

Scientists discover soy component may be key to fighting colon cancer

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A study conducted by Children's Hospital & Research Center Oakland scientists identifies a new class of therapeutic agents found naturally in soy that can prevent and possibly treat colon cancer, the third most deadly form of cancer. Sphingadienes (SDs) are natural lipid molecules found in soy that research shows may be the key to fighting colon cancer.

The study, led by Julie Saba, MD, PhD, senior scientist and director of the Cancer Center at Children's Hospital Oakland Research Institute (CHORI), will be featured in the December 15, 2009 issue of *Cancer Research*. Soy has long been touted as protective against [colon cancer](#), but Dr. Saba's team made the groundbreaking discovery that SDs naturally found in soy may underlie the benefits of soy products.

Dr. Saba and her team first identified SDs in the fruit fly, an organism that is sometimes used to study the genetics of human diseases. Further investigation indicated that elevated SDs actually induced the death of mutant cells in the fly, revealing SDs to be cytotoxic compounds (toxic to cells). Preventative colon cancer strategies often focus on cell death—a normal process the body uses to remove unhealthy or mutant cells, like cancer cells. Coupling this discovery with the finding that soy is a rich source of SDs, researchers made an innovative connection.

"It's very exciting," said Dr. Saba. "First, we are encouraged to find a natural molecule that could be consumed through soy products as a strategy to help prevent colon cancer. Second, this information is

important because we can build on our understanding of the structure and metabolism of SDs in terms of developing new drugs to treat people who already have colon cancer. Uncovering how SDs exert their effects also helps us to find the most likely combinations of drugs that may work synergistically to eliminate cancer cells and [mutant cells](#) that could give rise to cancer."

Future research is needed to identify the best way to deliver SDs and to confirm the overall toxicity when the compounds are used for extended time periods and in combination with other agents. Dr. Saba, who has already received two grants to continue her research, also hopes to determine if SDs are effective in protection against other cancers.

Dr. Saba also acknowledges that future research is needed to determine if there are other components of soy that are beneficial in fighting colon cancer. In the meantime, Dr. Saba says, "I would be comfortable recommending soy products as a change in the diet that could protect against cancer. The more that soy is studied, the more of these protective agents are found, so it's a very healthy diet choice."

Source: Children's Hospital & Research Center at Oakland ([news](#) : [web](#))

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