

AloeArborescens.org / Scientific Research

[Aloemannan, Significant Antitumor Efficacy](#)

Winters

Health Science Center, University Of Texas

In 1977 while conducting a series of animal experiments using aloemannan a mucopolysaccharide of Aloe arborescens, detected aloemannan a significant antitumor efficacy. Unlike usual anticancer drugs killing cancer cells directly, it acts as a stimulus for the body's defense mechanism, or immunity to suppress tumor. In other words, it prohibits multiplication of cancer cells while it is coexistent with them. Prof. Winters and his group of the Health Science Center at the University of Texas verified their test-tube experiments using human cervical cancer cells that Aloe arborescens extract prohibits the growth of cancer cells.

[Aloe - Cancer Research](#)

Tizard I; Kemp M

Texas A&M

Research by the immunologist Ian Tizard, Ph.D. and virologist Maurice Kemp, Ph.D. from Texas A&M led to the discovery that Aloe mucopolysaccharide is taken into a special leukocyte, the macrophage, and this cell is stimulated to release messenger molecules called cytokines (interferons, interleukines, prostaglandins, tumor necrosis factor and stem-cell growth factors.) Tumors release a chemical that attracts blood circulation so that malignant cells have a supply to the tumor and it therefore dies. All of the immune modulating effects from Aloe contribute greatly to the prevention and healing of malignant cells.

Aloe and cancer Research

Plant Lectin, ATF1011, On The Tumor Cell Surface Augments Tumor-Specific Immunity Through Activation Of T Cells Specific For The Lectin

Yoshimoto R; Kondoh N; Isawa M; Hamuro J
Cancer Immunol Immunother 25(1):25-30 1987

The possibility that a plant lectin as a carrier protein would specifically activate T cells, resulting in the augmentation of anti-tumor immunity was investigated. ATF1011, a nonmitogenic lectin for T cells purified from *Aloe arborescens* Mill, bound equally to normal and tumor cells.

Antimutagen Of Aloe Plants

Nakasugi, Tohru; Komai, Koichiro

Res. Lab. Med, Prod. Plant Origin
Kinki Daigaku Nogakubu Kyo (1994), 27, 47-54

An antimutagen from *Aloe Arborescens* Mill was isolated and identified. Methanol exts. from dried leaves of *A. arborescens* inhibited frameshift mutation induced by 3-amino-1-methyl-5H-pyrido [4, 3b] indole in *Salmonella typhimurium* TA98. The antimutagen isolated from the methanol exts. was identified as the anthraquinone Aloe-emodin. Aloe-emodin inhibited frameshift mutation by 60.3% at 0.1 mM/plate and 86.3% at 1.0 mM/plate whereas barbaloin, monoglucoside of Aloe-emodin, did not. Fresh *A. arborescens* leaves contained 1.17 ug/g (wet wt.) of Aloe-emodin. Aloe-emodin was also detected in *A. ferox*, *A. vera*, *A. eru*, and *A. compacta* by HPLC. These Aloe species may have substances that are useful for prevention of some forms of cancer.

Effects Of Aloe Extracts On Human Normal & Tumor Cells In-Vitro

Winters WD; Benavides R; Clouse WJ

Dep. Microbiol., Univ. Tex. Health Sci. Center
Econ Bot 35 (1), 1981, 89-95

Fractions of leaf extracts from 2 local types, labeled Aloe vera (subsequently identified as *A. barbadensis* Mill., and *A. saponaria* Haw.), were prepared by differential centrifugation and tested by in vitro assays for the presence of lectin-like activities and for effects on the attachment and growth of human normal and tumor cells. Fractions of extracts of fresh leaves and commercially *A. vera* gel had high levels of lectin-like substances measured by immunodiffusion and nemagglutination assays. Substances in fluid fractions from both fresh leaf sources markedly promoted attachment and growth of human normal cells.

Antimetastatic Properties Of Aloe Juice

Gribel' NV; Pashinskii VG

Vopr Onkol 32(12):38-40 1986

An evaluation of antimetastatic properties of succus Aloes was carried out using three types of experimental tumors of mice and rats. It was found that succus Aloes treatment contributes to reduction of tumor mass, metastatic foci and metastasis frequency at different stages of tumor progress without affecting major tumor growth. Succus Aloes potentiates the anti-tumor effect of 5-fluorouracil and cyclophosphamide as components of combination chemotherapy.

