Recent and Upcoming Events

Endowed Awards Ceremony
January 29, 2020
Urbana, IL

DNS Applicant Visit Weekend
February 27-29, 2020
Urbana, IL

Experimental Biology Meeting
April 4-7, 2020
Urbana, IL

ACES Funk Awards Ceremony
April 13, 2020
Urbana, IL

NSGSA Nutrition Symposium
April 22, 2020
Urbana, IL

ACES Spring Commencement
May 17, 2020
Urbana, IL

ASN Meeting
May 30-June 2, 2020
Seattle, WA

External Advisory Committee Meeting
September 16-17, 2020
Urbana, IL

New Course Helps DNS Students Explore Industry Careers

Did you know approximately 24% of DNS alumni pursue a career in industry and another 5% of DNS alumni own their own company? A recent survey of DNS alumni working in industry showed they believe DNS students would benefit from more opportunities to learn about potential careers in industry.

In response to this alumni feedback, DNS launched a new course in summer, 2019: “NUTR 590-Industry Immersion for Career Opportunities.” This exciting new course, which will be offered each summer, features campus visits by alumni and friends of DNS who work in industry, and includes corporate site visits.

The following alumni and friends of DNS visited campus over the summer, and talked with students about their careers: Brian Berg (PhD 2004, Rhythm Pharmaceuticals), Kirstie Canene-Adams (PhD 2007, Tate and Lyle), Clare Hasler (OlivinoLife, Inc.), and Mike Zora (Archer Daniels Midland). Each speaker provided a unique perspective on their career path and what it is like to work in their company.

The class also travelled to several companies. They visited The Kraft Heinz Company (hosted by Jackie Schultz and Amanda Young), toured their processing facility and talked with staff about regulations and product claims. Next the class visited FutureCeuticals (hosted by Boris Nemzer), toured their testing facility, and learned about quality assurance and marketing. The class visited Eli Lilly and Company (hosted by DNS aluma Keri Poi (Kles), PhD 2002), where students participated in a panel discussion with staff about career opportunities and the drug discovery process. The class also visited Curion Insights (hosted by DNS aluma Virginia Luchini, MS 2016). While at Curion Insights, students conducted a sensory test and learned more about project management. The last site visit was to fairlife, LLC (hosted by Shakeel Rehman) where students had the opportunity to tour their facility, taste-test different products, and learn about how staff at fairlife, LLC work to communicate science to non-scientific audiences.

Participating students and alumni gave outstanding reviews of the course. Students commented:

“The speaker has a position that I’d never considered before...”

“I’m not usually exposed to speakers like this...”

“Her perspective…was helpful for me as I try to figure out what career path I want.”

“This was a useful reminder to develop translational skills, not just wet lab skills.”

We are very excited about this new course and hope to be able to offer it on a regular basis. Would you like to be a part of this course? Do you have suggestions about companies DNS students should visit? Would you or your company be willing to sponsor a site visit? Or if you would like to learn more about the course, contact DNS Director, Dr. Elvira de Mejia (edemejia@illinois.edu).

Written by: Jessica Hartke
Note from the Director

Dear DNS Family,

It is with great pleasure that I share with you the accomplishments of the Division of Nutritional Sciences, its students, faculty, staff, and alumni. Last year was a fascinating one for DNS. We welcomed six new faculty members, bringing the number to 71 current members from 10 colleges/schools, 18 departments with complementary expertise in nutrition and affiliated disciplines. We also welcomed 22 new students from domestic and international institutions, bringing our enrollment to 61 students from 11 different countries.

I have been reflecting on the extraordinary value of DNS. I want to take this opportunity to say thank you to all alumni, external advisory committee members, friends, students, faculty, and staff. THANK YOU for investing your time and talent, making DNS an outstanding interdisciplinary program. The success of DNS is dependent upon the participation of faculty members in their teaching and research missions. But our success is also dependent upon the involvement of our alumni, external advisory committee members, friends, students, and staff.

