

## Whole grape - seed and skin - may be perfect colon cancer fighting food

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(Medical Xpress) -- Colorado State University researchers may have unlocked the secret to why drinking wine and eating grapes can fight colon cancer. The study looks at how two grape compounds work in conjunction to kill colon cancer cells while leaving healthy cells unharmed.

Although researchers have known that resveratrol, a compound in grape skin, and compounds in [grape seed extract](#) may prevent [colon cancer cells](#) from growing, scientists have not known how the two compounds work together. CSU's study shows that the compounds must work together -- making the whole, seeded red or purple grape a perfect [colon-cancer](#) fighting food.

“The combination of the two substances at once, in the right ratio, turn on a gene that forces colon [cancer cells](#) to self-destruct,” said Jairam Vanamala, an assistant professor in the Department of Food Science and Human Nutrition. “The combination of compounds is not toxic to healthy cells -- just colon cancer cells. One of these compounds acting alone at low doses isn't as effective against cancer.”

These [compounds](#) can be delivered in calibrated doses directly to the colon in a supplement coated in pectin. Pectin is not digested in the upper gut, but it is broken down in the colon, making the supplement available.

Vanamala's next step in researching the impact of the compound on

colon cancer cells is to investigate whether or not cancer stem cells also are killed. The compound kills most colon cancer cells, but not all. If cancer stem cells are left behind, colon cancer is more likely to reoccur.

This study was funded by the College of Applied Human Sciences Challenge Grant and the National Research Initiative Grant from the USDA National Institute for Food and Agriculture. It was published today in the elite edition of *Frontiers in Bioscience*.

Provided by Colorado State University

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