

Documentation on Amazon Herbs
June 1999

Formula: Arcozon

Statement:

Arcozon contains four of the rainforest's most potent immune-support herbs including Una de Gato, Pau d'Arco, Suma and Jatoba.

Documentation

1. U.S. Patent 5302, 611. April 12, 1994. Oxindole Alkaloids Having Properties Stimulating the Immunological System and Preparation Containing Same. Keplinger et al.

"Tetra and pentacyclic oxindole alkaloids, in particular the alloisopteropodine, isomer A, a pentacyclic oxindole alkaloid, are suitable for the unspecific stimulation of the immunologic system, which has been proved by a substantial percentage phagocytosis increase in the granulocytic test according to BRANDT, a substantial percentage increase of the CL-response in the chemiluminescence test and a high increase of the phagocytosis activity of tissue macrophages of the reticuloendothelial system in the carbon clearance test according to BIOZZI. These alkaloids may be isolated from extracts of the roots of the *Uncaria tomentosa* whose fresh best has a yellow brown or dark red color, from which the tanning substances have largely been removed. The isopteropodine-containing roots showed values between 30 and 40% activity increase on the average. The examination of the raw alkaloid mixture in the water-soluble hydrochloride form showed an average phagocytosis increase of 20%."

2. New Quinovic Acid Glycosides from *Uncaria tomentosa* by Riccardo Cerri. *J Nat Products*, Vol. 51, No. 2, 257-261, Mar-Apr 1988.

An aqueous and ethanolic extract of *Uncaria tomentosa* showed cytostatic activity. A number of alkaloids show a pronounced enhancement of phagocytosis.

3. Plant Metabolites. Structure and In Vitro Antiviral Activity of Quinovic Acid Glycosides from *Uncaria tomentosa* and *Guettarda platypoda*. *J Nat Products*, Vol. 52, No. 4, 1989, 679-685.

A series of antiviral tests were performed on the quinovic acid glycosides in *Uncaria tomentosa*. The quinovic acid compounds inhibited vesicular stomatitis virus.

4. Die Alkaloide von *Uncaria tomentosa* und ihre Phagozytosesteigernde Wirkung by H. Wagner, B. Kreutzkamp and K. Jurcie, *Planta Medica* 1985, 419-423.

"Of the six oxindole alkaloids isolated and identified from the roots of *Uncaria tomentosa*, all except mitraphyllin and rynchophyllin showed a pronounced enhancement of phagocytosis. This was determined in two in vitro tests and the in vivo carbon clearance test. The active alkaloids include isopteropodin, pteropodin, mitraphyllin, isomitraphyllin, rynchophyllin and isorynchophyllin."

5. Mutagenic and Antimutagenic Activities of *Uncaria tomentosa* and its Extracts. *J Ethnopharm*, Vol. 38, 1993, 63-77.

Uncaria tomentosa plant extracts show a protective antimutagenic effect in vitro against photomutagenesis induced by 8-methoxypsoralen (8-MOP) plus UVA in *S. typhirium* TA 102. A decoction of *U. tomentosa* ingested daily for 15 days by a smoker decreased the mutagenicity induced in *S. typhimurium* TA 98 and TA100 by the subject's urine.

6. A Differential Sensitivity of Oxindole Alkaloids to Normal and Leukemic Cell Lines. *Planta Medica*, Vol. 59, 1993, A583.

"All tested oxindole alkaloids dose-dependently inhibited the growth of HL60 and U-937 cells. The most pronounced effect was found for uncarine F with IC50 values (concentration required to inhibit 50% of the leukemic cells) of 21.7 (HL 60) and 29.0 (U 937) $\mu\text{mol/l}$."

7. *The Healing Power of Herbs*, 2nd edition. By Michael Murray, 1995, 220-227.

Pau d'Arco contains anthroquinones and naphthoquinones. The naphthoquinones are highly effective against *Candida albicans* and *Tricophyton mentagrophytes*.

8. A Lapachol Derivative Active Against Mouse Lymphocytic Leukemia P388 by M. da Consolamo et al. *J Med Chem* 18, 11, Nov 1975, 1159-61.

"Lapachol and its derivatives were tested against rat tumor Walker 256 carcinosarcoma and found to be active. It was also effective against mouse lymphocytic leukemia P388."

9. Inhibition of Potentially Lethal DNA Damage Repair in Human Tumor Cells by Beta-lapachone, an Activator of Topoisomerase I by D.A. Boothman, D.K. Trask and A.B. Pardee. *Cancer Research* Vol. 49, No. 3, Feb 1, 1989, 605-12.

"Beta-lapachone, found in Pau d'Arco, inhibited the fast component of potentially lethal damage repair carried out by HEP-2 cells when present during or immediately after x-irradiation. It does not further enhance the lethal effects of x-rays following prolonged drug exposures. The mechanism of action is through activation of topoisomerase I."

10. Production of Anti-Tumor-Promoting Furanonaphthoquinones in *Tabebuia avellanae* Cell Cultures by S. Ueda et al. *Phytochemistry* Vol. 36, No. 2, 1994, 323-325.

Tabebuia avellanae (*Tabebuia impetiginosa*) quinones showed significant dose-dependent inhibitory effects in in vitro assays utilizing the activation of Epstein-Barr virus expression in EBV genome-carrying human lymphoblastoid cells to detect tumor promoters and anti-tumor promoters. These quinones have demonstrated potent cytotoxicity to human solid tumors in vitro. (A-549, MCF-7, HT-29)

11. Immunological Investigations of Naphthaquinone-containing Plant Extracts, Isolated Quinones and other Cytostatic Compounds in Cellular Immunosystems by H. Wagner, B. Kreher and K. Jurcie. *Planta Med* 1986 (6), 550-551, P99.