The Preventive & Therapeutic Potential Of The Squalene-Containing Compound Roidex, On Tumor Promotion & Regression

Desai KN; Wei H; Lamartiniere CA

Department Of Pharmacology & Toxicology, University Of Alabama
Cancer Letters 101(1):93-6 1996 Mar 19

Recent scientific evidence has shown free radicals or reactive oxygen species (ROS) to play an important role in the initiation and progression of cancer. Many radical scavengers have also been found to help reduce the attacks by these ROS. Interestingly, the ROS scavengers that have been investigated are naturally occurring compounds such as vitamins C and E. Roidex is a formulation of squalene, vitamin E, and Aloe vera.

[Anticancer Effects Of Aloe On Sarcoma 180 In ICR Mouse & On Human Cancer Cell Lines](#)

Jeong HY; Kim JH; Hwang SJ; Rhee DK
Coll. Pharm., Sung Kyun Kwan Univ.
Yakhak Hoeji 38 (3). 1994. 311-321

Anticancer effects of Aloe on sarcoma 180 in ICR mouse or human cancer cells were determined. Sarcoma 180 cells were inoculated subcutaneously into male ICR mouse to determine effect of Aloe on tumor growth, or inoculated intraperitoneally into male ICR mouse to determine effect of Aloe on life span prolongation, followed by oral administration of Aloe vera (10 mg/kg/day, 50 mg/kg/day) or Aloe arborescens (10 mg/kg/day, 100 mg/kg/day) once a day for 14 days.

[Tumor inhibitors. 114. Aloe emodin: antileukemic principle isolated from Rhamnus frangula L.](#)

[Kupchan SM](#), [Karim A](#).

A systematic fractionation of an ethanol-water (1:1) extract of the seeds of Rhamnus frangula L., guided by assays for tumore-inhibitory activity, led to the isolation of aloe emodin (1). This compound was found to show significant antileukemic activity against the P-388 lymphocytic leukemia in mice. A noteworthy vehicle-dependence of the testing results is reported. In the light of this vehicle-dependence, the re-examination of other anthraquinone derivatives is recommended.

PMID: 957911 [PubMed - indexed for MEDLINE]

[The Healing Properties Of Aloe Vera](#)

By Lawrence Plaskett, B.A., Ph.D., C.Chem., F.R.I.C.

Aloe Vera contains Glucomannan, a special complex polysaccharide composed largely of the sugar mannose. It interacts with special cell-surface receptors on those cells which repair damaged tissues, called fibroblasts, stimulating them, activating their faster growth and replication. Plant hormones in Aloe, called gibberellins, also accelerate healing by stimulating cell replication. These combined actions make Aloe a uniquely potent healing Herb.

[Aloe Saponaria Inhibe Activacion y Proliferacion de Celulas Tumorales](#)

ScienceDirect - International Immunopharmacology

Mannan from Aloe saponaria inhibits tumoral cell activation and proliferation

International Immunopharmacology

Volume 4, Issue 3 , March 2004, Pages 411-418

[Aloe - Different Researchs on Aloe and its benefits](#)

- [J Wound Care. 2004 Apr;13\(4\):157-8.: Phytotherapy: an alternative treatment for non-healing ulcers.](#)
[Avijgan M.](#)
[Shahr-e-kord University of Medical Sciences, Shahr-e-kord, Iran.](#)
avijgan@yahoo.com
There are few reports in the literature on the effectiveness of complimentary therapies on chronic wounds. Use of an aloe vera gel resulted in full healing after treatments such as antibiotics, surgical debridement and skin grafting had failed.
- [Int Immunopharmacol. 2004 Mar;4\(3\):411-8.: Mannan from Aloe saponaria inhibits tumoral cell activation and proliferation.](#)

[Aloe Vera & AIDS Research](#)

Various AIDS studies were completed by researchers such as Dr. Terry Pulse, M.D., Dr. Reg McDaniel, M.D., Dr. Terry Watson, D.O., Dr. Clumeck, M.D. (of Belgium) and others throughout the 1980's using oral mucopolysaccharides.

The results were impressive, demonstrating in many of the studies an average of 70% improvement in symptoms and laboratory criteria within 3 to 4 months. Many patients stated that opportunistic infections had stopped and they were able to return to normal activity.

[Epidemiologic Survey On Lung Cancer With Respect To Cigarette Smoking & Plant Diet](#)

Sakai R

Department Of Epidemiology, School Of Health Sciences, Ryukyu University

Jpn J Cancer Res 80(6):513-20 1989 Jun

This case-control study of lung cancer was based on a cross-sectional questionnaire survey of inpatients at 5 general hospitals in Okinawa, Japan, from 1982 to 1987.

The purpose of the study was to clarify the relations of lung cancer to cigarette smoking and plant diet. Ingestion frequencies of 17 major dietary plants and/or herbs were obtained by means of a questionnaire interview. As eligible subjects for a case-control analysis, there were 673 respondents aged over 30 years with clear smoking history, age, sex and diagnosis. Psychiatric patients were excluded.