While we continue to write training grant proposals and support our students in the preparation of pre-doctoral fellowships, the gift support from DNS alumni, friends, corporations, and endowments is vital to sustain and enhance our program excellence. Your support of DNS makes such a difference in our ability to continue the cutting-edge training and professional development of future generations of Nutritional Sciences students.

I want to thank Dr. Jessica Hartke, Dr. Anna Keck, and Ms. Ashley Negangard for preparing the newsletter and for all their contributions and constant support to the program. We are blessed with their presence and commitment to DNS.

I appreciate and value your comments and suggestions; please do not hesitate to contact me at any time (edemejia@illinois.edu; 217-244-3196).

Respectfully,

Elvira de Mejia

In Memoriam

Dr. Gilbert (Gil) A. Leveille, former UIUC nutritional biochemistry professor and friend of the Division of Nutritional Sciences (DNS), passed away on August 8, 2019 in Frederick, Maryland. He was 85 years old.

Gil began his academic career in 1965 at the University of Illinois in the Department of Animal Sciences. He was instrumental in the creation of DNS, and later served on the DNS external advisory committee for almost 2 decades. Throughout his career, he served as Chair of the Department of Food Science and Human Nutrition at Michigan State University, and held several positions in industry including at General Foods, Nabisco, and Cargill. In 1996, Gil founded Leveille Associates, which provided consulting services to the food industry. Dr. Leveille was the only person to become President of both the American Society for Nutrition and the Institute for Food Technologists. He also served on the Food and Nutrition Board of the National Academy of Sciences and the Committee on Recommended Dietary Allowances.

Gil was a great mentor, friend, and an influential leader in nutritional sciences. He will be greatly missed.
The Edge - Winter 2020

Research Spotlight

Drinking more water improves children’s ability to multitask, according to a new study led by Illinois professor Naiman Khan.

CHAMPAIGN, Ill. — Drinking water not only keeps children hydrated, but also increases their ability to multitask, suggests a new study by researchers at the University of Illinois and their collaborators.

After drinking more water for four days, 9- to 11-year-old children were more hydrated and had faster reaction times on a task-switching test, the researchers reported in The Journal of Nutrition.

“Recent urine biomarker data has indicated that over half of the children in the United States are probably inadequately hydrated,” said study leader Naiman Khan, a professor of kinesiology and community health at Illinois. “We’ve studied dietary effects on children’s cognition for a long time, but the opportunity to promote cognitive function in children with water intake is very important. Children are at a higher risk of involuntary dehydration: They depend on adults to recognize their needs and provide them with water.”

Khan’s group, in partnership with professor Charles Hillman at Northeastern University, studied 75 children in central Illinois. They compared the children’s urinary hydration and cognitive performance at their normal baseline levels, after drinking only half a liter of water a day for four days, and after drinking 2.5 liters of water each day for four days.

“This is the first study to our knowledge that has manipulated water intake over several days and measured changes in cognitive performance among children,” Khan said. “It’s also one of the first studies to use all the measures of urine hydration that are available, including osmolality, specific gravity and color.”

Children with higher baseline hydration performed better on a task-switching activity designed to measure cognitive flexibility. In addition, the children collectively performed better and had faster reactions on the task-switching test after drinking more water, although they showed no difference on tests designed to measure attention and inhibition.

“Children who were better hydrated tended to have greater ability to multitask and faster reaction times, and children who increased their water intake also increased their ability to multitask,” Khan said. “That tells us that the benefits of water may be selective for cognitive processes associated with multitasking.”

After drinking more water for several days, the children’s hydration improved — as was expected. However, many of the children had the same or only slightly different values in urinary markers of hydration in the low-water condition as they did at their baseline. This indicates that they may be underhydrated in their everyday activities, which is concerning, Hillman said.

