

Chapman University Takes Home Top Honors in NASA FTCSC Product Development Competition



Above: Pizza Poppers, the winning entry in the 2003 NASA FTCSC Product Development Competition, utilize byproducts of soymilk processing.

Members of the Chapman University student product development team include (standing from left) Gerrie Adams, Pei-Chen Chen, Akua Kwakwa, Wan-Lin Chou, and Heather Pe, and (front) team advisor Dr. Anuradha Prakash.

Five students from Chapman University in Orange, California, took home the top prize in the 2003 NASA Food Technology Commercial Space Center Product Development Competition for their Pizza Poppers, a healthy and nutritious bite-sized pizza snack. Chapman Food Science and Nutrition students Gerrie Adams, Pei-Chen Chen, Wan-Lin Chou, Akua Kwakwa, and Heather Pe developed the winning entry under the direction of their advisor, Associate Professor of food science and nutrition Anuradha Prakash.

Pizza Poppers come in three flavors (original pizza flavor, garlic, and hot and spicy), do not contain any chemical additives, and incorporate crops that will potentially be grown on a Moon or Mars outpost including tomatoes, wheat, onions, and herbs. In addition, the Pizza Poppers dough recipe utilizes okara and waste water, both byproducts of soymilk processing. The final product is vacuum packaged for space travel and has a minimum shelf life of one year.

“It is quite a challenge to create a product that meets the constraints of space and has a market on Earth,” Prakash commented. The students agreed that they found the contest challenging. “In addition to acquiring a great deal of knowledge while working on this project, the whole team enjoyed the challenge of trying to adapt our Earthly Pizza Poppers into a product that would fit the nutritional needs of the astronauts, provide them with a tasty, fun snack, and meet all the criteria for the contest,” Adams said.

Besides being well suited for space travel, Pizza Poppers were also designed for the terrestrial market. Pizza is a \$30 billion a year industry, and consumers spend another \$3 billion a year on pizza-related sauces and snacks. Because of their high nutritional value and great pizza taste, Pizza Poppers will appeal to customers on Earth as well as in space. One serving of Pizza Poppers contains only 20 calories, one percent of the recommended daily value of carbohydrates, and six percent of daily calcium intake.

“Pizza Poppers are a creative, nutritious, and tasty snack,” commented Cheryll Reitmeier, NASA FTCSC education mission specialist and coordinator of the competition. “Astronauts love bite-sized snacks because they are easy to eat and do not produce any crumbs. The spicy flavor of Pizza Poppers will also be appealing in space.”

The NASA FTCSC Product Development Competition was established in 2001 by NASA FTCSC to increase awareness about foods and food-processing techniques required for long-term space travel among food science and technology students. Student teams from universities across the United States are challenged to design food products or processing systems to meet the criteria for missions to the Moon or planetary outposts. Specifically, the products need to be based on the crops grown in space, easily prepared, nutritious, safe to eat, have few crumbs, and taste good. Food scientists from NASA and several food companies evaluate the student proposals and products.

The Chapman team will be awarded a trip to the Institute of Food Technologists Annual Meeting and Food Expo®, in Chicago, Illinois, July 12-16 to showcase their product idea. The students will also have the opportunity to present their Pizza Poppers to scientists at the Johnson Space Center, in Houston, Texas, in November 2003.

More information about the competition can be found at <http://www.ag.iastate.edu/centers/ftcsc/pages/proddev.htm>

**The 2003 NASA FTCSC
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Competition was
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