"Pau d'Arco and other herb extracts were tested to see whether their well-known cytotoxic effects of the naphthaquinones were caused by a direct inhibition of the cell metabolism or by immuno-induced cytotoxicity. Most extracts and isolated compounds exerted in high concentrations (1 -0.01 mg/mL) a cytotoxic or immunosuppressive effect whereas the same preparations in very low concentration showed in nearly all cases immunostimulating properties. It was concluded that the induction of cellular and humoral immune factors was responsible for the action."

12. *The Honest Herbal* by Varro Tyler, 1992. Pg. 239-241.

"Lapachol does possess some anticancer properties. In 1968 it was shown to have significant activity against Walker 256 carcinosarcoma, particularly when administered orally to animals on which this tumor had been implanted. In later studies, lapachol was found to be active against other kinds of animal cancers, including Yoshida sarcoma and Murphy-Sturm lymphosarcoma."

13. A Lapachol Derivative Active Against Mouse Lymphocytic Leukemia P388 by M. da Consolamo et al. *J Med Chem* 18, 11, Nov. 1975, 1159-61.

"Lapachol and its derivatives were tested against rat tumor Walker 256 carcinosarcoma and found to be active. It was also effective against mouse lymphocytic leukemia P388."

14. *Herbal tonic Therapies* by Daniel Mowrey. Keats Publishing, Inc., New Canaan, Connecticut, 1993. Pg. 70-89.

"In vivo trials show definite inhibition of free radicals and the inflammatory leukotrienes by lapacho constituents. One of the strongest actions of lapacho is against viruses. Antiviral effects are seen against herpesvirus hominis types I and II, polio virus, vesicular stomatitis virus, avian myeloblastosis virus, murine leukemia virus, Friend virus, and Rous sarcoma virus. One factor, beta-lapachone, inhibits reverse transcriptase enzyme. Lapacho was found to be effective against both *Schistosoma mansoni* and *Trypanosoma cruzi*. Lapacho is often singled out as the premier treatment for *Candida* or yeast infections. Toe and fingernail fungal infections are relieved by soaking the appendages in lapacho tea of and on for a couple of weeks."

15. Pfaffosides, Nortriterpenoid Saponins From *Pfaffia paniculata* by S. Nakai et al. *Phytochemistry* Vol. 23, No. 8, 1703-5, 1984.

"Three new nortriterpene saponins having inhibitory effects on the growth of cultured tumor cells, named pfaffosides D, E, and F have been isolated from *Pfaffia paniculata*. The inhibitory effects were on the growth of cultured tumor cell melanomas (B16) at concentrations of ca 70, ca 120 and ca 30 ug/mL respectively."

16. Japan Patent Office. SHO 58-57547, March 31, 1983. Tsunematsu Takemoto et al.

Six tumor inhibitory substances from the plant *Pfaffia paniculata* are described. They are called pfaffosides (A, B, C, D, E, F) The pfaffosides inhibited the growth of black tumor cells (melanoma).

17. Screening for Antifungal Activity of Panamanian Plants by R.A. Halison et al. *Int J Pharmacog* 31, 1993 No. 1, 68-76.

Jatoba (*Hymenaea courbaril*) and 152 other crude plant extracts were tested for antifungal activity against *Candida albicans* and *Cladosporium cucumerinum*. Activity was assessed in a semiquantitative fashion by bioautography on TLC plates. When tested at 100ug, Jatoba leaves-stem and also bark chloroform extract were effective against both fungi and Jatoba leaves-stem methanol was effective against *Cladosporium cucumerinum*.

18. Medicinal Plants of Surinam IV by R. Verporrte and P.P. Dihal. *Jour of Ethnopharm* 21, 1987, 315-18.

"The bark of Jatoba is active against *Staphylococcus aureus* and *Bacillus subtilis*."

Statement

Together these herbs contribute essential plant nutrients you need to create a strong first line of defense.

Documentation

1. U.S. Patent 5302, 611. April 12, 1994. Oxindole Alkaloids Having Properties Stimulating the Immunological System and Preparation Containing Same. Keplinger et al.

"Tetra and pentacyclic oxindole alkaloids, in particular the alloisopteropodine, isomer A, a pentacyclic oxindole alkaloid, are suitable for the unspecific stimulation of the immunologic system, which has been proven by a substantial percentage phagocytosis increase in the granulocytic test according to BRANDT, a substantial percentage increase of the CL-response in the chemiluminescence test and a high increase of the phagocytosis activity of tissue macrophages of the reticuloendothelial system in the carbon clearance test according to BIOZZI. These alkaloids may be isolated from extracts of the roots of the *Uncaria tomentosa* whose fresh best has a yellow brown or dark red color, from which the tanning substances have largely been removed. The isopteropodine-containing roots showed values between 30 and 40% activity increase on the average. The examination of the raw alkaloid mixture in the water-soluble hydrochloride form showed an average phagocytosis increase of 20%."

2. Die Alkaloide von *Uncaria tomentosa* und ihre Phagozytosesteigernde Wirkung by H. Wagner, B. Kreutzkamp and K. Jurcie, *Planta Medica* 1985, 419-423.

"Of the six oxindole alkaloids isolated and identified from the roots of *Uncaria tomentosa*, all except mitraphyllin and rynchophyllin showed a pronounced enhancement of phagocytosis. This was determined in two in vitro tests and the in vivo carbon clearance test. The active alkaloids include isopteropodin, pteropodin, mitraphyllin, isomitraphyllin, rynchophyllin and isorynochophyllin."