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Nutritional Sciences

Congratulations!



Theresa LeGros (left) was selected as the 2017 CALS Outstanding Staff in Research Award. Theresa is a Research Specialist, Sr. working with the SNAP-Ed Evaluation Team in the Arizona Nutrition Network.

Ashlee Linares-Gaffer (right) was selected by the UA Commission on the Status of Women (CSW) as the recipient of the 2017 Edith Sayre Auslander Emerging Visionary Award. CSW recipients are selected based on their efforts to cultivate diversity and advance CSW goals relating to equity on campus. Ashlee is a member of the Diversity Task Force and was chosen in part for her record of supporting diverse student populations.



Kayle Skorupski (left) was selected to receive the Emerging Dietetic Leader Award from the Arizona Academy of Nutrition and Dietetics (AzAND). Kayle will receive her award at the June AZAND meeting in Phoenix.

Scottie Misner (right) has been elected to the Nominating Committee for the Society of Nutrition Education. Her two-year term of leadership will begin in July at the Annual Business Meeting.



Outstanding Nutritional Sciences Graduating Seniors!



Brenda Velarde is the NSC Spring 2017 Outstanding Graduating Senior and nominee for the CALS Outstanding Graduating Senior. Throughout her time at the UA, Brenda has volunteered with Nutrition Navigators, The Nut Club, and the University of Arizona Nutrition Network. She has also participated in Salivary Cancer Research in Dr. Limesand's lab as an undergraduate research assistant, and served as a preceptor for multiple NSC courses, including NSC 308 and NSC 325. After graduation, Brenda will begin her Master's of Science in Nutrition and Metabolism while concurrently working on a dietetic internship at the University of Texas Medical Branch in Galveston, TX. Congratulations Brenda!

Madi Egan is the 2017 winner of the Outstanding Student Award given by the AzAND DPD. Madi was also recognized on campus as a 2017 Pillar of Excellence. Many fantastic Honors students were nominated for this award. Eleven were selected based on what they accomplished and contributed to the Honors College and to the UA community. Throughout her time at the UA, Madi has volunteered with Tu Nidito, University of Arizona Nutrition Network, HealthYouth, and HealthSouth Rehabilitation Hospital. She has participated in research on children's diabetes prevention as part of EPIC Kids, and breast-cancer bone metastasis inhibition in Dr. Funk's lab. Madi's service includes mentorship director for the American Medical Student Association and president and co-founder of She's the First UA. After graduation, Madi will begin a dietetic internship at St. Louis VA Medical Center with a focus on health promotion and disease prevention.



Research

Research Highlight: Dr. Jennifer Teske



Noise pollution is a major cause of sleep disruption, affecting over 100 million people in the US. Poor sleep exacerbates chronic disease (i.e. obesity, diabetes, cardiovascular disease and cancer) and increases consumption of highly

palatable foods that are high in calories and low in nutrients. Currently, there are no pre-clinical models of sleep loss due to noise, which thwarts efforts to identify mechanisms mediating its negative health effects.

Dr. Jennifer A. Teske, an Assistant Professor in the Department of Nutritional Sciences, developed a rodent pre-clinical model to investigate how sleep loss due to noise exposure exacerbates weight gain. This model was developed to identify novel brain targets to reduce weight gain through better sleep and greater physical activity. Dr. Teske's research team recently published several papers on this topic. Collectively,

they show that a single night of poor sleep due to noise exposure reduces both physical activity and energy expenditure and stimulates weight gain, which may be due to low orexin, a naturally occurring protein in the brain.

Now, Dr. Teske is leading collaborative efforts with Dr. Claudio Perez-Leighton at the Universidad Andres Bello in Santiago, Chile and Dr. Naomi Rance in the Department of Medicine at the UA to use her model to address how sleep loss and consumption of highly palatable foods interact to promote weight gain, if males and females respond differently to this combination and the brain structures that confer the negative health consequences. Dr. Teske has had a dedicated team of students from the University of Arizona (Danielle DePorter, Jamie Coborn, Martina Sepulveda, Rebecca Lessie, Monica Houser, Domenick Scali, Lauren Troeger) and the University of Barcelona in Spain (Miriam Casellas Gibert). This research has been made possible through support by the Department of Veterans Affairs, the USDA, UA CALS, UA Office of Global Initiatives and the DeBell Research Enhancement Award.