“Such findings suggest that childhood health behaviors, such as being properly hydrated, may benefit complex cognitive operations including working memory and cognitive flexibility. Given that these aspects of cognition underlie academic achievement, it is interesting to think about low-cost lifestyle interventions, such as increasing water intake, to benefit cognitive and brain health as well as effective functioning throughout the school day,” Hillman said.

Khan said the researchers hope to further explore the relationship between hydration and cognitive performance in children by using brain imaging in future studies to see which neural networks benefit most from water consumption. They would also like to study hydration’s relationship to other mental tasks.

“The three tasks we studied do not comprehensively tap into all the different cognitive domains — there are others that may be of interest,” Khan said.

Additional co-authors include collaborators at Danone Nutricia Research in Palaiseau, France, which also supported this work.

Written by Liz Ahlberg Touchstone
New DNS Students

Joey Arballo
PhD Candidate
Advisor: Erdman

Alex Baldeon
PhD Candidate
Advisor: Holscher

Erin Bryan
PhD Candidate
Advisor: A. Dilger

Hanchu Dai
PhD Candidate
Advisor: Gaskins

Victoria Daniels
MS Candidate
Advisor: Donovan

Oluwemi Fabusoro
PhD Candidate
Advisor: Wilund

Megumi Hashida
PhD Candidate
Advisor: Erdman

Noah Hutchinson
PhD Candidate
Advisor: Woods

Ozan Imir
MS Candidate
Advisor: Madak-Erdogan

Yifei Kang
PhD Candidate
Advisor: Swanson

Emanuela Kayser
MS Candidate
Advisor: Cattai de Godoy

Continued on Page 5

2019 Quiz Bowl Winners

Pictured (l to r): Noah Hutchinson, Hanchu Dai, Dr. Michael Miller, and Ivan Pinos Cabezas.

Student Recognition

USDA National Needs Fellowship Recipients

2019-2020 Fellowship Recipients

CONACyT Fellowship: Miriam Aguilar Lopez

DNS Excellence Fellowship: Christian Maino Vieytes

National Science Foundation Graduate Research Fellowship: Lindsey Ly Ana Mitchell

USDA National Institute of Food and Agriculture Fellowship: Katie Ranard Sharon Thompson

NIH T32 Tissue Microenvrionment Predoctoral Fellowship: Catherine Applegate

Jonathan Baldwin Turner Fellowship: Andrew Dinsmoor Colleen McKenna Leila Shinn

The Kraft Heinz Company Human Nutrition Fellowship: Joey Arballo Maribel Barragan Amirah Burton Jonathan Cerna

USDA National Needs Fellowship: Alex Baldeon Hanchu Dai Kaylee Hahn Noah Hutchinson Justin Kim Arden McMath Breanna Metras Clara Salame Anqi Zhao

NSGSA 2020 Nutrition Symposium

April 22, 2020

Keynote Speaker
Catherine J. Field, PhD
Department of Agricultural, Food, and Nutritional Science
University of Alberta

Mini-Symposium
“Personalized Nutrition: Putting the ‘U’ in Nutrition”

Faculty Presenters:
Manabu Nakamura, PhD, DVM
Margarita Teran-Garcia, MD, PhD, FTOS
Yuan-Xiang Pan, PhD
Zeynep Madak-Erdogan, PhD
Celeste Alexander was awarded the 2019 Comparative Gastroenterology Society/ Royal Canin USA Professional Development Award.

Erin Davis received the Academy of Nutrition and Dietetics Foundation Mead Johnson Nutrition Scholarship.

Bridget Hannon was selected as one of 25 early career researchers to attend the inaugural Emerging Luminaries Symposium at Indiana University School of Public Health. The purpose of this symposium was to highlight rising stars in the field of nutrition and promote external collaborations.

Ching-Yen Lin was awarded the 2019 American Academy of Veterinary Nutrition and WALTHAM Student Research Award.

Ana Mitchell was awarded the Center for Latin American and Caribbean Studies (CLACS) International Travel Award.

