

Noni juice

Noni juice is derived from the fruit of the *Morinda citrifolia* tree indigenous to Southeast Asia, Australasia, and the Caribbean.

Noni juice has been promoted as a cure for a number of human diseases. However, there is no evidence to support these claims.

History

Sold in capsule form, pulp powder was the first *M. citrifolia* product brought to the commercial market in Hawaii by Herbert Moniz of Herb's Herbs in 1992 after patenting a unique *M. citrifolia* dehydrating method.^(US 5288491 ^[1]) The noni fruit is endemic in the Hawaiian islands.^[citation needed]



Noni fruit and juice. Commercial noni juice excludes the pulp pictured here.

Regulatory warnings and safety testing

In August 2004, the US Food and Drug Administration issued a Warning Letter to Flora, Inc. for violating section 201(g)(1) of the Federal Food, Drug, and Cosmetic Act (the Act) [21 U.S.C. § 321(g)(1)]. Flora made twelve unfounded health claims about the purported benefits of noni juice as a medical product, in effect causing the juice to be evaluated as a drug. Under the Act, this necessitates all safety and clinical trial evidence for the juice providing such effects in humans.

The FDA letter also cited 1) absent scientific evidence for health benefits of noni phytochemicals, scopoletin, and damnacanthal, neither of which has been confirmed with biological activity in humans, and 2) lack of scientific foundation for health claims made by two proponents of noni juice, Dr. Isabella Abbot and Dr. Ralph Heinicke.

Two other FDA letters have been issued for the same types of violations.

In the European Union, after safety testing on one particular brand of noni juice (Tahitian Noni), approval was granted in 2002 as a novel food by the European Commission for Health and Consumer Protection Directorate-General. In their report, the European Commission's Scientific Committee made no endorsement of health claims.

Research

In 2005, two scientific publications described incidents of acute hepatitis caused by ingesting *M. citrifolia*. One study suggested the toxin to be anthraquinones, found in roots, leaves and fruit of the *M. citrifolia*, while the other named juice as the delivery method.

This was, however, followed by a publication showing that noni juice 1) is not toxic to the liver even when consumed in high doses, and 2) contains low quantities of anthraquinones, which are potentially toxic to liver tissue.

The case reports of hepatitis were reviewed by the European Food Safety Authority (EFSA), wherein it was concluded that no causal link could be established.^[2] The potential for toxicity caused by noni juices remains under surveillance by EFSA, individual food safety authorities in France, Finland and Ireland,^[3] and medical investigators in Germany. A review of toxicity tests and the safety issues surrounding noni juice has been published.^[4]

The Physicians Desk Reference ("PDR") for Non-Prescription Drugs and Dietary Supplements lists only one particular commercial brand of noni juice, with no side-effects mentioned. Consumers of noni juice are advised to

carefully check labels for warnings, which may say "Not safe for pregnant women" or "Keep out of reach of children."

Two brands of noni juice are listed on ConsumerLab.com's "Athletic Banned Substance Screening Program" as having been screened for substances on the World Anti-Doping Code Prohibited List.

Medical research

The genus *Morinda* (of which *M. citrifolia* is a species) has attracted limited medical research, with 145 papers published since 1994 and 55 since 2006 (search "noni" and "morinda"; PubMed search, January 2008).

Noni plants and juice have been promoted by practitioners of alternative medicine as a cure for a number of human maladies including HIV, heart disease and cancer. However, according to the American Cancer Society "there is no reliable clinical evidence that noni juice is effective in preventing or treating cancer or any other disease in humans".

References

- [1] <http://worldwide.espacenet.com/textdoc?DB=EPODOC&IDX=US5288491>
- [2] EFSA :: EFSA re-assesses safety of noni juice (http://www.efsa.eu.int/en/press_room/press_release/press_releases_2006/pr_nda_noni_juice.html)
- [3] FSAI - Food Safety Authority Warns of Unsubstantiated Claims on Noni Juice (<http://www.fsai.ie/details.aspx?id=7142>)
- [4] West BJ, Jensen CJ, Westendorf J, and White LD. A Safety Review of Noni Fruit Juice. *Journal of Food Science* 2006 October; 71(8):R100-R106. <<http://www.blackwell-synergy.com/doi/full/10.1111/j.1750-3841.2006.00164.x>>

Further reading

- University of Hawaii (2006). "The Noni Website" (<http://www.ctahr.hawaii.edu/noni/>).
- Thomas, Chris (August 30, 2002). "Noni No Miracle Cure" (<http://www.cancerpage.com/news/article.asp?id=4799>). Cancerpage.com.

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