for 15 days. The
second preparation was 20 ml of 150% Dang Gui syrup given three times daily for 15 days.20  
• Stroke: Patients with ischemic stroke were treated with intravenous infusion of Dang Gui one time daily for 15 to 30 doses per course of treatment. Of 40 patients, the study reported complete recovery in 12 patients, marked improvement in 13 patients, slight improvement in 11 patients, and no response in 4 patients.21  
• Migraine: A preparation of Dang Gui demonstrated an 82.9% rate of effectiveness in 35 patients with migraine headache.22  
• Nephritis: In one study, 33 patients with acute nephritis were treated with one injection of a 20% Dang Gui solution to acupuncture points daily, with good results. No restrictions were made in regards to intake of water and salt. Acupuncture points selected include Shenshu (BL 23), Zhongji (CV 3), Shuiguan (KI 5), and ah shi points. Out of 33 patients, 11 also received drug treatment.23  
• Pain: Local injection of a 5% Dang Gui solution was found to have satisfactory effects to relieve post-surgical pain in patients who had chest operation. Out of 105 patients, 84 had excellent response, 16 had good response, and 5 had poor response.24  
• Upper gastrointestinal bleeding: In a clinical study, patients with upper gastrointestinal bleeding were treated with 4.5 grams of powdered Dang Gui three times daily with marked effectiveness. Out of 40 patients, the study reported remarkable improvement in 30 patients, moderate improvement in 4 patients, and no response in 6 patients.25  
• Liver disease: One intramuscular injection of Dang Gui (equivalent to 4 grams of the dried herb) daily for 2 months stimulated symptomatic improvement in 17 patients with chronic hepatitis and 10 patients with liver cirrhosis.26  
• Enuresis: According to one report, 87 patients who had enuresis for more than 2 years were treated with daily injection of 5% Dang Gui solution to acupuncture points for 1 week with a 90% rate of effectiveness. The treatment protocol was to inject 0.5 to 1.0 ml of Dang Gui solution into each point one time daily. Three to four acupuncture points were selected for each treatment. Points selected included Shenshu (BL 23), Dachangshu (BL 25), Pangguangshu (BL 28), Guanyuan (CV 4), Zhongji (CV 3), Sanyinjiao (SP 6), and Yiniao (Extra).27  
• Menstrual pain: Essential oil of Dang Gui given three times daily for 15 to 20 days was 76.79% effective in relieving menstrual pain in 112 patients.28  
• Uterine prolapse: In a clinical study, 67 patients with uterine prolapse were treated with injections of Dang Gui, with complete recovery in 27 patients, moderate improvement in 34 patients, and no response in 6 patient. The overall rate of effectiveness was 90%. The treatment protocol was to inject 2 ml of a 50% Dang Gui solution daily into the acupuncture points Sanyinjiao (SP 6) and Zusanli (ST 36), alternating sides with each treatment.29  
• Insomnia: Injection of 2 ml of a 5% Dang Gui solution bilaterally into Anmian points one time daily or every other day for 10 treatments was found to be 88% effective in treating insomnia in 30 patients.30  
• Thromboangitis obliterans: In one study, 52 patients were treated with an injection of a 5% Dang Gui solution daily, 6 days per week for a total of 4 weeks, with an 88.5% rate of effectiveness. Effectiveness was defined as relief of pain, improvement of blood circulation, increase of peripheral body temperature, and enhancement of recovery.31  
• Herpes zoster: One report describes 54 patients with herpes zoster who all recovered within 6 to 7 days after being treated with 0.5 to 1.0 gram of Dang Gui powder every 4 to 6 hours.32  
• Alopecia areata: Oral administration of 9 grams of an herbal formula three times daily after meals showed satisfactory results in 40 patients with alopecia areata. The herbal formula was prepared by mixing 500 grams each of Dang Gui and Bai Zi Ren (Semen Platycladi) with honey to make pills.33  
• Psoriasis: In a clinical study, 100 patients with psoriasis were treated with a combination injection, with complete recovery in 80 patients, moderate improvement in 15 patients, and slight improvement in 5 patients. The treatment protocol consisted of daily injection of 2% Dang Gui solution and 2% novocaine.34  
• Dermatological disorders: In one study, 353 patients with various dermatological disorders were treated with a 90.7% effective rate, using 0.1 to 0.2 ml injectable of 0.5% Dang Gui on ear points every other day for 10 to 20 days per course of treatment. Ear points selected included Adrenal Cortex, Endocrine, Shenmen, Pituitary Gland, and Lung.35  
• Deafness: Patients with acute-onset deafness were treated with intravenous infusion of 20 ml of 200% Dang Gui solution in 20 ml of D5W. The treatment protocol was to administer daily injections for 5 days per course of treatment, for a total of 4 to 5 courses. Out of 105 patients, the study reported complete recovery in 21 patients, marked improvement in 29 patients, moderate improvement in 29 patients, and no effect in 26 patients. The overall rate of effective was 75%.36  
• Anal fissure: According to one study, the combination injection of Dang Gui and 1% lidocaine to the affected area in 114 patients had an rate of effectiveness of 96.5%.37  
• Chronic hypertrophic rhinitis: According to one report, 43 patients were treated with a 90.7% rate of effectiveness using injection of herbs. The treatment protocol was to
**Dang Gui (Radicis Angelicae Sinensis)**

In traditional texts, different segments of *Dang Gui* are said to have slightly different actions:

- **Curved Tail**/ **曲尾** *Dang Gui Tou* (Caput Radicis Angelicae Sinensis), the head of the root, is said to be the most tonifying part. It has hemostatic effects as well as an ascending nature that directs the flow of blood upwards.

