## The Columbus Dispatch

# Homegrown cancer-fighters

# Berries from Ohio just as effective as exotics, new OSU research shows

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#### **BY MISTI CRANE**

#### THE COLUMBUS DISPATCH

Fancy foreign berries and their ordinary Ohio counterparts seem to be equals when it comes to preventing cancer, new research has found. In this latest research, Gary Stoner decided he'd branch out from his old standby - the Ohio-grown black raspberry - and look more closely at a variety of other berries, both domestic and exotic.

Stoner, who works at the Ohio State University Comprehensive Cancer Center, has spent much of his career looking for - and finding - evidence that berries work against cancer. Research here and elsewhere has found that berries might offer benefits in the oral cavity, esophagus, colon, breast and skin.



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"We know a lot about how they work. They inhibit cell growth, and they encourage nasty cells to die, and they markedly reduce inflammation," Stoner said.

In this study, Stoner compared strawberries, red raspberries, black raspberries, blueberries, acai berries, goji berries and noni berries.

The researchers freeze-dried the berries, ground them into powder and fed them to rodents; they found that all were about equally effective in preventing cancer of the esophagus.

All the rats in the study were injected with a cancer-causing compound. The ones fed a diet that included dried berries had half as many tumors as those that didn't eat berries, according to the study, which was published in the journal *Pharmaceutical Research*.

The different berries have different compounds and differing levels of some other compounds, Stoner said. What they have in common is that all are about half fiber.

"Obviously, that needs to be looked at to a greater extent than it has been so far," he said.

Stoner has been working with berry farmer Dale Stokes, of Wilmington in Clinton County, for more than two decades. Stoner said he used the black raspberry - his old standby - because it was high in compounds (including anthocyanins, which give berries their color) and because they're easily grown in Ohio and any boost to sales could benefit the economy here.

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Stokes said he first learned of the possible health benefits of berries in 1962, when he was studying at Ohio State and learned that they were originally cultured in Europe as a medicinal crop.

The partnership with Stoner has been "exhilarating," he said, adding that he'd love to see a berryprocessing facility here that could turn the fruit into powder. For now, the berries are sent to suburban Chicago for processing.

Stoner's most recent work is significant because it suggests that there isn't just one source of the protective ingredient or ingredients, said Margie Clapper, co-leader of the Cancer Prevention and Control Program at Fox Chase Cancer Center in Philadelphia.

Like Stoner, Clapper is on the hunt for natural cancer-preventing compounds.

The toxic side effects that come with synthetic products used to treat cancer are acceptable because the trade-off is so great, she said. "With prevention, that isn't true. It's something we're going to have to take very early on and probably for the rest of our lives, and we need something that is very nontoxic and has no adverse outcomes or side effects."

Fox Chase researchers are working to determine whether the anthocyanins alone have anti-cancer properties in mice with inflammatory bowel disease.

A half-pound of whole berries a day is enough to reduce the level of oxidative stress in people, which could protect against cancer for those at a normal risk level, Stoner said. For those with precancerous lesions or an elevated risk for cancer, more may be in order, and taking the berries in powder form would be more practical.

For his part, Stoner makes a smoothie nearly every morning. It's loaded with berries, he said, and includes "some honey, a little kiwi and a little of some kind of juice."

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