

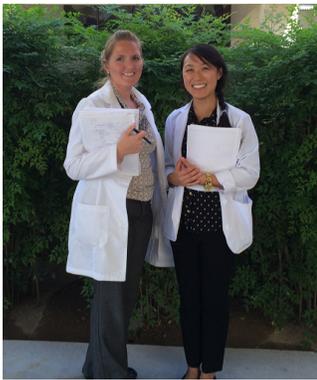
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# Nutritional Sciences

## NSC Graduates its First Class of ISPP Interns



ISPP Intern Leanne Barry (left) and ISPP Preceptor Cindy Qu, RD

As every Dietetics student knows, the most difficult step in obtaining the registered dietitian (RD) credential is getting into an internship. Placement into supervised practice programs has become increasingly competitive, with the national average at about 50%. The NSC Didactic Program in Dietetics (DPD) was recently given approval by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) to implement an Individualized Supervised Practice Pathway (ISPP). Though ISPP's can be offered by DPD's, they are held to the same standards and quality measures as a traditional dietetic internship. The UA ISPP is available to UA dietetics graduates who were not matched in the internship application process. Upon completion of the ISPP, students are able to sit for the registration exam to obtain the RD credential.

The program covers all aspects of dietetic practice including clinical or hospital dietetics, foodservice, and community nutrition. Rotation sites include Tucson Medical Center, Pima County Cooperative Extension, and the UA Park Student Union. Currently the program admits only UA Dietetics graduates, with the goal to expand outside Tucson and the state in the future.

In September 2013 the first two interns were admitted into the ISPP and completed rotations over the span of 32 weeks. Interns worked side by side with registered dietitians and other nutrition professionals to gain the hands-on experience needed to be proficient as a dietetics professional. Exposure to intensive care pediatrics, outpatient nutrition counseling and university retail foodservice provide a well-rounded experience. The ISPP program will admit its second cohort of interns in September 2014. By 2015 the program hopes to develop additional community partnerships to support growth of the ISPP to six interns. To learn more visit: <http://nutrition.cals.arizona.edu/ispp-program>

## Congratulations!



**Dr. Wanda Howell** was honored by CALS this spring with a Special Award of Commendation to recognize her many years of service to the College and University.

**Tait Hansen** was selected by CALS this spring to receive the *Outstanding Staff* award. Tait has been working as the Communications Network Analyst for the NSC department for the past 2 years.



## Faculty Publications

Please visit <http://www.cals.arizona.edu/nutrition/content/new-publications> to view a list of recent faculty publications in peer reviewed journals.



**Kaitlin Charette** was selected this spring as the *Nutritional Sciences Outstanding Graduating Senior*. Kaitlin is currently the Vice President of the Nutritional Sciences Club and will begin a dietetic internship at UAMC after graduation. Once credentialed as an RD, Kaitlin hopes to work in the area of clinical or community nutrition in the Tucson area.

# Research

## Research Highlight: Dr. Scott Going and Danielle Vassallo, MS



Dr. Scott Going's research team is currently studying the effects of obesity on bone development in young girls. Nearly 20% of youths are obese and at risk for cardio-metabolic diseases. Both childhood obesity and its comorbidities track into adulthood; and obese adolescents tend to become the heaviest adults with the most adverse risk profiles. The cardio-metabolic complications of obesity are undisputed, including inflammation, insulin resistance, glucose intolerance and greater prevalence of type 2 diabetes in youth. We suggest that obesity during adolescence, a critical time for bone development, may also impair mineral accrual and reduce bone strength, leading to greater fracture risk during adolescence and later in life.

Our main goal is to determine the effect of obesity and accompanying metabolic changes (insulin resistance and inflammation) on bone mineral accrual and related changes in structure and strength in normal weight, overweight, and obese pre-menarcheal girls. Our primary objectives will clarify the effects of obesity, insulin resistance and inflammation on bone around the time of peak height velocity. Our secondary focus is to assess the effect of visceral adipose tissue and skeletal muscle fat, both of which are strongly associated with insulin resistance, along with whole body fatness. The results of this study will be critical to developing effective prevention strategies to counter the linked risks of obesity and osteoporosis, both major public health concerns.

