

# Herbs for Infectious Diseases

Christopher Hobbs L.Ac., A.H.G.

## MALARIA

Pharmaceutical name: **Cortex Cinchonae**

Botanical name: *Cinchona* spp.

Daily dose: 0.3 to 1 grams, 2-4 times daily for decoctions (equivalent to 500 mg of quinine); tincture (1:10, 70% ethanol), 2-4 ml, t.i.d.

Notes: Smaller doses of cinchona tincture are used in bitter tonics to aid digestion.

Toxicity: "Cinchonism" can result from increased doses, extended use, or in some sensitive individuals (hypersensitivity) even with minimum therapeutic doses. Symptoms include headache, nausea, tinnitus, blurred vision, and in high doses death. Contraindicated in pregnancy.

Pharmaceutical name: **Cortex Lycii Radicis (di gu pi)**

Botanical name: *Lycium chinense* Mill. or *L. barbarum* L.

Daily dose: 6-15 grams as a decoction.

Notes: In 145 of 150 cases of malaria, a decoction of Cortex Lycii Radicis (*di gu pi*) and tea leaves had a significant healing effect on patients, when given 2-3 hours before the onset of fever.

Pharmaceutical name: **Herba Artemisiae Annuae**

Botanical name: *Artemisia annua* L.

Traditional Use: Use with Radix Scutellariae Baicalensis (*huang qin*) and Rhizoma Pinelliae Ternatae (*ban xia*) for malarial disorders.

Daily dose: 3-9 grams as an infusion; for a stronger antipyretic effect, up to 24 grams may be used. Do not overcook (decoct 5 min, steep for 15); tincture of leaves (1:5, 80% EtOH), 2-4 ml, t.i.d.

Notes: Kills malaria parasite *in vitro*.

Pharmaceutical name: **Folium Artemisiae Argyi (ai ye)**

Botanical name: *Artemisia argyi* Levl. et Vant.

Daily dose: 3-9 grams as an infusion.

Notes: The herb was effective in controlling symptoms of 89% of malaria patients in one group when given in large doses for two days before the onset of symptoms. Blood examinations were negative for the parasite in over half of the cases.

Pharmaceutical name: **Radix Dichroa febrifuga (chang shan)**

Botanical name: *Dichroa febrifuga*

Traditional use: With Cortex Magnoliae

Officinalis (*hou po*), Pericarpium Citri

Reticulatae Viride (*qing pi*), and Fructus Amomi

Tsao-ko (*cao guo*) for malaria.

Daily dose: 3-9 grams in decoction; traditional formulas and patent medicines for oral use.

Notes: Alkaloids from Radix Dichroae

Febrifugae (*chang shan*) show a very potent

antimalarial effect *in vitro*. The alkaloids in

general show up to 25 times more activity than

quinine as an antimalarial agent. In Traditional

Chinese Medicine, this is a special herb for

killing the parasites which cause malaria. It is

used in China to control outbreaks of malaria.

## DYSENTERY

### Amebic

Pharmaceutical name: **Radix Dichroa febrifuga (chang shan)**

Botanical name: *Dichroa febrifuga*

Daily dose: 3-9 grams

Notes: Alkaloids in Radix Dichroae febrifuga are stronger than the alkaloid emetine (from ipecac) *in vitro* against amebae.

Pharmaceutical name: **Bulbus Allii Sativi (da suan)**

Botanical name: *Allium sativum*

Daily dose: 6-15 grams or 3-5 cloves in decoction, or added to the diet; raw garlic is more effective than cooked or dried forms.

Notes: In 100 cases of amebic dysentery, a strong decoction of garlic was curative in 88% of the cases. Bulbs with purple skin were found to be more effective in this clinical study than those with white skins. Patients were advised to continue eating purple-skinned Bulbus Allii Sativi (*da suan*) in the daily diet.

Pharmaceutical name: **Pericarpium Punicae Granati (shi liu pi)**

Botanical name: *Punicum granatum* L.

Daily dose:

Notes: 40 patients with amebic dysentery were given decoctions of the herb for six days. No patients had any symptoms on follow up 6 months later, and stool examinations were negative in 36 of the patients. Mild and transient side effects included nausea and tinnitus.

