Plantas estimulantes do sistema imune

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Chlorella (Chlorella pyrenoidosa)
A Chlorella é uma alga unicelular encontrada espontaneamente em tanques e lagos, com grande habilidade em realizar a fotossíntese. (Teske, M., et al., 1995)
Pode ser utilizada como suplemento alimentar principalmente como preventivo de anemias em gravidez.
Também é utilizado em dietas de emagrecimento promovendo sensação de saciedade
Possui uma substância chamada CGF (Chlorella Growth Factor) composta por um nucleopeptídeo sulfurado, um polissacarídeo e outras substâncias que ativam as funções fisiológicas e estimulam o sistema imune. (Teske, M., et al., 1995)

Dente de Leão (Taraxacum officinale)
Há evidências científicas que a Taraxacum officinale restabelece a função imune suprimida em animais aumentando a resposta imune mediada, humoral, e imunidade não específica. Comprovações experimentais sugerem também que a Taraxacum officinale leva a produção de óxido nítrico, que é uma substância importante para a regulação sistêmica e defesa imune. Além disso, o extrato aquoso de Taraxacum officinale abole o efeito inibitório do cádmio na defesa imune e regulação sistêmica, restabelecendo a produção de ácido nítrico por macrófagos da cavidade peritoneal dos ratos. (Carvalho, J.C.T., 2004)

Referências bibliográficas:

Immunomodulating agents of plant origin. I: Preliminary screening.
Atal CK; Sharma ML; Kaul A; Khajuria A
extract was studied in murine lymphocyte proliferation tests using Concanavalin A (ConA) as mitogen for non-specific stimulation and mixed lymphocyte culture (MLC) as allospecific stimulation. Th1 and Th2 cytokine levels in MLC were assayed by two antibody capture ELISA technique. All tests were performed in triplicate and repeated twice. RESULTS: We found that Milk Thistle is immunostimulatory in vitro. It increased lymphocyte proliferation in both mitogen and MLC assays. These effects of Milk Thistle were associated with an increase in interferon gamma, interleukin (IL)-4 and IL-10 cytokines in the MLC (table). This immunostimulatory effect increased in response to increasing doses of Milk Thistle. CONCLUSIONS: Our study has uncovered a novel effect of milk thistle on the immune system. This immunostimulatory effect may be of benefit in increasing the immunity to infectious diseases.

Modulation of the cellular and humoral immune responses of tumor patients by mistletoe therapy.


Resumo: There is evidence from recent data that mistletoe extracts exert immunostimulatory properties which could explain their therapeutic effects observed in some tumor patients. Aim of our study was, therefore, to investigate the effect of a subcutaneous 16-weeks therapy with a mistletoe extract (ABNOBAviscum Mali, AM) on the cellular and humoral immune responses in eight breast cancer patients. Mistletoe therapy induced a strong initial proliferation of peripheral blood mononuclear cells (PBMC) in all individuals, which, however, decreased in six patients during the observation period, indicating that not only activating but also inhibitory mechanisms have been induced. In all supernatants of AM-stimulated cell cultures TNF-alpha or IL-6 were found, indicating the activation of cells of the monocyte-/macrophage lineage by mistletoe extracts. Further analyses revealed, that AM induced in vitro also the release of low amounts of IFN-gamma and IL-4 with individual variations. At the end of the therapy, a shift to Th1-related cytokines could be observed in the in vitro cell culture system. All patients produced anti-mistletoe lectin 1 antibodies of the IgG-type during therapy and in four of them additionally antibodies of the IgE-type were found. It, therefore, seems that AM can influence the Th1/Th2 balance and, in case of a Th1 shift, this may favourably influence the tumor growth.

Mistletoe therapy and immunological research.

Anticancer Drugs;8 Suppl 1:S65, 1997 Apr. Büssing A

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Eleutherococcus senticosus

The synthesis of Rantes, G-CSF, IL-4, IL-5, IL-6, IL-12 and IL-13 in human whole-blood cultures is modulated by an extract from Eleutherococcus senticosus L. roots.


Resumo: An ethanol extract derived from the roots of Eleutherococcus senticosus was found to influence markedly the cytokine synthesis of activated whole blood cultures of ten healthy volunteers. Whereas the synthesis of Rantes was increased over a wide range of concentrations, the release of IL-4, IL-5 and IL-12 was significantly inhibited. An inhibition at higher concentrations, switching to a stimulation at lower doses of the extract was seen with G-CSF, IL-6 and IL-13. From these particular immuno-pharmacological effects of Eleutherococcus senticosus we suggest this herbal preparation possesses immuno-modulatory potency, rather than just being immuno-suppressive or -stimulating.

Uncaria tomentosa

Enhanced DNA repair, immune function and reduced toxicity of C-MED-100, a novel aqueous extract from Uncaria tomentosa.

J Ethnopharmacol;69(2):115-26, 2000 Feb. Sheng Y; Bryngelsson C; Pero RW

Pais : IRELAND

Resumo: Female W/Fu rats were gavaged daily with a water-soluble extract (C-MED-100) of Uncaria tomentosa supplied commercially by CampaMed at the doses of 0, 5, 10, 20, 40 and 80 mg/kg for 8 consecutive weeks. Phytohemagglutinin (PHA) stimulated lymphocyte proliferation was significantly increased in splenocytes of rats treated at the doses of 40 and 80 mg/kg. White blood cells (WBC) from the C-MED-100 treatment groups of 40 and 80 mg/kg for 8 weeks or 160 mg/kg for 4 weeks were significantly elevated compared with controls (P < 0.05). In a human volunteer study, C-MED-100 was given daily at 5 mg/kg for 6 consecutive weeks to four healthy adult males. No toxicity was observed and again, WBC were significantly elevated (P < 0.05) after supplement. Repair of DNA single strand breaks (SSB) and double strand breaks (DSB) 3 h after 12 Gy whole body irradiation of rats were also significantly improved in C-MED-100 treated animals (P < 0.05). The LD50 and MTD of a single oral dose of C-MED-100 in the rat were observed to be greater than 8 g/kg. Although the rats were treated daily with U. tomentosa extracts at the doses of 10-80 mg/kg for 8 weeks or 160 mg/kg for 4 weeks, no acute or chronic toxicity signs were observed symptomatically. In addition, no body weight, food consumption, organ weight and kidney, liver, spleen, and heart pathological changes were found to be associated with C-MED-100 treatment.