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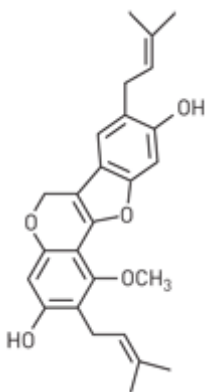
NATURAL PRODUCTS

Licorice Could Aid Battle Against Dental Cavities

Compounds extracted from herb show potent activity against bacterium that causes tooth decay

Rachel Petkewich

Compounds isolated from licorice root (*Glycyrrhiza uralensis*) have been shown in bioassays to exhibit potent antibacterial activity against *Streptococcus mutans*, an oral pathogen that causes tooth decay (*J. Nat. Prod.* [2006](#), *69*, [121](#)). That means chewing on licorice candy may help reduce cavities or combat other problem bacteria, researchers speculate.



[Wenyuan Shi](#), Qing-Yi Lu, and their colleagues at the University of California, Los Angeles, discovered two new pterocarpene compounds (glycyrrhizol A and B) and isolated four previously known flavonoids from the root with a bioassay-guided fractionation method. They characterized the compounds by several spectroscopic methods and used bioassays to test the antibacterial properties. Glycyrrhizol A (shown) exhibited the strongest activity against *S. mutans*.

Licorice is an important herb in Chinese medicine, and its derivatives are used worldwide as flavoring and sweetening agents in tobacco, gum, candy, and beverages. Although further testing is needed, herbal oral-care lollipops are already available, and toothpaste companies are interested in the new compounds, Shi says

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News Center

Licorice compounds may fight tooth decay



Feb 03 (Reuters Health) - Licorice lovers now have an excuse to eat more, since new study findings suggest it may be good for their teeth.

Compounds from the Chinese herb, *Glycyrrhiza uralensis*, which is commonly referred to as licorice root or Chinese licorice, appear to be effective in fighting bacteria that cause tooth decay, researchers report in the *Journal of Natural Products*.

"Chewing licorice has been a practice in different cultures," study author and microbiologist Dr. Wenyuan Shi told Reuters Health. "Our findings provide some scientific basis for that."

"Licorice contains active antimicrobial compounds," Shi explained, adding that "many Chinese medicinal herbs contain antimicrobial compounds that could be used for health purposes."

The current findings about licorice's antimicrobial activity grew out of a larger study of 2,000 commonly used Chinese herbs, said Shi, chairman of the oral biology department at the University of California at Los Angeles' School of Dentistry. He and his colleagues evaluated each of the herbs for potential antimicrobial properties and observed some of the strongest activity in experiments involving licorice root, the researcher noted.

They found that at least two compounds from the herb inhibited the growth of *Streptococcus mutans*, the primary bacteria responsible for causing cavities. In fact, licorice root's antimicrobial activity was seen in a number of experiments, including those involving human saliva and dental plaques, Shi said.

According to Shi, the data imply a possible benefit "for promoting oral health with licorice extracts." Yet, he cautioned, more study is needed before consumers start using licorice to prevent cavities. "The actual clinical effects need to be further validated," he added.

Still, Shi and his colleagues are currently in the process of translating their findings into a product, namely, "sugar-free, active component concentrated licorice lollipops, which could promote oral health in children and elder populations," he told Reuters Health.

Shi expects the lollipops to be available sometime this spring through C3 Jian, a company based in Washington state.

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<http://channels.netscape.com/homerealestate/package.jsp?name=ftel/licorice/licorice>

One Kind of Candy Fights Tooth Decay

Eat your licorice! Thanks to compounds from the Chinese herb *Glycyrrhiza uralensis*, which is commonly referred to as licorice root or Chinese licorice, this favorite candy appears to be effective in fighting the bacteria that cause tooth decay, according to researchers from the University of California at Los Angeles.

Lead study author Dr. Wenyuan Shi told Reuters Health, "Chewing licorice has been a practice in different cultures. Our findings provide some scientific basis for that." The magic ingredients are active antimicrobial compounds, which are also contained in many other Chinese medicinal herbs. It was from a study on 2,000 of these common herbs that the researchers realized the power of licorice.

Shi's team painstakingly evaluated each of those 2,000 herbs to determine their potential antimicrobial properties, and some of the strongest activity was in experiments involving licorice root, reports Reuters. In test tubes, at least two of the compounds in licorice inhibited the growth of *Streptococcus mutans*, the primary bacteria responsible for causing cavities.

What does that mean? Licorice has a possible benefit "for promoting oral health with licorice extracts," Shi told Reuters. Still he warned that more research is needed before anyone should take up chewing licorice as a way to prevent cavities.

But just because we should wait, it doesn't mean Shi has to. He and his team are currently developing sugar-free lollipops that contain the active component in licorice which could be used to promote oral health in kids and seniors. Preventing cavities never tasted so sweet!

The study findings were published in the *Journal of Natural Products*.

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Compounds in licorice root may help fight tooth decay

By Simon Pitman

1/24/2006 - **Licorice, which has long been used as an ingredient in a range of oral care products, has been scientifically proven to help fight the onset of cavities and other oral diseases.**

According to researchers at the University of California, Los Angeles, compounds isolated from [licorice](#) root used for confectionery products contains at least two compounds that appear to be potent inhibitors of Streptococcus mutans, a bacteria associated with the dental caries.

The study is due to appear in its entirety in the February edition of Journal of Natural, published monthly by the American Chemical Society and the American Society of Pharmacognosy.

Its findings could prove to be a major boost to makers of [oral care](#) products - including mouthwashes, toothpaste and even chewing gum - looking to up the efficacy of their products through the use of natural, well-known ingredients.

The scientists involved in the project say that more research is needed before it can categorically be proven that the compounds effectively fight human cavities.

However, Qing-Yi Lu, a chemist at UCLA's School of Medicine, and Wenyuan Shi, Ph.D, a microbiologist at UCLA's School of Dentistry state that if further studies show promise, the licorice compounds could eventually be used as cavity-fighting components in mouthwash or toothpaste.

According to the soon-to-be published article, licorice has been an important herb in Chinese medicine for many years and is now being 'rediscovered' by Western medicine as a rich source of potentially beneficial compounds.

In addition to being used as flavoring and sweetening agents in candy, tobaccos and beverages, compounds derived from licorice root have been shown to help fight inflammation, viruses, ulcers and even cancer, according to the researchers.

Currently licorice extract can be found in a number of Ayurvedic oral care remedies, having been long-discovered by Indian Ayurvedic practitioners to have positive effects on oral health.

A leading manufacturer of licorice toothpaste is Indian personal care player [Auomere](#), which distributes its product lines both in India and in the US.

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Licorice May Be A Cavity Fighter

NewsMax.com Wires

Saturday, Feb. 4, 2006

If you love licorice, here's some good news - chewing it may help protect your teeth from cavities, according to a new study from UCLA.

The study shows that certain chemical compounds from the Chinese herb, Glycyrrhiza uralensis, commonly referred to as licorice root, can effectively fight the bacteria that cause tooth decay.

"Chewing licorice has been a practice in different cultures," said microbiologist Dr. Wenyan Shi, chairman of the oral biology department at the University.

"Our findings provide some scientific basis for that." he said.

The current findings about licorice's antimicrobial activity grew out of a larger study of 2,000 commonly used Chinese herbs.

The UCLA researchers tested the herbs for antimicrobial properties and found some of the strongest activity in licorice root.

At least two of its compounds inhibited the growth of Streptococcus mutans, the primary bacteria responsible for causing cavities.

