



Cat's Claw: *Uncaria tomentosa*, *Una de Gato* (*Uncaria tomentosa*)

Common Indications:

- Anti-inflammatory
- Immune support, including protection from cancer
- Antioxidant
- Antibacterial, antifungal, antiviral, including Lyme's disease

General Comments:

Cat's Claw is a tropical vine that has "Cat-like" claw appendages that allow it cling to other foliage and climb high. It can be found in rainforests of South America and in Asia. Cat's claw reportedly affects the immune system and has potent anti-fungal impact in the bowel when consumed as a supplement. It also has a general anti-inflammatory impact on the gut in general.

Benefits & Mechanism of Action:

Anti-inflammatory

Glucosides, proanthocyanidins, and beta sitosterol contribute to anti-inflammatory activity.^{1,2,3,4} The anti-inflammatory effect of cat's claw has been observed in patients with active rheumatoid arthritis.⁵ It has also been shown to improve joint function in patients with osteoarthritis.^{6,7}

Immune support, including protection from cancer

Laboratory studies have also looked into the herb's function in supporting the immune system. Seven different oxindole alkaloids are the structures that boost the immune system.^{8,9,10,11} Isopteropodin is the alkaloid believed to have the most immunological activity. Cat's claw has also been shown to enhance DNA repair, inhibit TNF-alpha production, inhibit cell division, and inhibit NF-kappaB activity.^{12,13,14,15} It also had antiproliferative effects on a breast cancer cell line.¹⁶

Antioxidant

Dietary antioxidants protect gut epithelial cells from oxidant-induced apoptosis.^{17,18,19}

The oxindole alkaloid, isopteropodin increases the immune response in the body and acts as an antioxidant.

Antibacterial, antifungal, antiviral, including Lyme's disease

Because of Cat's claw's ability to soothe irritated and inflamed tissues, it helps eliminate harmful bacterial and viral invaders from the gastrointestinal tract. It contains glycosides, proanthocyanidins, and beta sitosterols that provide anti-viral support.

Dose:

- 250-1000mg, 3 times a day (using 3% alkaloid and 15% total phenol extraction)
- 20 mg 2-3 times per day x10 days and then reduce to once daily thereafter (using 1.3% pentacyclic extraction product)
- 600 to 1800 mg/day (using 0.5% pentacyclic oxindole alkaloids (TOA free) product)

Standardization:

- Cat's claw products should be standardized to contain 3% alkaloids and 15% total phenols per dose OR not less than 1.3% pentacyclic oxindole alkaloids and not more than 0.06% tetracyclic oxindole alkaloids. The pentacyclic oxindole alkaloids may be more beneficial as an immune enhancing product than the standard mixture of pentacyclic and tetracyclic alkaloids.
- Another standardization of 0.5% pentacyclic oxindole alkaloids (TOA free) has been reported beneficial in treating Lyme disease.

Cautions & Side Effects:

- Cat's claw has been reported to be safe in recommended doses. Diarrhea has been reported with high doses.
- Cat's claw should be used in caution in organ transplant patients.
- Cat's claw should not be taken in high doses during acute phases of infections, especially when accompanied by a high fever.
- Use with caution in neurological disorders, including Parkinson's disease. There was a case report of oral cat's claw leading to reversible worsening of motor signs in a patient with Parkinson disease.²⁰
- Medications with increased effects while taking Cat's Claw include:
 - Protease Inhibitors, including atazanavir, ritonavir and saquinavir.²¹

References:

Anti-inflammatory

1. Aguilar, J. L., Rojas, P., Marcelo, A., Plaza, A., Bauer, R., Reininger, E., Klaas, C. A., and Merfort, I. Anti-inflammatory activity of two different extracts of *Uncaria tomentosa* (Rubiaceae). *J Ethnopharmacol* 2002;81(2):271-276.
2. Heitzman, M. E., Neto, C. C., Winiarz, E., Vaisberg, A. J., and Hammond, G. B. Ethnobotany, phytochemistry and pharmacology of *Uncaria* (Rubiaceae). *Phytochemistry* 2005;66(1):5-29.
3. Muhammad, I., Khan, I. A., Fischer, N. H., and Fronczek, F. R. Two stereoisomeric pentacyclic oxindole alkaloids from *Uncaria tomentosa*: uncarine C and uncarine E. *Acta Crystallogr.C.* 2001;57(Pt 4):480-482.
4. Goncalves, C., Dinis, T., and Batista, M. T. Antioxidant properties of proanthocyanidins of *Uncaria tomentosa* bark decoction: a mechanism for anti-inflammatory activity. *Phytochemistry* 2005;66(1):89-98.
5. Mur, E., Hartig, F., Eibl, G., and Schirmer, M. Randomized double blind trial of an extract from the pentacyclic alkaloid-chemotype of *uncaria tomentosa* for the treatment of rheumatoid arthritis. *J Rheumatol* 2002;29(4):678-681.
6. Hardin SR. Cat's claw: an Amazonian vine decreases inflammation in osteoarthritis. *Complement Ther Clin Pract.* 2007 Feb;13(1):25-8. Epub 2006 Dec 13. Review.
7. Piscocoya, J., Rodriguez, Z., Bustamante, S. A., Okuhama, N. N., Miller, M. J., and Sandoval, M. Efficacy and safety of freeze-dried cat's claw in osteoarthritis of the knee: mechanisms of action of the species *Uncaria guianensis*. *Inflamm.Res* 2001;50(9):442-448.