Contributed by Dr. Jennifer Teske:
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Joint Appointed Faculty: Dr. John Konhilas

Our laboratory studies several topics regarding cardiovascular disease (CVD); with the major focus on how sex/gender impact cardiac disease development and how the gut microbiome affects cardiac remodeling. In general, women are protected against CVD compared to age-matched men, but this protection is lost in menopausal women. In fact, women with CVD progress to worse outcomes more rapidly than men. We are using a novel model of menopause developed at the UA to more appropriately study CVD in women, especially how menopause makes women more susceptible to CVD. Using this model of menopause, we have demonstrated that perimenopausal and cycling female mice *are protected from CVD* and *menopausal* female mice lose this protection. Our current work aims to elucidate the physiological, cellular and molecular mechanisms of this increased susceptibility that comes with menopause.

Our lab also has a long-standing interest in the ability of environmental factors, like diet, to impact cardiac disease. Now, there is a growing appreciation that our microbial environment plays an integral role in the maintenance of health and the pathogenesis of disease. In parallel, advances in se-

quencing and bioinformatic technologies have allowed unprecedented characterization of the gut microbiome. Our lab has been successful in manipulating the gut microbiome with a beneficial strain of bacteria, or probiotic, that mitigates the harmful affects of cardiac injury from myocardial infarction (heart attack). We are currently interrogating the bacterial, molecular, and cellular players that mediate this effect with the goal of developing or identifying novel treatment strategies for the clinic.



Contributed by Dr. John P. Konhilas, PhD. Associate Professor of Physiology, a member of the Sarver Molecular Cardiovascular Research Program, Graduate Interdisciplinary Program in Physiological Sciences and Biomedical Engineering, Affiliate Member Cell and Molecular Medicine, Molecular Cell Biology and Nutritional Sciences:
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Graduate Program

Congratulations!



Danielle DePorter defended her thesis entitled, "The effect of sleep deprivation on hedonic eating" and will graduate with her MS degree this May. Danielle was mentored by Dr. Jennifer Teske.

Micah Donovan defended his thesis entitled, "Breast Cancer Epigenetics: Modification by Genestein" and will graduate with his MS degree this May. Micah was mentored by Dr. Donato Romagnolo. After graduation, Micah will continue his graduate education by joining the Cancer Biology PhD program here at the UA.



Preston Harris defended his thesis entitled, "Sex-dependent effect of exercise on dehydration and exercise performance: impact of beverage on post-exercise hydration and lower-body muscle performance" and will graduate with his MS degree this May. Preston was mentored by Dr. John Konhilas. After graduation Preston will continue his graduate education by joining the Nutritional Sciences PhD program here at the UA.

Preston Harris was selected by the College of Agriculture and Life Sciences as the recipient of the Master's Level Meritorious Graduate Teaching Award for the Spring of 2017. Preston was nominated by the department for consistently going 'above and beyond' and for being an incredibly organized and effective Graduate Teaching Assistant. Preston was noted as being invaluable by Dr. Romagnolo in supporting his NSC 408 course as well as by the students in the class.

Alumni Update: LT Kerton Victory



Lieutenant Kerton Victory PhD, MS is an Environmental Health Officer/Epidemiologist in the United States Public Health Service (USPHS) assigned to the National Institute for Occupational Safety and Health (NIOSH) at the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia. In May 2010, he graduated with a Master's degree in Nutritional Sciences with a focus on Cancer Biology under the mentorship of Dr. Kirsten Limesand. His thesis on head and neck tumor cell radiation response led him to pursue a PhD in Environmental Health Sciences at the University of Arizona to further understand the role of environmental contaminants in the etiology of chronic diseases like head and neck cancers. He graduated from the University of Arizona in May of 2014 and then completed a post-doctoral fellowship with CDC's Epidemic Intelligence Service (EIS) program.

During EIS, LT Victory was assigned to the NIOSH Health Hazard Evaluation Program in Cincinnati, Ohio from June 2014-May 2016. He has worked on several projects including evaluating crystalline silica exposures among granite countertop workers, evaluation of Missouri's Adult Blood Lead Epidemiology and Surveillance program, and provided technical assistance in epidemiology and emergency preparedness for the Ebola response in the Republic of Guinea and in Dallas, Texas.



