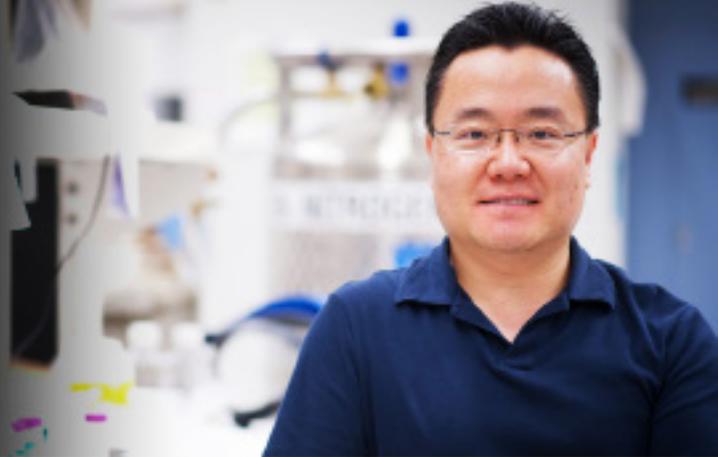


# AG RESEARCH SPOTLIGHT



## Kee-Hong Kim

*“Before I came to Purdue, I was collaborating with physicians on translational research. It was important work, and interesting, and I learned a lot. But I dreamed to study obesity prevention.” —Kee-Hong Kim, Associate Professor of Food Science*

The Ag Research Spotlight shines each month on an individual whose work reflects our commitment to the six strategic themes that guide Agricultural Research at Purdue. Our spotlight for August 2014 underscores the theme, “Utilizing molecular approaches to expand the frontiers of agriculture and life sciences.”

**THE RESEARCHER:** As a student in Seoul, South Korea, Kee-Hong Kim began to explore how his own interest in biology and chemistry might complement his country’s growing food industry. “Food science research in Korea was expanding into more advanced biological and molecular research on how to improve human health,” he says. After earning bachelor’s and master’s degrees at Seoul National University, Kim determined that a U.S doctoral program was his next best academic step. He was drawn to Rutgers University and a research program that integrated biology, chemical engineering and pharmaceutical engineering. However, he first had to overcome the nervousness caused by his limited fluency in English: “I could not understand fully my colleagues and advisor,” he recalls. “[They] were supportive and patient, but I was very desperate at the time.” So Kim bought a television. After four years at Rutgers—and with verbal skills enhanced by news broadcasts and sitcoms like “Friends” —he accepted a four-year postdoctoral position in the Department of Nutritional Sciences and Toxicology at the University of California, Berkeley. He then spent three years on the faculty of the Medical College of Wisconsin. He responded to an opening at Purdue because “the

nature of this position required me not only to participate in Food Science but in many other multidisciplinary activities—that’s exactly what I was trained to do.” He joined the faculty in July 2007.

**THE RESEARCH:** Kim’s research focuses on the dietary regulation of development and function of adipose (fat) tissue. Controlling the development and function of the human body’s fat cells through bioactive food compounds or nutrients could help Kim and other scientists find ways to delay or prevent obesity and obesity-associated chronic diseases. His lab uses molecular and biochemical studies of cultured mammalian cells and animal models of obesity to study the anti-obesity properties of such compounds as curcumin, a natural phenol that gives turmeric its yellow coloring; piceatannol, a metabolite of resveratrol found in red wine; and the micronutrient selenium.

**THE LEARNING PROCESS:** Kim credits the graduate students who work in his lab as “the best and very important core of my research.” But he remains acutely aware they are still learning. “They need time for their coursework and to master research techniques,” he says. “Outcomes, which are mostly published in scientific papers, take a long time and a lot of effort. I really enjoy seeing my students’ progress and maturation.”