Contributed by NSC graduate student Danielle Vassallo, MS; [dmv@email.arizona.edu](mailto:dmv@email.arizona.edu)

## Joint Appointed Faculty Research: Dr. Janet Funk

The use of plants to treat disease dates back thousands of years. Many popular pharmaceuticals in use today are derived from plants. Turmeric is a spice that has a long history of use in traditional Chinese and Indian medicine. The active chemical compounds in turmeric that are thought to be responsible for its anti-cancer, anti-arthritic and bone protective properties are the curcuminoids. Dr. Janet Funk and her lab are leading the way in discovering the pharmaceutical potential of turmeric.



Dr. Funk's lab is particularly interested in the mechanisms of action and the efficacy of turmeric in cell-based studies and in animal models of rheumatoid arthritis and breast cancer. In pre-clinical models of rheumatoid arthritis, curcuminoids have been shown to inhibit the production of inflammatory proteins and thus prevent joint inflammation. Curcuminoids also show promise in decreasing joint destruction in rheumatoid arthritis through blocking the activation of cells that break down bone. However, there are limited clinical trials in rheumatoid arthritis patients documenting the safety and tolerable doses needed for anti-arthritic effects. Currently, Dr. Funk's lab is working to get FDA approval for use of turmeric in a rheumatoid arthritis phase 1 clinical trial to identify the maximal tolerable dose of turmeric curcuminoids.

Beyond its beneficial role in arthritis, cell culture studies have shown curcuminoids to inhibit the growth of breast cancer cells through modification of inflammatory proteins, gene regulatory proteins and compounds linked with cell survival and proliferation. A separate beneficial effect identified by Dr. Funk's lab is the ability of curcuminoids to inhibit the development of osteolytic bone lesions in breast cancer bone metastases. Future studies will focus on understanding the active metabolites involved, mechanism of action, as well as identifying possible interactions of turmeric compounds with standard breast cancer treatments. The end goal of this effort is to bring these findings from the bench to bedside in the form of clinical trials.

Contributed by NSC Graduate Student Megan Hetherington-Rauth; [mchr@email.arizona.edu](mailto:mchr@email.arizona.edu)



# Graduate Program

## Congratulations!



**Emily Goldberg** defended her dissertation entitled, "Lifespan Extension and Immune Competence" to earn her PhD degree. Emily was mentored by Dr. Nikolich-Zugich. After graduation, Emily will be moving to New Haven, CT to work as a Postdoctoral

Research Assistant in the Immunobiology Department with Dr. Vishwa Deep Dixit at the Yale School of Medicine.

**Mary Jo Cantoria** defended her dissertation entitled, "The Effects of Metformin on Pancreatic Cancer Metabolism" and plans to graduate with her PhD degree in August. Mary Jo was mentored by Dr.

Emmanuelle Meuillet. After graduation, Mary Jo will be moving to Dallas, TX to work as a Postdoctoral Fellow in the Department of Molecular Genetics with Drs. Micheal S. Brown and Joseph L. Goldstein at UT Southwestern.



**Rachel Kranch** defended her thesis entitled, "Temporal Patterns of Food-Specific IgE and their Relation to Asthma, Allergic Rhinitis and Eczema Diagnoses by Age 5" and plans to graduate with her MS degree in August. Rachel was mentored by Dr.

