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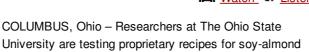
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## Soy-Almond vs. Soy: Bettering A Bread To Beat Prostate Cancer



University are testing proprietary recipes for soy-almond bread and soy bread for their potential to prevent and treat prostate cancer, the second most common form of cancer in men, affecting one in every six.

In a collaborative study between The Ohio State University Comprehensive Cancer Center – Arthur G. James and Richard J. Solove Research Institute and Ohio State's Department of Food Science and Technology, researchers are studying the health benefits provided by the new soy-almond bread as compared to previous soy bread recipes without almonds.

Soybeans contain components called isoflavones, which are often studied for their health-promoting properties. Studies have shown that isoflavones can help lower cholesterol, but researchers believe they may also inhibit hormone-dependant cancers, such as prostate cancer.

This study tests the idea that men treated for prostate cancer can prevent or slow recurrence of the disease, or enhance prostate cancer therapy, if they increase the amount of soy in their diet.

Forty men will participate in this study, which is expected to be complete in 2011. Half the men will eat three slices of soy bread per day for eight weeks, and half will eat three slices of soy-almond bread per day. The two groups will then switch bread types, eating three slices daily for another eight weeks.

"We are studying the preventative power of soy in a way that will also fit into the American diet," said Dr. Steven Clinton, a medical oncologist and researcher who specializes in the treatment and prevention of prostate cancer at the OSUCCC-James and director of the clinical trial. "Eating two slices of our soy-almond bread is equal to the amount of soy a person in China might consume in one day."

The concept for adding soy to bread was developed by Dr. Yael Vodovotz, a physical chemistry researcher and



food scientist in the Ohio State's Department of Food Science and Technology, and the study's principal investigator. Vodovotz first began working with soy bread at NASA's Johnson Space Centers where she developed food for space missions.

Vodovotz and Clinton's current study is testing whether soy bread with almonds will improve preventative and treatment benefits over soy bread alone. Almonds improve the flavor, but more importantly, they contain an enzyme that converts soy isoflavones into a form more easily absorbed in the body. The new recipe also calls for steaming the soy ingredients prior to baking. Combined, these two changes quadruple the highly-absorbable isoflavones of previous soy breads. Researchers hypothesize that the new bread will have added preventative and treatment powers – all while looking, smelling and tasting great.

As a way to advance personalized health care, the study also will look at how each person's body reacts to the soy-almond bread. The chemical reaction that breaks down food in the body is unique. Studying this pattern can help identify any markers that make a diet with soy-almond bread have health benefits for one person and not another.

"We're taking advantage of the rare opportunity we have to develop new functional foods," Clinton said. "Ohio State is one of the few universities in the nation to have an academic medical center, NCI-designated Comprehensive Cancer Center, a College of Public Health and specific departments such as Human Nutrition, Food Science and Technology and Horticulture all located on a single campus."

Other Ohio State researchers involved in this study include Paul Monk, Amir Mortazavi and Steven Schwartz.

The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute is one of only 40 Comprehensive Cancer Centers in the United States designated by the National Cancer Institute. Ranked by U.S. News & World Report among the top 20 cancer hospitals in the nation, The James (www.jamesline.com) is the 180-bed adult patient-care component of the cancer program at The Ohio State University. The OSUCCC-James is one of seven institutions conducting Phase I and Phase II trials.

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## **Related Links:**

- Click here for a high-quality photo of Dr. Yael
   Vodovotz in a research lab
- Click here for a high-quality photo of Dr. Steven

## Clinton

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