California Polytechnic State University

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Cal Poly Professor Awarded $150,000 to Study Dairy Product Quality, Shelf Life

SAN LUIS OBISPO – Cal Poly’s Dairy Products Technology Center and Professor Phil Tong have received a $150,000 grant from the California State University Agricultural Research Initiative for a study aimed at helping dairy processors improve their ability to produce dairy foods and beverages with a longer shelf life.

Tong and the DPTC research team will be looking at dairy food processing techniques and how they interact to produce high or poor quality and shelf life in the end product.

One key to producing a wider variety of high-quality dairy foods and beverages with a longer shelf life is to ensure that dairy ingredients remain stable during the food processing stage, Tong believes.

“In some cases, poor heat stability results in protein precipitation and the breakdown of fat emulsion. These changes cause undesirable flavor, texture, and appearance in the final product. Understanding this instability will allow us to then identify process conditions and other ingredient innovations which can insure high product quality,” he said.

The $150,000 ARI grant was matched with $150,000 awarded previously by the dairy industry. The earlier grant allowed Tong to obtain the processing equipment needed to conduct the research project.

“By funding Dr. Tong’s project, the state is actually receiving two dollars of research value for every state dollar it invested,” says Associate Dean Mark Shelton of the Cal Poly College of Agriculture.

"For Cal Poly, this grant also means our students will get exposed to working on a real-world project that will likely impact the foods we will shop for in the near future,” Tong said.

The research will benefit both dairy producers and the dairy food processing industry, according to the professor. “Successful completion
of this project will encourage both dairy producers and food processors to use enhanced shelf life technologies in more innovative food product development,” he explained.

The research project findings should develop more value-added uses for dairy producers’ milk and milk products, and more effective strategies enabling dairy foods processors to produce products with the convenience and variety demanded by today’s consumers, Tong said.

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For further information contact Laurie Jacobson (805) 756-6097, ljacobso@calpoly.edu. The Dairy Products Technology Center (DPTC), established in 1986, is a program within the College of Agriculture at California Polytechnic State University, San Luis Obispo. The DPTC conducts education, research and outreach activities to provide solutions to help manage risk, facilitate innovation, and defend equity in the dairy foods industry and related business sectors. Visit the DPTC website at www.calpoly.edu/~dptc.