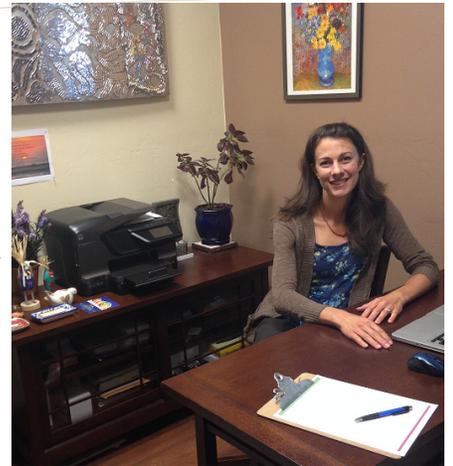
Mari Wilhelm and plans to take dietetics courses to prepare for a dietetic internship in the fall

**Adam Lyon** was selected to participate in the Cancer Prevention Research Training Program at MD Anderson in Houston, TX during the summer of 2014.



## Alumni Update: Hana Feeney, MS, RD

Ten years ago I graduated with a Master's degree in Nutritional Sciences from the University of Arizona. Since then I completed the Carondelet Dietetic Internship, worked at the Canyon Ranch Health Resort, promoted health at the UA Campus Health Service and established *Nourishing Results, LLC*, a patient-centered integrative nutrition practice. I was also married, had two children and have been diagnosed with celiac disease.



As a nutrition consultant and coach, I specialize in celiac disease, gastrointestinal health, autoimmunity, fertility, insulin resistance, eating disorders, weight management and optimal aging. I work with individuals and groups, give dynamic presentations, write informative articles and support other dietitians with patient-ready handouts.

My goal is to turn the intangibles of nutrition into recommendations for delicious, healthful foods. I have found that it is crucial to connect with people beyond the walls of my office, so I offer hands-on food experiences like grocery store tours, kitchen & pantry makeovers and home cooking classes. Additionally [www.NourishingResults.com](http://www.NourishingResults.com) is a powerful online tool, containing many articles and recipes, and [www.Facebook.com/NourishingResults](http://www.Facebook.com/NourishingResults) allows me to share website content and other health-related information to a broad network of people.

My unique approach to nutrition and motivational interviewing is key to successful nutrition education and behavior change. I personally hold food in high regard and love to cook. Curiosity has pushed me to challenge what we think we know; and to appreciate integrative healthcare. These philosophies are what have allowed me to help many people achieve the good health and vibrant life that they want. While I've learned quite a bit, the words of Lisa Powell, MS, RD, Nutrition Director at Canyon Ranch ring as true today as they did ten years ago, "Just when I think I know everything, I realize there is much I don't know." The field of nutritional sciences is one that grows every day. You cannot be a competent practitioner without dedicating yourself to personal growth and ongoing learning. That's what makes our work so exciting, fun and rewarding. Here's to good food!



# Undergraduates

## Rachael Yeskey & Raquel Galvez Selected for AFA Food Institute Conference



In February Raquel Galvez and I were pleased to be selected as participants for the first annual Agriculture Future of America (AFA) Food Institute Conference. After a rigorous and competitive application process, 75 students from across the country were selected to attend. This three-day event was held in Chicago, IL; the hub for many major food companies. The conference connects students with leaders and current innovators in the food industry. On the first day, we had the

unique opportunity to ask an executive panel about their experiences in the industry. Among the panel were representatives from major companies such as Hillshire Brands, Cargill, and CME group. They addressed important topics currently confronting their companies such as efforts to become sustainable and modifying current products to appeal to changing customer desires. It was interesting to see how "food fads" influence development of new products.

The best day was the second day simply because it was a field trip all about food! First our group visited Hormel Foods. We were greeted with smells of freshly cooked pork sausage, bacon, and apple cinnamon oatmeal for breakfast. While touring the facility we were given a behind-the-scenes view of Hormel meat product productions. Hormel Foods owns a variety of brands, most notably Skippy and Jennie-O. Next stop was the newly established Hillshire Brands testing kitchen in the heart of Chicago. Like Hormel, Hillshire Brands is a company that includes a range of name-brand products like Jimmy Dean, Ball Park and Sara Lee. The building we visited was solely dedicated to food scientists and chemists in research and development. The day we visited happened to be what the company calls a "Rain Day," during which employees drop all of their projects and come together to brainstorm new product ideas.