- **Tongue**/ **舌** *Dang Gui Shen* (Corpus Radicis Angelicae Sinensis), the body, has stronger blood nourishing than blood-invigorating properties.

**HERB-DRUG INTERACTION**

- **Anticoagulant or antiplatelet drugs:** It has been suggested that concurrent use of *Dang Gui* and warfarin may potentiate the effect of warfarin. In one *in vitro* study, it was discovered that while *Dang Gui* treatment did not affect prothrombin time on its own, it significantly lowered prothrombin time values when given concurrently with warfarin. [Note: Examples of anticoagulants include heparin, warfarin (Coumadin) and enoxaparin (Lovenox); and examples of antiplatelet drugs include aspirin, dipyridamole (Persantine), and clopidogrel (Plavix).]

- **Scopolamine and cycloheximide:** Administration of *Dang Gui* extract at 1 g/kg was found to be effective in treating scopolamine- and cycloheximide-induced annesia in rats.

- **Acetaminophen:** It has been shown that *Dang Gui* treats acetaminophen-induced liver damage, presumably because *Dang Gui* promotes the generation of hepatocytes.

**REFERENCES**

1. Xian Dai Zhong Yao Yao Li Xue (Contemporary Pharmacology of Chinese Herbs), 1997; 1290-1291
4. Zhong Yao Xue (Chinese Herbs), 1998; 815:823
5. Jiang Su Zhong Yi (Jiangsu Chinese Medicine), 1965; (3):22
11. Zhong Hua Yi Xue Za Zhi (Chinese Journal of Medicine), 1978; 17(8):87
13. Chong Qing Yi Yao (Chongqing Medicine and Pharmacology), 1989; 16(4):39

**AUTHORS’ COMMENTS**

Traditional Chinese medicine considers *Dang Gui* to be a blood tonic, and it is thus commonly used to treat pregnant women who have blood deficiency. In fact, several classic formulas specifically use *Dang Gui* to tonify blood and stabilize pregnancy, such as *Bao Chan Wu You Fang* (Preserve Pregnancy and Care Free Decoction) from *Zeng Bu Nei Jing Shi Yi* (Supplement to the Formulas Omitted from the Inner Classic). However, when caring for pregnant women, one should always exercise caution and use medicinal substances only when the benefits outweigh the risks.

*Dang Gui* and *Bai Shao* (Radix Paeoniae Alba) are both blood tonics. *Dang Gui* is warm and dispersing, and more suitable for blood-deficient patients with yang deficiency and coldness. *Bai Shao* is cool and stable, and is used for blood and yin-deficient patients with heat.

According to Dr. Richard Tan, the use of *Dang Gui* (Radicis Angelicae Sinensis) and *Huang Qi* (Radix Astragalali), such as in *Dang Gui Bu Xue Tang* (Tangkuei Decoction to Tonify the Blood), can be used to raise WBC and RBC counts in patients receiving chemotherapy or radiation treatments.
Dang Gui (Radicis Angelicae Sinensis)

14. Huo Xue Hua Yu Yan Jiu (Research on Blood-Activating and Stasis-Eliminating Herbs), 1981;335
15. Xin Yi Yao Xue Za Zhi (New Journal of Medicine and Herbology), 1975; (6):34
16. Yao Xue Za Zhi (Journal of Medicinals), 1971; (91):1098
17. Ibid.
18. Tian Jing Zhong Yi (Tianjing Chinese Medicine), 1986; 1:4
21. Shen Jing Jing Shen Bi Bing Za Zhi (Journal of Psychiatric Disorders), 1981; 4:222
22. Bei Jing Yi Xue (Beijing Medicine), 1988; 2:95
23. Xin Yi Xue (New Medicine), 1976; 6:294
27. Chi Yao Yi Sheng Za Zhi (Journal of Barefoot Doctors), 1977; 4:21
29. Yao Xue Tong Bao (Report of Herbology), 1979; 7:310
30. Zhong Xi Yi Jie He Za Zhi (Journal of Integrated Chinese and Western Medicine), 1983; 5:319
32. Zhong Hua Yi Xue Za Zhi (Chinese Journal of Medicine), 1961; 5:317
33. Shan Xi Zhong Yi (Shanxi Chinese Medicine), 1987; 9:419
35. Shan Xi Yi Yao Za Zhi (Shanxi Journal of Medicine and Herbology), 1975; 5:69
36. Zhong Xi Yi Jie He Za Zhi (Journal of Integrated Chinese and Western Medicine), 1986; 9:536
37. Tian Jing Zhong Yi (Tianjing Chinese Medicine), 1986; 4:10
40. Bei Jing Yi Xue (Beijing Medicine), 1980; 1:47
42. Pharmacotherapy 1999, July; 19(7):870-876
46. Chong Qing Yi Yao (Chongqing Medicine and Herbology), 1989; 18(4):39
47. Zhong Cao Yao (Chinese Herbal Medicine), 1981; 12(7):33