LT Victory is screened by a healthcare worker for symptoms of a fever before entering a building in Guinea during the 2014 Ebola outbreak.

Currently, LT Victory works in the NIOSH Emergency Preparedness and Response Office (EPRO) which prepares for and responds to chemical, biological, radiological, and natural events. EPRO integrates occupational safety and health into responses to protect response and recovery workers with the help of partners from industry, labor, trade associations, professional organizations, academia, and other federal agencies. When he's not busy responding to public health emergencies, he enjoys hiking, running, cooking, and travelling the world.



Undergraduates

The Weight is Over



Brenda Velarde (second from left) and the National CLARION Interprofessional Case Competition winning team

One of the most significant accomplishments in my undergraduate studies has been participating in and winning both the local and national CLARION Interprofessional Case Competitions. CLARION is a University of Minnesota Center for Health Interprofessional Programs (CHIP) program designed to provide opportunities for health profession students to achieve a 360-degree perspective on patient safety in current healthcare systems.

CLARION has helped to enhance my critical thinking, problem solving and presentation skills. I was able to apply creativity, knowledge, and experience to analyze diverse issues facing a healthcare organization. As an interprofessional team composed of students from the Colleges of Medicine, Nursing, Public Health and Agriculture and Life Sciences, I was exposed to professions I will be working with in the future and learned how to collaborate with diverse disciplines to make an impact in health care.



Velarde, left, with mentor Dr. Mary Marian

Being assigned to a random team of master's health professionals challenged me as an undergraduate to utilize this experience to collaborate and learn as much as I could. I have been fortunate to work in a team that genuinely liked each other, worked well together, and wanted each member of our team to succeed in the CLARION competition. Our team invested many hours over the course of several months working together to address prevention, treatment, and community-based follow-up by creating a person-centered, culturally specific comprehensive interprofessional care plan.

Walking away with the CLARION National Championship has been such a rewarding honor and I am extremely proud of my team and mentors for all of our hard work in representing The University of Arizona. My involvement in this case competition has helped me be dedicated to furthering interprofessional collaboration for the sake of patient safety and improved health care quality. CLARION has been a life changing event that I will look back on and treasure always in advancing my skills in interdisciplinary team work.

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NSC at Experimental Biology

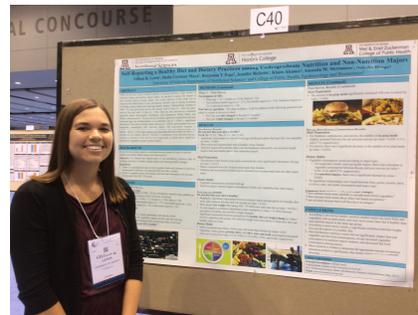


In April, two Nutritional Sciences Honors Students, Amanda McDaniels (right) and Gillian Lewis (below), were invited to present their Honors Thesis research projects at the Experimental Biology (EB) meeting in Chicago, IL. More than 14,000 scientists attend the EB Conference every year.



Both students were mentored by Dr. Nobuko (Kay) Hongu. Their abstracts have been published in the FASEB Journal, April 2017; 31 (Supplement).

Amanda M. McDaniels, Sheila Cortazar Moya, Benjamin T. Pope, Jennifer Ricketts, Klaire Alcance, Gillian R. Lewis, Nobuko Hongu. *Opinions of GM foods and food grown with pesticides in health and non-health major undergraduate students*



Gillian R. Lewis, Sheila Cortazar Moya, Benjamin T. Pope, Jennifer R. Ricketts, Klaire Alcance, Amanda McDaniels, Nobuko Hongu. *Self-reporting a healthy diet and dietary practices among undergraduate nutrition and non-nutrition majors*



Outreach

UANN Supports Wellness at Santa Cruz Catholic Elementary School



This spring, the University of Arizona Nutrition Network (UANN) supported a Community Wellness Fair hosted by Santa Cruz Catholic Elementary School. The Wellness Fair, which focused exclusively on health and wellness, took place on Thursday, March 30th 2017 from 6:00 to 8:00pm at Santa Cruz Catholic School. The UANN provided information about Local Wellness Policies, how parents could become part of the school's wellness team, and how to shop on a budget. The UANN also hosted a healthy food sampling activity to highlight healthy snack ideas to parents and children. In addition, local agencies such as the Community Food Bank of Southern Arizona, Parent Aid, the Garden Kitchen

and the Pima County Health Department provided information about their unique services.

