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 Cotex 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 Lev. 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 febrifugua
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 febrifugua
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 Alli 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 Alli Sativi (da suan) in the daily diet.

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

**Typhoid Fever**
Pharmaceutical name: **Rhizoma Coptidis** (huang lian)
Botanical name: *Coptis chinensis* Franch.
Daily dose: 1.5 to 9 grams
Notes: In Chinese studies, the herb was found to be effective for the treatment of bacterial dysentery.

**Cholera**
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.
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 rutacarpa* 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 Ali 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: *Punica 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* (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.

Pharmaceutical name: *Pericarpium Punicae Granati* (shi liu pi)
Botanical name: *Punica 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* (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 Torreyae 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.

**Other Herbs With Possible Antimicrobial Applications**

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rangoon creeper Fructus Quisqualis Indicae</td>
<td>inhibitory effects in vitro against common dermatomycoses</td>
</tr>
<tr>
<td>Root bark of the China-berry tree Cortex Meliae Radicis</td>
<td>Alcohol extracts are effective and popular in China for treating common dermatomycoses such as tinea</td>
</tr>
<tr>
<td>Usnea; old man’s beard Usnea longissima, U. spp.</td>
<td>Inhibits and kills gram positive bacteria, such as <em>Streptococcus</em> spp., <em>Mycobacterium tuberculosis</em>, <em>Staphylococcus</em> spp., Pneumococcus.</td>
</tr>
<tr>
<td>Andrographis paniculata (Burm.f) Nees</td>
<td>Used to treat leptospirosis in China</td>
</tr>
<tr>
<td>Sweet Annie Artemisia annua L.</td>
<td>Inhibitory effect in vitro against many common dermatomycoses and leptospirosis; <em>Plasmodium vivax</em>, <em>P. spp.</em></td>
</tr>
<tr>
<td>Quassia bark Quassia amara L. or Picrasma excelsa (Sw.) Planch</td>
<td>Used traditionally as a bitter tonic to stimulate digestion; nematode infestations orally or rectally, pediculosis (topically)</td>
</tr>
<tr>
<td>Black Walnut Juglans nigra L.</td>
<td>The rind of the green fruit contains the napthaquinone, juglone; the tincture is used in products for giardiasis, candidiasis, and fungal infections of the skin</td>
</tr>
<tr>
<td>Bloodroot Sanguinaria canadensis L.</td>
<td>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 <em>Streptococcus</em> for prevention of gum and tooth disease</td>
</tr>
<tr>
<td>Goldenseal</td>
<td>Contains berberine and hydrastine; used in</td>
</tr>
<tr>
<td>Herb</td>
<td>Preparations to treat infections</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><em>Hydrastis canadensis</em> L.</td>
<td>Preparations to treat infections</td>
</tr>
<tr>
<td>Wormseed</td>
<td><em>Chenopodium ambrosioides</em> L. One of the active constituents, ascaridole paralyzes and kills roundworms and is effective against <em>Entamoeba histolytica</em>; dose in TCM is 3-6 grams of the dried flowering tops</td>
</tr>
<tr>
<td>Ai Ye</td>
<td><em>Artemisia argyi</em> Lev. et Vant. Dose: 3-9 grams as an infusion Decoctions inhibit <em>Staphylococcus aureus</em>, <em>Streptococcus pneumoniae</em>, <em>Shigella sonnei</em>, <em>Salmonella typhi</em>, and <em>Salmonella paratyphi</em> in vitro</td>
</tr>
<tr>
<td>Pharbitis</td>
<td><em>Pharbitis nil</em> (L.) Choisy Semen Pharbitidis (qian niu zi) Used in China for ringworm of the scalp</td>
</tr>
<tr>
<td>Pomegranate</td>
<td><em>Punica granatum</em> L. Cortex Punicae Granati Radicis (shi liu gen pi) Strong inhibitory effect in vitro against <em>Staphylococcus aureus</em>, hemolytic <em>Streptococcus</em>, <em>Shigella</em>, <em>Salmonella typhi</em>, and <em>Pseudomonas aeruginosa</em>, as well as some pathogenic fungi</td>
</tr>
</tbody>
</table>