Immune support, including protection from cancer

8. Akesson, Ch, Pero, R. W., and Ivars, F. C-Med 100, a hot water extract of *Uncaria tomentosa*, prolongs lymphocyte survival in vivo. *Phytomedicine.* 2003;10(1):23-33.
9. Lamm, S., Sheng, Y., and Pero, R. W. Persistent response to pneumococcal vaccine in individuals supplemented with a novel water soluble extract of *Uncaria tomentosa*, C-Med-100. *Phytomedicine* 2001;8(4):267-274.
10. Reiss ST, Vaente LM, Sampaio AL, et al. Immunomodulating and antiviral activities of *Uncaria tomentosa* on human monocytes infected with Dengue Virus-2. *Int Immunopharmacol.* 2008 Mar;8(3):468-76. Epub 2007 Dec 26.
11. Reinhard, K. H. *Uncaria tomentosa* (Willd.) D.C.: cat's claw, una de gato, or saventaro. *J.Altern.Complement Med.* 1999;5(2):143-151.
12. Sheng, Y., Bryngelsson, C., and Pero, R. W. Enhanced DNA repair, immune function and reduced toxicity of C-MED-100, a novel aqueous extract from *Uncaria tomentosa*. *J Ethnopharmacol.* 2000;69(2):115-126.
13. Sheng, Y., Li, L., Holmgren, K., and Pero, R. W. DNA repair enhancement of aqueous extracts of *Uncaria tomentosa* in a human volunteer study. *Phytomedicine* 2001;8(4):275-282.
14. Akesson, C., Lindgren, H., Pero, R. W., Leanderson, T., and Ivars, F. An extract of *Uncaria tomentosa* inhibiting cell division and NF-kappa B activity without inducing cell death. *Int.Immunopharmacol.* 2003;3(13-14):1889-1900.
15. Akesson, C., Lindgren, H., Pero, R. W., Leanderson, T., and Ivars, F. Quinic acid is a biologically active component of the *Uncaria tomentosa* extract C-Med 100(R).

Int.Immunopharmacol. 2005;5(1):219-229.

16. Riva, L., Coradini, D., Di Fronzo, G., De, Feo, V, De Tommasi, N., De Simone, F., and Pizza, C. The antiproliferative effects of *Uncaria tomentosa* extracts and fractions on the growth of breast cancer cell line. *Anticancer Res* 2001;21(4A):2457-2461.

Antioxidant

17. Jurgensen, S., Dalbo, S., Angers, P., Santos, A. R., and Ribeiro-do-Valle, R. M. Involvement of 5-HT₂ receptors in the antinociceptive effect of *Uncaria tomentosa*. *Pharmacol Biochem.Behav* 2005;81(3):466- 477.
18. Flores-Sanchez, I. J., Ortega-Lopez, J., Carmen Montes-Horcasitas, M., and Ramos-Valdivia, A. C. Biosynthesis of sterols and triterpenes in cell suspension cultures of *Uncaria tomentosa*. *Plant Cell Physiol* 2002;43(12):1502-1509.
19. Miller, M. J., Angeles, F. M., Reuter, B. K., Bobrowski, P., and Sandoval, M. Dietary antioxidants protect gut epithelial cells from oxidant-induced apoptosis. *BMC.Complement Altern Med* 2001;1:11.

Cautions & Side Effects

20. Cosentino, Carlos, and Luis Torres. "Reversible worsening of Parkinson disease motor symptoms after oral intake of *Uncaria tomentosa* (cat's claw)." *Clinical neuropharmacology* 31.5 (2008): 293-294.
21. López Galera RM, Ribera Pascuet E, Esteban Mur JI, Montoro Ronsano JB, Juárez Giménez JC. Interaction between cat's claw and protease inhibitors atazanavir, ritonavir and saquinavir. *Eur J Clin Pharmacol.* 2008 Dec;64(12):1235-6. Epub 2008 Aug 20. No abstract available.