The third day was the conclusion of the conference. This day was the most informative because it focused on the logistics of food safety and regulation as well as global food trends. Despite the seemingly Arctic conditions for native Arizonans, the AFA Food Institute Conference helped us to gain vast insight into a future in the food industry.

Contributed by NSC Major Rachael Yeskey: [rey@email.arizona.edu](mailto:rey@email.arizona.edu)

## NSC Majors Selected for Summer Food Service Internships

Kimberly Niccolai and Jennie Altman, have been selected for summer internships with Southwest Foodservice Excellence. These internships provide education and real life work experience in the school nutrition profession. Interns will learn how to create menus within school menu guidelines and develop nutrition promotion materials for schools.



Kimberly Niccolai has experience (via NSC 395a) working with children through her volunteer work with the local organization Grow 2B Fit and looks forward to learning more about foodservice in schools. In addition to maintaining her academics and volunteer work, Kimberly is a member of the UA triathlon team, the Tricats. Congratulations Kimberly!

Jennie Altman has experience working with the community through her volunteer activities with the Nutritional Sciences Club and with Smart Moves through Campus Health. Jennie is excited to be working with SFE to provide nutritious food to children and promote a life-long healthy relationship with food. Congratulations Jennie!



Jacob Fleming has been selected as a Food Service Intern at Camp Ronald McDonald at Eagle Lake in Lassen County, CA. Food Service Interns plan, direct and supervise food service at the camp for children with disabilities and disadvantaged youth. Jacob has experience (via NSC 395a) working with the community through his volunteer work with The Food Bank of Southern Arizona. Congratulations Jacob!



# Outreach

## UANN Program Coordinator Takes the SNAP Challenge



As a Program Coordinator with the UA Nutrition Network, I encourage families in Pima County who are eligible for SNAP (Supplemental Nutrition Assistance Program) to make nutritious eating choices. To better understand the families that

I serve, I recently decided to take the "SNAP Challenge." This provides a glimpse of what life can be like for millions of low-income Americans who are living on the average SNAP daily food stamp benefit of about \$4/person/day by encouraging anyone to rely on a typical SNAP budget.

With \$20 and the goal to follow the USDA's MyPlate guidelines for five days, I started by carefully searching the weekly grocery ads to see where I could find the most economical prices on my food staples. After creating a detailed list I headed out and loaded up on oatmeal, brown rice, pasta, peanut butter, dried beans, fresh seasonal produce, eggs, milk, and my splurge, chicken thighs. I took a few hours on the first day to prepare most of the foods, including batch cooking brown rice, soaking and cooking dried beans, and chopping carrots, pineapple, and cucumbers for quick meals.

After that, my meals came together quickly. I ate oatmeal & peanut butter each morning, drank milk at every meal, snacked on eggs and veggies, and my lunches and dinners included all five food groups.

By the end of the week I had managed to maintain a 2,000 calorie diet with more than the five recommended servings of fruits and vegetables and achieved the Dietary Guideline recommendations for fiber, potassium, and calcium. However, many meals were basic and lacked taste and creativity since I was unable to afford spices and other condiments. I couldn't afford items I take for granted on a daily basis, such as a cup of coffee or a sweet treat.

While living on a food stamp budget for just a few days does not compare to the struggles encountered by low-income families every month, it did provide me with a new perspective and greater insight into the food shopping tradeoffs that are required to afford nutritious foods. Buying unprocessed food is the most cost effective measure, but knowledge on how to prepare these foods can be a barrier. As a result of this challenge, I now offer practical cooking advice and personal stories on how to save money at the grocery store.

