Inhibitors Serine Peanuts and some of its Products and its Effect on Satiety in mice

Medeiros, A.F1; Rocha, M.G.F1; Machado, R.J.A2; Serquiz, A.C2; Carvalho, F.M.C1; Bezerra, A.D.L1; Santos, E.A2; Morais, A.H.A1

DNUT1, DBQ2, UFRN, RN, Brazil

The serine protease inhibitors have activities such as anti-allergic, anti-inflammatory, anti-carcinogenic, effect on coagulation, fibrinolysis and satiety. Cholecystokinin (CCK) is a putative satiety signal; thus, increased secretion of CCK could decrease food intake. Some studies have shown that consumption of peanuts has an influence on weight control. This paper aims to partially purify serine inhibitors in peanuts and some of its products (roasted, shelled and paçoca) and verify the effect of trypsin inhibitor of peanuts dietary inclusion on satiety of mice. The crude extract was obtained in 0.02 M borax buffer, pH 7.5 (1:10), fractionated with ammonium sulfate saturation in the range of 0-30% (F1), 30-60% (F2) and 60 - 90% (F3) and the fraction that showed higher activity antitriptina was applied on a column of trypsin-Sepharose affinity. Active fractions eluted with 5 mM HCl were combined, dialyzed and tested for satiety in mice. When analyzed in gel electrophoresis revealed the presence of protein bands containing between 30 and 35 kDa. The fractions retained inhibited trypsin from 18.3 to 25.4 IU / mg protein. A diet high in trypsin inhibitors gave on satiety and weight reduction in rats when compared with the standard diet (AIN-93G). Purification of protease inhibitors with potential for biological activities is a branch of research on the rise, given the potential for pharmacological treatments, particularly with so-called natural products.

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