Wellness Fair attendees received free blood pressure screening, information on chronic illness prevention, aid in filing taxes and budgeting, resources on child nutrition, and an opportunity to learn about free evidence-based home visiting programs to foster safe home environments. Participants were able to engage in fitness-based activities such as Zumba, yoga, and Tai-Chi. The UANN along with the other participating health agencies, aimed to inspire parents, students, and community members to make positive changes for a healthy lifestyle.

The Co-Principal Investigator for the UANN Pima County campus unit is Dr. Vanessa A. Farrell and the Principal Investigator of the UANN is Dr. Scottie Misner.

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Contributed by UANN Program Coordinator Trisha Bautista: trishabautista@email.arizona.edu

The Sweet Life of Fruit at the Tucson Festival of Books

On the weekend of March 11th, the class of 2017 ISPP dietetic interns educated 3,000 community members about the nutritional benefits of fruit at Science City, an interactive STEM fair associated with the Festival of Books. In collaboration with the College of Agriculture and Life Sciences Cooperative Extension, the dietetic interns ran The *Sweet Life of Fruit* booth. The booth included four unique stations that educated community members on simple vs. complex carbohydrates, hydration with infused water vs. sugary beverages, differences between sucrose and fructose, and nutrition trivia with prizes.



Participants were provided with a variety of tasty samples to illustrate the lesson they were given, including apple slices paired with peanut butter, sun-

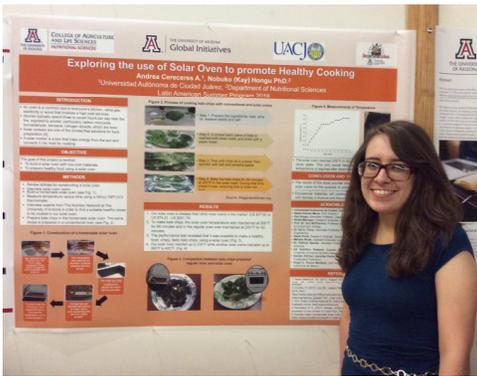
flower seed butter or Mexican chili seasoning and lined up for refreshing fresh fruit infused water. Almost all products were generously donated for this event and the interns were supported with over 20 volunteers from the 4H Healthy Living Ambassadors Program and the Nutritional Sciences undergraduates.



Contributed by NSC Assistant Professor of Practice Ashlee Linares-Gaffer: alinares@email.arizona.edu

Extension

2017 Solar Oven Project



A solar oven is a box that traps energy from the sun and converts it into heat for cooking. It has been used regularly in several parts of the world. Melissa Wyatt, MS (alumna of NSC), Extension Agent at UA, La Paz County Office, received requests about how to make and cook foods using solar oven from people in her county.

Andrea Cereceres (left), Latin American Summer Intern from Universidad Autónoma de Ciudad Juárez, Chihuahua, Mexico, and Dr. Kay Hongu, worked on the solar oven project. The goals of the project were to build ovens with low-cost materials and to prepare healthy food using a solar oven. Andrea started by contacting current solar oven users in Tucson and reviewing articles published on solar oven use.

Then, she developed our own solar oven (pictured right). The nutritionists at the University of Arizona Nutrition Network helped to develop healthy recipes using solar ovens. The project was presented at the *Research Frontiers in Nutritional Sciences Conference* in February, 2017.



Contributed by Dr. Kay Hongu: hongu@email.arizona.edu

Nut Club Wins Award at Spring Fling

This year the Nutritional Sciences Club ran a booth selling fruit s'mores cups at the largest student run carnival in the country—Spring Fling. The Spring Fling committee selected the Nut Club as the recipient of the 'Best Façade' award. Congratulations Nut Club!



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 supporters may choose how their gift is applied. All gifts are tax deductible. Visit <http://nutrition.cals.arizona.edu/invest> for direct links to the UA Foundation for secure, online giving.

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