**Bacterial Infections**

Pharmaceutical name: **Bulbus Alli Sativi** (da suan)

Botanical name: *Allium sativum*

Dose: 6-15 grams or 3-5 cloves in decoction

Notes: 130 patients with bacterial dysentery took enemas of *Bulbus Alli Sativi* (da suan) in one clinical study. Colonoscopy showed that 126 had total resolution of all pathological changes in 6.3 days on average. Other studies with hundreds of patients showed that the efficacy of the herb was over 95%. Purple-skinned and fresh garlic cloves were more effective than white-skinned or dried bulbs.

Pharmaceutical name: **Fructus Terminalae Chebulae** (he zi)

Botanical name: *Terminalia chebula*

Daily Dose: 3-9 grams

Notes: Retention enemas, as well as capsules of the herb, were given to twenty five patients with bacillary dysentery, with a cure rate of over 95%. Temperatures returned to normal range within 2.5 days, and bowel movements became normal without tenesmus or abdominal pain by 2.9 days. Side effects were not noted except transitory mild nausea.

Pharmaceutical name: **Pericarpium Punicae Granati** (shi liu pi)

Botanical name: *Punicum granatum*

Daily dose: 6-9 grams

Notes: Decoctions of the herb were given to 40 patients with the disease for six days. Six months later 36 had negative stool exams with repeated followups, and symptoms did not return. Side effects included nausea and tinnitus, but were transitory.

Pharmaceutical name: **Rhizoma Coptidis** (huang lian)

Botanical name: *Coptis chinensis*

Daily dose: 1.5-9 grams

Notes: An active alkaloid from the herb, berberine, as well as the whole herb is effective in treating bacillary dysentery and is one of the most commonly-used treatments. Chinese studies show them to be as effective as sulfa drugs or chloramphenicol, with few side effects.

Pharmaceutical name: **Cortex Phellodendri** (huang bai)

Botanical name: *Phellodendron amurense*

Ruprecht

Dose: 4.5 to 9 grams

Notes: In Chinese studies, the herb was found to be effective for the treatment of bacterial dysentery.

Pharmaceutical name: **Radix Pulsatillae Chinensis** (bai tou weng)

Botanical name: *Pulsatilla chinensis* Ser.

Dose: 3 to 12 grams

Notes: The herb has shown an excellent cure rate in many Chinese studies to treat amebic dysentery, both acute and chronic, with an improved healing effect on associated ulcers. Recovery time was 7 days, but negative stool samples were seen after a day and a half.

Pharmaceutical name: **Herba Portulacae Oleraceae** (ma chi xian)

Botanical name: *Portulacca oleracea* L.

Dose: 30-60 grams dried, 60-120 fresh

Notes: A mild, healthful herb commonly used in China for the prevention and treatment of dysentery. Clinical studies demonstrated that with thousands of subjects, decoctions of fresh herb had a strong protective effect for reducing the incidence of bacillary dysentery during epidemics. The herb is as effective as sulfa drugs for the treatment of recurrent bacillary dysentery—at least 90% effective in acute cases and less than 60% effective in chronic cases.

**Typhoid Fever**

Pharmaceutical name: **Rhizoma Coptidis** (huang lian)

Botanical name: *Coptis chinensis* Franch.

Daily dose: 1.5 to 9 grams

Notes: The average time for reduction of fever in patients with this disease was reduced to 5.6 days when they were given capsules containing the herb powder. Two cases were reported where the herb was effective in antimicrobial-resistant organisms.

**Cholera**

Pharmaceutical name: **Rhizoma**

**Anemarrhenae Asphodeloidis** (zhi mu)

Botanical name: *Anemarrhena asphodeloides* Bunge.

Dose: 9 to 12 grams, up to 15 to 25 grams

Notes: *In vivo* experiments showed that decoctions of the herb strongly inhibited *Staphylococcus aureus*, *Salmonella typhi*, *E. coli*, *Bacillus subtilis*, *Vibrio cholerae*, as well as pathogenic dermatomycoses.

Pharmaceutical name: **Radix Gentianae Qinjiao** (qin jiao)

Botanical name: *Gentiana qinjiao*

Dose: 4.5-12 grams

Notes: *In vitro* inhibition against *Staphylococcus aureus*, *Streptococcus pneumoniae*, Shigella, and *Vibrio cholerae* has been demonstrated in China.

