



P.O. Box 144345 Austin, TX 78714-4345 • 512.926.4900 • Fax: 512.926.2345 • www.herbalgram.org

HerbClip™

Christina Chase, MS, RD
Heather S Oliff, PhD
Michelle Schuman Sanger

Jill Hoppe
Diane Graves, MPH, RD

Mariann Garner-Wizard
Densie Webb, PhD

Editor Mark Blumenthal
Funding/Administration Wayne Silverman, PhD

Managing Editor Jan Veenstra
Production George Solis/Kathleen Coyne

FILE: ■ **Andrographis (*Andrographis paniculata*)**
■ **Colds, flu**

HC 100611 - 210

Date: April 8, 2002

RE: **Andrographis Monograph**

Bone, K. *Andrographis paniculata*. *British Journal of Phytotherapy*. 2001; Vol 5: 107–13.

This review article describes the herb *Andrographis paniculata*, which has several common names: andrographis, king of bitters, and Chirayta (the review is based on and revised from the author's book, *Principles and Practice of Phytotherapy**). *Andrographis* is grown in the gardens and hedgerows of India. The entire herb, including the root, is used and valued for its medicinal properties. *Andrographis* is also used in Chinese and Thai traditional medicine.

Andrographis is reported to have various actions and indications. These include stimulating the immune system, reducing fever and inflammation, protecting the liver, reducing platelet aggregation, treating and preventing the common cold, and treating bacterial infections such as urinary tract infections. *Andrographis* is also used to treat diabetes, cough, throat infections, hepatitis, and gastrointestinal disorders such as diarrhea, indigestion, and loss of appetite.

The primary active ingredient in *andrographis* is andrographolide, a bitter diterpenoid lactone. Other substances in *andrographis* include other diterpene lactones, diterpene glucosides, diterpene dimers, and flavonoids.

The taste of *andrographis* is very bitter, and therefore liquid preparations can be difficult to take. The daily dose that is recommended for preventing illness is 2 to 3 grams (or 4 to 6 milliliters of a 1:2 fluid extract) for adults. For treating infections, up to twice this dose (6 grams or 12 milliliters) is recommended. Preparations that have been standardized for andrographolides are desirable, according to this author, based on clinical trials conducted primarily on a Swedish *andrographis* extract, standardized to 4% andrographolides. *Andrographis* is considered a "cold" herb and should be taken together with "warm" herbs when used as a preventive medicine in the winter writes the author, referring to its "energetics" in traditional Chinese medicine. The author provides recommended combinations with other herbs for various indications.

Research on the pharmacodynamics of *andrographis* suggests that it enhances immune function but does not have antibacterial effects. However, *andrographis* was found to have activity against malaria *in vivo*. The herb also prolonged survival after snakebites in animals. *Andrographis* protected the liver from injury caused by alcohol, infectious organisms, and toxins. Development of hepatic tumors was delayed by *andrographis* in mice exposed to a carcinogen. Some evidence suggests that *andrographis* induces hepatic

drug-metabolizing enzymes. In mice and rats, andrographis had anti-fertility effects in males and prevented pregnancy in females.

Andrographolides were found to have anti-inflammatory effects in some in vivo studies. They reduced inflammation significantly in several animal models, including a model of induced arthritis. Other studies found that andrographolides had analgesic activity, antipyretic effects, and prevented aspirin-induced ulcers in rats.

In uncontrolled Chinese clinical studies, both bacterial and viral respiratory infections were treated effectively with andrographolides or andrographis. In a randomized, double-blind trial, andrographis was as effective as paracetamol for treating fever and sore throat in a study involving 152 patients with pharyngotonsillitis (inflammation of the pharynx and tonsils). The effective dose was 6 grams daily for one week, and lower doses were not as effective. In a double-blind, placebo-controlled trial, andrographis was effective against symptoms of the common cold. Placebo-controlled studies have also found that andrographis improved the common cold and sinusitis. In healthy children, andrographis given daily (11.2 milligrams andrographolide/day) for 3 months during the winter reduced the incidence of colds to a rate that was 2.1 times lower than that of placebo; this study was randomized and double-blind. The author discusses additional studies that found andrographis to be effective against common cold symptoms.

Other clinical studies have found that either andrographis or andrographolides was effective in treating intestinal infections, tuberculosis, leprosy, pyelonephritis (kidney infection), urinary tract infection, and hepatitis. Some of these studies were uncontrolled. One study found that platelet aggregation was inhibited by andrographis extract.

Andrographis is not toxic, but it should not be taken during pregnancy. It has few side effects, and they are most likely to occur at high doses. These adverse effects are gastric discomfort, vomiting, and loss of appetite.

Although not traditionally sold in North America nor included in western herb books, andrographis is being introduced into the U.S. herb market. Based on its safety and clinical support, it has a good chance of becoming a popular herb in the coming years.

—Christina Chase, MS, RD

* Mills S and Bone K. *Principles and Practices of Phytotherapy*. London, New York; Churchill Livingstone, 2001. Available from the American Botanical Council, Code B441 via their website at <<http://www.herbalgram.org>> or by calling 1-800-373-7105.

Enclosure: Reference article reprinted with permission from the *British Journal of Phytotherapy*.

The American Botanical Council provides this review as an educational service. By providing this service, ABC does not warrant that the data is accurate and correct, nor does distribution of the article constitute any endorsement of the information contained or of the views of the authors.

ABC does not authorize the copying or use of the original articles. Reproduction of the review is allowed on a limited basis for students, colleagues, employees, and/or customers. Other uses and distribution require prior approval.