



**Healthy Foods, Healthy Lives Institute
Faculty and Graduate/Professional Student Grants Awarded Spring 2013**

FACULTY GRANTS

Grant Category: Prevention of Obesity and Diet-Related Diseases

“Measuring Nutrition Quality in the Emergency Food System”

Amount Awarded: \$99,986

Timeframe: July, 1, 2013 – July 2, 2014

PIs: Marilyn S. Nanney, Associate Professor, Department of Family Medicine and Community Health, Program in Health Disparities Research, Medical School, University of Minnesota
Robert P. King, Professor, Department of Applied Economics, College of Food, Agricultural and Natural Resource Sciences, University of Minnesota

Co-Investigators: Susan Basil King, Consultant and Project Manager, Twin Cities Hunger Initiative

Lori Kratchmer, Executive Director, Emergency Foodshelf Network

Amy Maheswaran Lopez, Community Impact Manager, Greater Twin Cities United Way

Cathy Maes, Executive Director, Intercongregation Communities Association

Rob Zeaske, Executive Director, Second Harvest Heartland

Abstract: Ensuring that healthy foods are available shelf segment of the emergency food system is important for the families served because of the disparity in diet-related health outcomes experienced by this vulnerable population. In addition, there is a national movement to measure food shelf performance beyond the traditional "pounds of food" distributed and establish a metric for reporting the amount of *healthy and local* food distributed. One approach to address this practical need is the application of the USDA's Healthy Eating Index (HEI) to quantify the emergency food environment. The purpose of this project is to develop an automated HEI calculation tool that can be used to measure the nutritional quality of food shelf orders placed with food banks. A team of interdisciplinary Co-Principal Investigators (Drs. Nanney and King) along with the leaders in hunger relief, food access and food banking in Minnesota propose research aims that will (1) calculate the HEI for each order made by a randomly selected cohort of 100 food shelves over a nine month period; (2) identify relationships between food shelf characteristics and HEI measures; and (3) determine whether provision of HEI information to food shelves stimulates them to improve the HEI for their bulk purchases. This project takes a first and scalable step towards developing a metric that measures the variety and nutritional value of food purchased by food shelves. It is expected that the findings from this project will identify several meaningful avenues for future research including measuring the impact of healthier food availability upon the satisfaction, diet patterns and health of families served.

“Exploring playful, creative design as a means of increasing children’s vegetable consumption”

Amount Awarded: \$49,550

Timeframe: July, 1, 2013 – July 2, 2014

PIs: Zata Vickers, Professor, Department of Food Science and Nutrition, College of Food, Agricultural and Natural Resource Sciences, University of Minnesota

Barry Kudrowitz (project leader), Assistant Professor, Department of Design, Housing and Apparel, College of Design, University of Minnesota

Co-Investigators: Marla Reicks, Professor, Department of Food Science and Nutrition, College of Food, Agricultural and Natural Resource Sciences, University of Minnesota

Abstract: This new collaboration between CFANS Department of Food Science and Nutrition and the CDES Product Design program to explore how playful design can be used to entice children to eat healthier, specifically consuming more vegetables in meals. In this study, playful design can refer to a novel preparation, presentation, or interaction with a vegetable. Recently Co-PI Kudrowitz has been working with local chefs on understanding creative design process in the food service industry and Vickers and Reicks have been exploring ways of enticing children to eat more vegetables. This project plans to encourage children to eat more vegetables by using evaluative conditioning (the pairing of vegetables with people and situations that the child likes) with the goal of transferring the liking of the situation to the liking of the food. Such transfer has been documented in past studies. The project combines researchers' skills and research interests in an effort to improve eating behaviors of children to address the obesity epidemic, a problem of national importance. This project also provides the basis for preparing a grant proposal to continue our collaboration by further exploring the use of the processes found to be effective in this study in settings reaching a far greater number of children.

GRADUATE AND PROFESSIONAL STUDENT GRANTS

“Effect of Acculturation on Health: A Case Study of International Students”

Amount Awarded: \$6,800

Timeframe: July, 1, 2013 – July 2, 2014

PI: Bhagyashree Katare, Applied Economics Doctoral Student, CFANS

Advisor: Timothy Beatty, Associate Professor, Applied Economics

Focus of the Project: In this study researchers will survey international graduate students studying at public universities in the 48 contiguous states to understand the effect of acculturation on the change in their dietary pattern and on their health. This research will answer two questions: (1) Does the effect of acculturation on the health of international students vary in the United States (2) Does acculturation – both social and geographical – play a role in spreading obesity (and overweight) among international students?

“Familial Consequences of an Intervention to Increase Vegetable Intake among Young Children”

Amount Awarded: \$5,500

Timeframe: July, 1, 2013 – July 2, 2014

PI: Tashara Marie Leak, Food Science & Nutrition Doctoral Student, CFANS

Advisor: Marla Reicks, Professor, Food Science and Nutrition, CFANS

Focus of the Project: In this study researchers will determine whether in-home behavioral economic strategies developed and implemented for 9 to 12 year old children would also increase vegetable intake among their adolescent (13 to 18 year old) siblings. Additionally, the PI will focus on better understanding how the presence of an adolescent in the home can influence the implementation of those behavioral economic strategies. By better understanding the role the

adolescent plays during mealtime, the strategies can be revised to be more appropriate for households that contain both preadolescent and adolescent children.

“Considering Health and Nutrition in Agricultural Production Decisions: Evidence from Tanzania”

Amount Awarded: \$7,913

Timeframe: July, 1, 2013 – July 2, 2014

PIs: Helen Markelova, Applied Economics Doctoral Student, CFANS

Martha Rogers, Applied Economics Doctoral Student, CFANS

Advisor: Marc Bellemare, Assistant Professor, Applied Economics, CFANS

Focus of the Project: Researchers will investigate the extent to which agricultural households in Tanzania consider household nutritional demands when choosing what crops to produce. In developing countries, rural households may face challenges in accessing or purchasing food on the local markets and may choose to overcome these market failures by producing crops needed for home consumption. Investigators will look at whether households forgo a market-oriented agricultural production portfolio for a nutrition-based agricultural production portfolio that is aimed at meeting household nutritional demands. Research findings will have important implications for agricultural programs in developing countries that aim to increase household incomes through cash crop production but do not consider the impact of these programs on household health and nutrition.

“Inducing Positive Emotional Associations with Novel Foods: Making ‘Comfort Foods’ Out of Healthy Foods”

Amount Awarded: \$10,000

Timeframe: July, 1, 2013 – July 2, 2014

PI: Katie E. Osdoba, Food Science and Nutrition Doctoral Student, CFANS

Advisor: Zata Vickers, Professor, Food Science and Nutrition, CFANS

Focus of the Project: The relationships between food and emotions are complex, and a better understanding of them could hold significance for promotion of mental and physical health. People generally have a positive emotional response to food, but it is unclear why. One theory is that prior associations with a food elicit these responses. The research conducted in this study will determine if positive emotional associations can be induced to a novel food. This research will also explore whether calorie density affects these associations, and if liking increases after these associations are made.