Pharmaceutical name: **Fructus Evodiae**

**Rutaecarpae** (wu zhu yu)

Botanical name: *Evodia rutaecarpa* Benth. var. *officinalis*

Daily dose: 3-9 grams

Notes: *In vitro* studies with the herb demonstrated strong inhibitory effects against *Vibrio cholerae*, as well as some dermatomycoses and worms, including ascarides and Hirudo.

### Worms

"Herbal medicine for worms should be taken on an empty stomach, according to TCM."

Pharmaceutical name: **Bulbus Alli Sativi** (da suan)

Botanical name: *Allium sativum* L.

Daily dose: 6-15 grams or 3-5 cloves in decoction.

Notes: 154 cases of pinworms in children 2-9 years old were treated with decoctions of the herb given as enemas 3 times on days 1, 3, and 7. No eggs were seen around the anus in 76% of the patients.

Pharmaceutical name: **Semen Pharbitidis** (qian niu zi)

Botanical name: *Pharbitis nil* (L.) Choisy or *P. purpurea* (L.) Vogt

Daily dose: 4.5-9 grams as a decoction; 1.5-3 grams as a powder. The herb is dry-fried to reduce toxicity.

Notes: Tests in China have shown it to be an effective remedy for hookworms and pinworms. It is often given with other herbs to treat various types of intestinal parasites.

Pharmaceutical name: **Herba Portulacae**

**Oleraceae** (ma chi xian)

Botanical name: *Portulacca oleracea* L.

Daily dose: 15-60 grams dried herb in decoction; or the fresh juice

Notes: In China, the fresh juice or decoction of the dried herb is said to be effective for treating hookworms, with up to an 80% success rate in some studies.

Pharmaceutical name: **Pericarpium Punicae**

**Granati** (shi liu pi)

Botanical name: *Punicum granatum* L.

Daily dose: 3-9 grams. Charred peel is used to stop bleeding.

Notes: In China, the peel is often used to kill and expel tapeworms and roundworms. Topical preparations are used for treating ringworm.

Cautions and Contraindications: Traditionally, the herb is not given to people with excessive diarrhea or in the early stages of diarrhea. Avoid using with oils and fats to prevent excessive absorption of the toxic constituents, especially preparations of the root bark, which is much more toxic than the fruit peel.

The herb is blended with **Fructus Quisqualis Indicae** (shi jun zi) to kill intestinal worms and relieve abdominal pain.

*In vitro*, pelletierine, the main active alkaloid, has a strong killing effect against hookworms, and isopelletierine has a much stronger effect.

Tannins in the herb reduce absorption of the alkaloids, increasing its effect against parasites. TOXICITY: Administration of very large amounts of the alkaloids from the herb to animals resulted in respiratory arrest and death, and curare-like effects were also seen. Side effects in humans commonly seen include dizziness, visual disturbances, weakness, calf spasm, tremors, and formication. Large overdoses can result in mydriasis, severe headache, vertigo, vomiting, diarrhea, and lethargy.

The bark of pomegranate root, *Cortex Punicae Granati Radicis* (shi liu gen pi), has properties and actions similar to those of *Pericarpium Punicae Granati* (shi liu pi) and is more frequently used for killing parasites, especially tapeworms and roundworms. The dose is 1.5-9 grams.

Pharmaceutical name: **Fructus Quisqualis Indicae** (shi jun zi)

Botanical name: *Quisqualis indica* L.

Daily dose: 4.5-12 grams

Notes: An effective herb for killing roundworms.

Decoct with *Semen Arecae*

*Catechu* (bing lang) and *Cortex Meliae Radicis* (ku lian gen pi) to expel roundworms; with *Radix Stemonae* (bai bu) for pinworms. The herb is dry-fried until aromatic to reduce toxicity. The active constituents are soluble in both water and alcohol. It is effective *in vitro* against pinworms.

A number of clinical studies performed in China have shown that worms are expelled in 30-86% of cases. Negative stool samples are observed

in about 30-40% of cases. Several courses of the herb might be necessary for complete elimination of the worms.

Toxicity: The herb has a reasonably low toxicity, but side effects include nausea, vomiting, and belching.

