Noncariogenic intense natural sweeteners.

Kinghorn AD, Kaneda N, Baek NI, Kennelly EJ, Soejarto DD.

Abstract
There is a definite relationship between the dietary consumption of sucrose and the incidence of dental caries. Noncaloric sucrose substitutes for use in the sweetening of foods, beverages, and medicines may be either synthetic compounds or natural products. In the United States, four potently sweet artificial sweeteners are approved, namely, saccharin, aspartame, acesulfame potassium, and sucralose. Highly sweet plant constituents are used in Japan and some other countries, including the diterpene glycoside stevioside and the protein thaumatin. Recent progress in a research project oriented towards the discovery and evaluation of novel potentially noncariogenic sweeteners from plants has focused on substances in the sesquiterpenoid, diterpenoid, triterpenoid, steroidal saponin, and proanthocyanidin structural classes. The feasibility of using Mongolian gerbil electrophysiological and behavioral assays to monitor the sweetness of plant extracts, chromatographic fractions, and pure isolates has been investigated. An in vivo cariogenicity study on the commercially available natural sweeteners stevioside and rebaudioside A has been carried out.

PMID:
9735874

[PubMed - indexed for MEDLINE]

Link: http://www.ncbi.nlm.nih.gov/pubmed/9735874