*Contributed by UANN Program Coordinator  
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## The Nutritional Sciences Club Participates in the Body Smart Fair

February 23 - March 1 was National Eating Disorders Awareness Week, and nowhere was that more evident than at the Body Smart Fair on February 26. The event took advantage of gorgeous Arizona weather to share an equally beautiful message with students; that a positive body image, resiliency, and strong self-worth are free for the taking. Those lessons are at the heart of Body Smart's mission statement, and they were on full display just feet from Old Main and the Student Union. The UA Nutrition Club joined Body Smart to reach out to students from all walks of life. Activities included raffles and games aimed at playfully engaging students in body image discussions, back and shoulder massages from Stressbusters, and Healthy Body Image Screenings designed to gather eating disorder information on college campuses across the country.

In a culture and demographic which often places a high value on physical beauty, students were able to comment on their favorite aspects of themselves. In these short notes, it

was clear to see the many aspects of true beauty that can be seen in students of all walks of life. Responses ranged from "Proud to be left-handed!" to "I love my loyalty to others" and "I love my compassion." Glancing over displays of these notes quickly showed onlookers how meaningful self-worth comes from more than just what is seen in the mirror. While National Eating Disorders Awareness Week has come and passed, Body Smart is here to stay at the University of Arizona.



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# Extension

## The Garden Kitchen



In March the Garden Kitchen hosted the Caribbean/African Cultural Festival. This free event welcomed visitors to taste Caribbean and African dishes such as Jamaican Chicken Curry, Congolese Chicken and Tomato Stew, Nigerian Roasted Yam with Eggplant, and Sudanese Sambusas. While the weather was a little wet, it did not dampen the spirits of those listening and dancing to the rhythms of *Key Ingredients of African Soul*, featuring lead singer and African Studies Professor Praise Zenenga. Student volunteers served samples of healthy recipes and answered questions about the nutrition. This event was the last in a series of cultural festivals designed to develop closer ties between the University of Arizona and the residents of South Tucson and the surrounding area through cultural events.

“The Garden Kitchen presents a lot of opportunity for student involvement,” according to Program Coordinator Cheralyn Schmidt. This semester there are over 17 student volunteers and interns at the Garden Kitchen representing the Department of Nutritional Sciences, the Mel and Enid Zuckerman College of Public Health, and Geography. NSC Department Head Dr. Scott Going sees the Garden Kitchen “as a place for students to apply their skills in a neighborhood where there’s need and get some practical real world experience.” To access recipes from this event and learn more about the Garden Kitchen, visit: [www.TheGardenKitchen.org](http://www.TheGardenKitchen.org). To view a video of the Caribbean/African Cultural Festival go to: <http://nutrition.cals.arizona.edu/outreach-programs>.

Contributed by Dr. Dan McDonald: [mcdonaldaz@gmail.com](mailto:mcdonaldaz@gmail.com)

## HomeStyles



*HomeStyles: Shaping Home Environment and Lifestyle Practice to Prevent Childhood Obesity* is a USDA funded, multistate (NJ and AZ) project that integrates education, research and Extension. HomeStyles uses community-based

participatory research principles to create a culturally-competent intervention. The goal is to enable and motivate parents with preschool-aged children to shape home environments and lifestyle practices which may prevent excessive weight gain in preschool children. These practices include increasing fruit and vegetable consumption, physical activity and sleep, while watching less television.

In the Spring of 2014, Spanish speaking students from the Departments of Nutritional Sciences and Physiology worked under the mentorship of Gayle Alleman to interview Spanish speaking participants (parents or care-givers) about intervention lessons that will ultimately be delivered to 1,000 parents in NJ and AZ. Students asked participants about colors and images, text size within lessons, usefulness of the information, and what they would change in their behaviors after reading a lesson. The interviews typically lasted an hour, providing students with valuable hands-on research experiences.

Contributed by NSC Major Viridiana Beltran: [ybeltran@email.arizona.edu](mailto:ybeltran@email.arizona.edu)

## Support Nutritional Sciences

Supporting the Department of Nutritional Sciences has never been easier! All contributions are made to the UA Foundation, a 501(c)3 organization. Through this foundation donors may choose how their gift is applied. All gifts are tax deductible. Visit <http://cals.arizona.edu/nutrition/content/donations> for direct links to the UA Foundation for secure, online giving.



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