



Grow it. Know it. Live it.

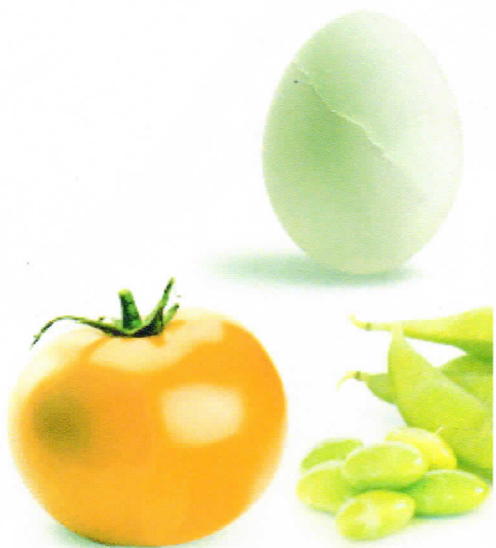
Search: Enter Search...

Go!

[Food/Cooking](#) [Neighbors](#) [Home/Gardens](#) [TV/Videos](#) [Magazine](#) [Resources](#) [Teachers](#)

[Home](#) > [Magazine](#) > Issues - 2012 > May/June 2012 > Ohio State Food Innovation Center

SHARE



improving lives one bite at a time

OSU's Food Innovation Center cultivates collaboration

Story by Connie Lechleitner

Imagine going to your doctor, receiving a diagnosis and with it a prescription to eat certain foods that will combat your disease. Thanks to the research orchestrated at the Food Innovation Center at the Ohio State University, that scenario isn't so far-fetched.

Disease-fighting foods are just a few of the projects under way at the center, which also include making raw eggs safer, reducing food waste and decreasing obesity.

The [Food Innovation Center](#), on the campus of the Ohio State University, has taken an interdisciplinary approach to food research. It includes more than 125 faculty members from all 14 Ohio State colleges.

The collaborative effort focuses on four broad themes: improving human health through food, discovering the medicine in food, promoting safe food and working toward a healthier, hunger-free world. The university has invested \$3.75 million to inspire research for the center's first five years of operation.

Ken Lee has served as director of the Food Innovation Center since it began in 2009. "Ohio is making major investments in these four areas, and recognizes they are intertwined," he said. "No other state or institution has developed a strategic plan to



From left, Steven Schwartz, Steven Clinton and Yael Vodovotz are advancing research at the

Food Innovation Center.



Ken Lee is spearheading Ohio State University's efforts to bring a trans-disciplinary approach to improving human life through food.

See a [video of Ken Lee](#), director of the Food Innovation Center, discussing advancements in food at Ohio Farm Bureau's 2011 Bringing it to the Table conference.

advance the global economy in this way. In OSU's total research budget last year, food research accounted for \$91 million."

The center sees itself as an incubator for food research projects and sees trans-disciplinary collaboration as a key to its success. "We provide seed money and bring expertise from throughout our university to the table," Lee said. "We know that finding individual 'Einstein' moments are rare, but bringing multidisciplinary solutions to big problems leads to great solutions. I call them 'Sputnik moments.' "

Steven Clinton, associate director of the center, agreed. "From our work with farmers in the field, to development of new varieties of plants at Ohio Agricultural Research and Development Center, to the product development in our Food Science department, to the trials we conduct at The James (Ohio State's Cancer Hospital and Research Institute), I believe no one is doing this better than we are," he said. "The collaboration is one of the greatest things about what we're doing."

Lee noted that while the center serves as a starting point, it also works to win grants and matching funds. "Our theme is 'We bring food to life,'" he said. "We're working to improve humanity through food research."

DEVELOPING SUPER FOODS

One of the most intriguing research areas at the center focuses on foods that can improve human health.

"We've traditionally thought of food as calories and nutrients, but there is a growing body of evidence that food can provide more—well beyond curing deficiencies," Lee said. "One of the areas we concentrate on is chronic diseases such as cancer, heart disease and diabetes."

Researcher Steven Schwartz recently led a study that developed a tomato/soy juice for the treatment of prostate cancer. The Ohio Agricultural Research and Development Center developed a specific tomato species high in lycopene, which has shown promise in cancer prevention. OSU's Food Science department developed a palatable juice that was combined with soy, which also has shown promise in reducing prostate cancer. The center received a grant from the National Institutes of Health for clinical trials with patients with prostate cancer, which is currently under way in conjunction with the James Cancer Clinic.



 **Food Innovation Center**
Collaborating for a healthier, hunger free world



A speed networking session for faculty members is one way in which the Food

Innovation Center has fostered collaboration.

