

# Gynostemma: An Undiscovered Treasure

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## Background

*Jiao gu lan* (rhizoma seu herba gynostemmatis) is an herb commonly found in various parts of China, Korea and Japan. Throughout the history of Oriental medicine, there has been little documentation on *jiao gu lan*, and it is seldom used. However, there has also been a recent resurgence in the interest and the application of this herb. This article will address its actions, indications and applications.

*Jiao gu lan* is slightly bitter, cold, and enters through the lung and heart channels. The medicinal parts of the plant are the root and the aerial part above the ground. The primary therapeutic actions are to clear heat and eliminate toxin; moisten the lung and promote the generation of body fluids; and dispel phlegm. The normal adult dose of the herb is 5-12 grams in decoction, and 0.75 to 1.0 grams as powder.

*Jiao gu lan* also has a general effect of nourishing and strengthening the body. It is commonly used to treat chronic disorders such as asthma; migraine; neuralgia; impaired function of the respiratory and gastrointestinal tract; and syndromes characterized by deficiency. Clinical manifestations may include vomiting or nausea with drooling of saliva; shortness of breath; and chest congestion. It can be used with *fu rong* (radix hibisci) for the treatment of chronic bronchitis.

## Pharmacological Effects and Clinical Studies

With the increased interest in *jiao gu lan*, numerous laboratory and clinical studies have been conducted to confirm its effectiveness. The abstract of the studies are as follows:

**Hypercholesterolemia:** The water extract of *jiao gu lan* has demonstrated a marked effect in lowering cholesterol and triglyceride levels.<sup>1</sup> In one clinical trial, 129 patients were divided into two groups, with one group receiving *jiao gu lan* and the other receiving a placebo. After one month of study, the patients in the herb group showed a statistically significant reduction in both total cholesterol and triglycerides levels in comparison with the placebo group. Side-effects included two cases of dizziness; one case of poor appetite; four cases of abdominal distention; 42 reports of weight loss; and 28 cases of weight gain.<sup>2</sup> In another study, the combination of *jiao gu lan* and *shan zha* (crataegus) reduced both triglycerides and cholesterol levels.<sup>3</sup>

**Anti-aging:** Administration of *jiao gu lan* is associated with prolonged life expectancy and delayed aging in animals. In one study, a group of old mice were divided into two groups. After four months, all mice in the control group died, while only 50% of the mice died in the herb group.<sup>4</sup> In clinical studies, administration of *jiao gu lan* three times daily for two months was beneficial for 106 patients in reducing general signs

and symptoms of aging, such as fatigue; lack of energy; aversion to cold; diarrhea; poor memory; decreased balance; insomnia; and excessive dreams.<sup>5</sup>

Headache: Fifty patients with headache due to various causes were treated with 79.6% overall effectiveness using 30 to 50 grams of *jiao gu lan* daily as tea.<sup>6</sup>

Chronic trachitis: In one clinical study, a preparation of *jiao gu lan* was used to treat patients with chronic trachitis. Out of 86 patients, the study reported complete recovery in 12 patients; moderate improvement in 23 patients; some improvement in 45 patients; and no change in six patients.<sup>7</sup>

Chronic atrophic gastritis: One hundred fifty-one patients were treated with 10 grams of *jiao gu lan* three times daily for three months. According to endoscopy, 28 patients showed significant improvement; 57 showed moderate improvement; 58 showed no change; and eight patients deteriorated. The overall effective rate was 56.26%. No significant side-effects were reported.<sup>8</sup>

Cancer: According to laboratory studies, preparations of *jiao gu lan* have demonstrated an inhibiting influence on various kinds of cancer cells, including cancers of the stomach; abdomen; uterus; liver; mouth; esophagus; pancreas; brain; lung; kidney; tongue; breast; and skin. There was also an increase in life expectancy in mice that received the herb compared to the control group.<sup>9</sup>

### Cautions

*Jiao gu lan* appears to be relatively safe. Incidences of mild side-effects have been observed, such as fatigue; lethargy; feeling of chest oppression; dry nose; dry throat; increased heart beat; and rash. Severe adverse reactions and complications have not been reported. Laboratory toxicology studies state that the LD<sub>50</sub> for oral ingestion of *jiao gu lan* extract is 48.94 g/kg, and the LD<sub>50</sub> for intraperitoneal injection is 2,862 mg/kg. (*Editor's note:* LD<sub>50</sub> stands for "lethal dose." The LD50 is the amount of a material, given all at once, that causes the death of 50% of a group of test animals, and is one way to measure the short-term poisoning potential of a material.) Following daily administration of 4g/kg/day for 90 days in mice, no abnormalities were reported for blood panel; liver; kidney; heart; and testes.<sup>10</sup> The chemical composition of *jiao gu lan* includes gynoside, ginsenoside, rutin and ombuoside.<sup>11</sup>

### Conclusion

One of the main reasons for the resurgence of *jiao gu lan* is the different makeup of patients and the environment between the old living conditions in China and current lifestyles in the U.S. In the past, malnutrition and starvation were the primary diseases of concern. In contrast, cardiovascular diseases are currently the main causes of death. Since *jiao gu lan* is an excellent herb to clear heat and dispel phlegm, it is no wonder that most doctors are now re-discovering its wonderful ability to lower cholesterol and treat various types of cardiovascular diseases.

### References

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