Pharmaceutical name: **Cortex Meliae Radicis** (ku lian gen pi) [China berry root bark]

Botanical name: *Melia azedarach* L. or *M. toosendan* Sieb. et Zucc.

Daily dose: 6-15 grams or up to 60 grams when used alone

Notes: In China, the herb is commonly used to treat round worms, hookworms, pinworms, and vaginal Trichomonas infections. Studies with tens of thousands of patients have been performed. Applications of the herb concentrate can paralyze pinworms. The herb is considered to be strong and effective, but the results can be inconsistent, depending on the quality of the product.

The herb is blended with Semen Arecae Catechu (bing lang) to increase its overall antiparasitic effect, and as an enema with Radix Stemonae (bai bu) and Fructus Pruni Mume (wu mei) for pinworms.

Cautions and Contraindications: Not for long-term use. Do not use in people who are weak, convalescing, or with liver-disease. Liver changes have been reported in some patients after a dose of 10 mg/kg, and the herb should be used very cautiously in patients with a history of gastric ulcers or esophageal varices.

Patients taking large doses can develop bleeding, respiratory arrest, and circulatory collapse, where emergency measures are necessary. The bark of these plants, Cortex Meliae (ku lian mu pi), has similar effects (and side effects) as the principal herb, but not as strong.

Pharmaceutical name: **Semen Torreya Grandis** (fei zi)

Botanical name: *Torreya grandis* Fort.

Daily dose: 9-15 grams, or up to 30 grams

Notes: Kills a variety of intestinal parasites, including tapeworms, pinworms, hookworms, and roundworms. According to Traditional Chinese Medicine, it is nontoxic, does not harm the stomach and because of its mild laxative qualities, it is considered an important antiparasitic herb.

In China it is used with Radix Stemonae (bai bu) to eliminate hookworms; with Fructus Quisqualis Indicae (shi jun zi) for roundworms; with Herba

Polygoni Avicularis (bian xu) for pinworms, and with Semen Arecae Catechu (bing lang) to dislodge and expel tapeworms. The herb is used in decoction, but it is most effective when the nuts are dry-fried and eaten in food. In one test in China, five patients infested with hookworms were given daily administration of 100-150 grams of dryfried seeds for one months until repeated stool samples were negative.

Pharmaceutical name: **Fructus Carpesii seu Daucusi** [wild carrot seed]

Botanical name: *Carpesium abrotanoides* L. or *Daucus carota* L.

Daily dose: 6-12 grams

Notes: A popular remedy in China for killing parasites and reducing pain. Said to be especially effective for intestinal parasites, primarily abdominal pain caused by roundworms, pinworms, hookworms, or tapeworms.

In Chinese medicine it is often mixed with Semen Arecae Catechu (bing lang), Fructus Quisqualis Indicae (shi jun zi), and Cortex Meliae Radicis (ku lian gen pi) to eliminate roundworms, pinworms, hookworms, and tapeworms. The herb is commonly used in pills or powders.

Cautions and Contraindications: Patients who are weak or convalescing should be cautious. An overdose can cause dizziness, tinnitus, and abdominal pain.

Thirty ml of a concentrated watery extract of the seed (10 ml of the concentrate equaled 15 grams of the crude herb) was used in treating 57 cases of hookworm infection. The extract was given before bed for two nights with a little white sugar. Children, the elderly, and debilitated patients were given less. The stools were negative for hookworm eggs in 45 of the patients after 15 days. In 31 patients roundworms were also present; and stools were completely clear in 19 after the trial. Side effects were light and transient in a few patients and included lightheadedness, nausea, tinnitus, and abdominal pain.

Fructus Carpesii Abrotanoidis is sometimes sold under the name he shi, but is more properly called bei he shi (northern he shi).

## GENERAL BACTERIAL INFECTIONS

Pharmaceutical name: **Rhizoma Coptidis** (huang lian)

Botanical name: *Coptis chinensis* Franch.

Daily dose: 1.5-9 grams

Notes: Coptis, and its main active ingredient, berberine, has a broad antimicrobial effect *in vitro* against hemolytic *Streptococcus pneumoniae*, *Staphylococcus aureus*, *Shigella dysenteriae*, *S. flexneri*. It is said to be more effective than sulfa drugs, but less so than streptomycin or chloramphenicol against some of these pathogens and is sometimes effective against bacteria that have developed resistance to streptomycin, chloramphenicol, and oxytetracycline hydrochloride.