“Ohio is the leading producer of processed tomatoes and a major producer of soybeans, so this study was a natural fit,” Schwartz said. “We’re researching the juice as a possible preventive adjuvant or therapy. The study could have an impact that is national and worldwide.”

In addition to the tomato/soy juice project, the center also is working with The James to test soy bread and recently worked with a soy pretzel as well. “The soy pretzel was developed as a healthy substitute for diabetics and created less stimulation of glucose and less insulin response. It’s an example of a product that could easily be brought to market fairly soon,” Schwartz said.

BERRY INTERESTING

Ohio’s berry crops are another area of research that may hold healing properties. “We’re looking at ways to put the bioactive components of blackberries into foods, including as a confectionery candy-type product, a nectar or juice and a gummy snack, for oral cancer prevention,” Clinton said. “We target patients that are at high risk of certain cancers and survivors who have a risk of reoccurrence.”

Yael Vodovotz is a researcher studying the impact of black raspberries on esophageal cancer. “If our trials are successful, we hope to end up with a product in the marketplace that is practical and can be adapted into the diet either preventively or medicinally. With the best outcome, the technology will be licensed or a spin-off company will be created that can produce another way to treat esophageal cancer,” Vodovotz said.

CREATING BIODIVERSITY

Berries also can provide another super power—by helping other countries diversify the types of crops they can grow. “In some developing nations you don’t see a great variety or yield in the crops grown,” Lee said. “Ohio is so agronomically advanced that it makes an ideal incubator to propagate plants for other lands. Berries are a good example of a functional food that can greatly aid the local economies and has the potential to help populations become healthier.”

EGG-STRA SPECIAL IMPLICATIONS

In another recent project, researcher Ahmed Yousef developed a pasteurization technique that involves heat and ozone that produced salmonella-free eggs. “Ohio is second in the nation in shell egg production, so it was only natural that we would partner with Ohio egg farmers to develop safer eggs,” Lee said.

“The breakthrough is a result of many years of research, funded by several of Ohio’s largest egg producers,” Yousef said. “Now the technology can be licensed to develop it commercially. Ohioans and Ohio egg producers will be the biggest winners from the research, when safer, locally harvested eggs become available.”

WASTE NOT, WANT NOT

The center also seeks to improve the efficiency of food use as well as the health implications of improperly using food. The center is partnering with the Mid-Ohio Food Bank to reduce food waste. “There are one quarter of a million people who depend on the Mid-Ohio Food Bank for food,” Lee said. “We’re thinking of ways to make sure more food gets on the plates of those who need it.”

Obesity is another problem where innovation can make a difference. “Being overweight has so many health implications, increasing the staggering cost of health care, and the number of people who are diagnosed as obese has more than doubled,” Lee said. “Because weight gain starts with children, we are currently partnering with Nationwide Children’s Hospital to combat obesity. Our initial work shows great progress. We are working to help Ohioans become healthier consumers.”

SHARING GOOD NEWS

Although the Food Innovation Center is still in its infancy, an educational outreach program also will become a large part of its mission. “As a land-grant university, we have a responsibility to translate research to practice, so education will involve farmers, consumers and marketers,” Lee said. “Ohio State has always had quality outreach, and you’ll see us apply our findings and share our knowledge to bring food to life.”

You must be logged in to leave a comment. Click [here](#) to login.

[events](#)

OSU Chadwick Arboretum Spring Plant Sale :

May 10, 2012 - May 12, 2012

Location: OSU Campus at Lane Avenue and Fred Taylor Drive, Columbus, Ohio

Canning and Preserving :

May 12, 2012

Location: Grace Lutheran Church, Eaton

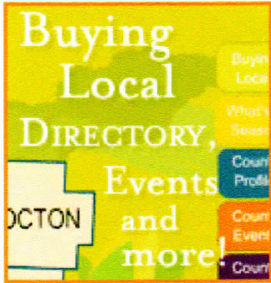
[Small Fruits- Perennial Members of the Edible Garden :](#)

May 15, 2012

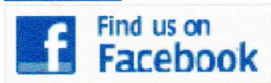
Location: Dayton Nursery

[>> view all](#)

[find local foods](#)



[facebook](#)



[pinterest](#)



[twitter](#)



[Home](#) | [Subscribe](#) | [Privacy Policy](#) | [Webmaster](#) | [Contact Us](#) | [Facebook](#) | [Pinterest](#) | [Twitter](#) | [YouTube](#)



© 2008 - 2012 Ohio Farm Bureau Federation, Inc. All rights reserved. Material provided on this website is acquired from many knowledgeable and reliable sources. However, the material is intended to be informational only; is not guaranteed as to accuracy; and in no way should be considered a preference, recommendation or referral of any specific facility or activity.