

Researchers discover component of cinnamon prevents colorectal cancer in mice

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Georg Wondrak (left) and Donna Zhang, researchers at the University of Arizona College of Pharmacy and UA Cancer Center, discovered that a component of cinnamon prevents colorectal cancer in mice. Credit: University of Arizona Biomedical Communications

Research conducted at the University of Arizona College of Pharmacy

and the UA Cancer Center indicates that a compound derived from cinnamon is a potent inhibitor of colorectal cancer.

Georg Wondrak, Ph.D., associate professor, and Donna Zhang, Ph.D., professor, both of the UA College of Pharmacy Department of Pharmacology and Toxicology, recently completed a study in which they proved that adding cinnamaldehyde, the compound that gives [cinnamon](#) its distinctive flavor and smell, to the diet of mice protected the mice against colorectal cancer. In response to cinnamaldehyde, the animals' cells had acquired the ability to protect themselves against exposure to a carcinogen through detoxification and repair.

'This is a significant finding,' says Zhang, who, along with Wondrak, is a member of the UA Cancer Center. 'Because [colorectal cancer](#) is aggressive and associated with poor prognoses, there is an urgent need to develop more effective strategies against this disease.'

'Given cinnamon's important status as the third-most-consumed spice in the world,' Wondrak adds, 'there's relatively little research on its potential health benefits. If we can ascertain the positive effects of cinnamon, we would like to leverage this opportunity to potentially improve the health of people around the globe.'

Drs. Wondrak and Zhang's study, 'Nrf2-dependent suppression of azoxymethane/dextrane sulfate sodium-induced colon carcinogenesis by the cinnamon-derived dietary factor cinnamaldehyde,' has been published online and will appear in a print issue of *Cancer Prevention Research* later this spring.

A story about the cinnamaldehyde study appears on the UA College of Pharmacy's website.

The next step in the research is to test whether cinnamon, as opposed to

cinnamaldehyde, prevents cancer using this same [cancer](#) model. Because cinnamon is a common food additive already considered safe—it's not a synthetic, novel drug—a study in humans may not be too far off.

Wondrak outlines questions to investigate going forward: 'Can cinnamon do it, now that we know pure cinnamaldehyde can? And can we use cinnamaldehyde or cinnamon as a weapon to go after other major diseases, such as inflammatory dysregulation and diabetes? These are big questions to which we might be able to provide encouraging answers using a very common spice.'

Provided by University of Arizona

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