Pharmaceutical name: **Bulbus Alli Sativi** (da suan)  
*pneumoniae*, *Neisseria meningitidis*, *Salmonella typhi*, and *Corynebacterium diphtheriae*. It is sometimes effective against bacteria that are resistant to penicillin, streptomycin, and chloramphenicol, although the clinical usefulness is not completely proven, according to Chinese research.

Botanical name: *Allium sativum* L.  
Daily dose: 6-15 grams or 3-5 cloves in decoction, or added to the diet; raw garlic is more effective than cooked or dried forms.  
Notes: Various preparations of garlic strongly inhibit many pathogenic fungi. Intravenous drip is especially effective against respiratory mycoses. *Candida albicans* infections respond well to garlic, and preparations are used in China to treat encephalitis B with intravenous drip. The fresh juice shows antibiotic effects against a variety of pathogenic bacteria, including *Staphylococcus aureus*, *Streptococcus*

#### Other Herbs With Possible Antimicrobial Applications

Botanical Name	Effect
Rangoon creeper <i>Quisqualis indica</i> L. Fructus Quisqualis Indicae	inhibitory effects <i>in vitro</i> against common dermatomycoses
Root bark of the China-berry tree <i>Melia azedarach</i> L. or <i>M. toosendan</i> Sieb. et Zucc. Cortex Meliae Radicis	Alcohol extracts are effective and popular in China for treating common dermatomycoses such as tinea
Usnea; old man's beard <i>Usnea longissima</i> , <i>U. spp.</i>	Inhibits and kills gram positive bacteria, such as <i>Streptococcus spp.</i> , <i>Mycobacterium tuberculosis</i> , <i>Staphylococcus spp.</i> , <i>Pneumococcus</i> .
Andrographis <i>Andrographis paniculata</i> (Burm.f) Nees	Used to treat leptospirosis in China
Sweet Annie <i>Artemisia annua</i> L.	Inhibitory effect <i>in vitro</i> against many common dermatomycoses and leptospirosis; <i>Plasmodium vivax</i> , <i>P. spp.</i>
Quassia bark <i>Quassia amara</i> L. or <i>Picrasma excelsa</i> (Sw.) Planch	Used traditionally as a bitter tonic to stimulate digestion; nematode infestations orally or rectally, pediculosis (topically)
Black Walnut <i>Juglans nigra</i> L.	The rind of the green fruit contains the naphthaquinone, juglone; the tincture is used in products for giardiasis, candidiasis, and fungal infections of the skin
Bloodroot <i>Sanguinaria canadensis</i> L.	The rhizome of this native species of Eastern North America is used in tinctures, creams, and salves to treat fungal infections of the toenail, skin cancer, and in mouthwashes and other mouthcare products to inhibit <i>Streptococcus</i> for prevention of gum and tooth disease
Goldenseal	Contains berberine and hydrastine; used in

<i>Hydrastis canadensis</i> L.	preparations to treat infections
Wormseed <i>Chenopodium ambrosioides</i> L.	One of the active constituents, ascaridole paralyzes and kills roundworms and is effective against <i>Entamoeba histolytica</i> ; dose in TCM is 3-6 grams of the dried flowering tops
Ai Ye <i>Artemisia argyi</i> Levl. et Vant.	Dose: 3-9 grams as an infusion Decoctions inhibit <i>Staphylococcus aureus</i> , <i>Streptococcus pneumoniae</i> , <i>Shigella sonnei</i> , <i>Salmonella typhi</i> , and <i>Salmonella paratyphi</i> <i>in vitro</i> .
Pharbitis <i>Pharbitis nil</i> (L.) Choisy Semen Pharbitidis (qian niu zi)	Used in China for ringworm of the scalp
Pomegranate <i>Punica granatum</i> L. Cortex Punicae Granati Radicis (shi liu gen pi)	Strong inhibitory effect <i>in vitro</i> against <i>Staphylococcus aureus</i> , hemolytic <i>Streptococcus</i> , <i>Shigella</i> , <i>Salmonella typhi</i> , and <i>Pseudomonas aeruginosa</i> , as well as some pathogenic fungi