Katie Ranard was awarded the USDA-NIFA Agriculture and Food Research Initiative (AFRI) Predoctoral Fellowship. The AFRI Fellowship Program aims to develop the next generation of research, education, and extension professionals in the food and agricultural sciences. During this two-year fellowship, Katie will continue her interdisciplinary research on the role of natural vs synthetic vitamin E in brain using a vitamin E deficient mouse model.

Susannah Scaroni qualified as a member of the US Paralympic Marathon Team for the 2020 Tokyo Paralympic Games.

Sharon Thompson was awarded the USDA-NIFA Agriculture and Food Research Initiative (AFRI) Predoctoral Fellowship. During this two-year fellowship, Sharon will continue her research on the impact of avocado consumption on the gut-microbiota-liver axis in the context of adult overweight and obesity. Sharon also received the American Society for Nutrition’s Clinical Emerging Leader Award at Nutrition 2019 in Baltimore, MD. Sharon's presentation entitled “Effects of Avocado Consumption on Gastrointestinal Microbial Metabolite Concentrations and Taxa Abundances: A Randomized, Controlled Trial” earned her a cash prize and recognition at the ASN awards ceremony.
Faculty Updates

**Brenna Ellison** was awarded the Outstanding Applied Economic Perspective and Policy Article Award for 2018 (awarded in 2019) and NACTA Educator Award, 2019.

**John Erdman** presented the Carolyn Clifford Distinguished Lecture on Nutrition and Cancer at the University of California, Davis in late October. His lecture was titled; “Tomatoes, lycopene and risk of prostate cancer”.

**Zeynep Madak-Erdogan** accepted the position of science Editor-in-Chief for Endocrine and Metabolic Science from Elsevier Publisher. She will also be serving on the Diversity and Inclusion committee of the Endocrine Society.

**Erik Nelson** was awarded an R01 funded through the National Cancer Institute as well as grants from the American Institute of Cancer Research and METAvivor. The focus of his research is on how cholesterol and its metabolites influence the progression of breast cancer.

**Kelly Swanson** was the Fechheimer Symposium Speaker at the Ohio State University. He is also serving as a Scientific Advisor for the International Life Sciences Institute (ILSI) Leadership Council and Chair of the International Scientific Association for Probiotics and Prebiotics (ISAPP) Symbiotic. Consensus Panel.

**Yong-Su Jin and Michael Miller** received a University of Illinois Investment for Growth award to fund “SynFONI,” the new Synthetic Biology for Food and Nutrition Innovation program. This initiative will build a research network between top-ranked ACES research programs and Illinois food and agricultural industries and will create a new professional MS program in Synthetic Biology for Food and Nutrition and a minor in Fermentation Science.

New Faculty in DNS

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<tr>
<th>Paul Davidson</th>
<th>Madhu Khanna</th>
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<tr>
<td>Assistant Professor</td>
<td>Professor</td>
</tr>
<tr>
<td>Dept. of Agricultural &amp; Biological Engineering</td>
<td>Dept. of Agricultural &amp; Consumer Economics</td>
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<td>College of ACES</td>
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<tr>
<th>Jodi Flaws</th>
<th>Sandraluz Lara-Cinisomo</th>
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<tr>
<td>Professor</td>
<td>Assistant Professor</td>
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<tr>
<td>Dept. of Comparative Biosciences</td>
<td>Dept. of Kinesiology and Community Health</td>
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<tr>
<td>College of Veterinary Medicine</td>
<td>College of Applied Health Sciences</td>
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<tr>
<th>Jennie Hsu-Lumetta, MD, FACP</th>
<th>Daniel McKim</th>
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<tr>
<td>Clinical Associate Professor</td>
<td>Assistant Professor</td>
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<td>Carle Illinois College of Medicine</td>
<td>Dept. of Animal Sciences</td>
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$50,000 for 50 Years of Research Excellence

In recognition of the DNS 50th Anniversary, DNS announced a special Request for Proposals (RFP). The RFP focused on research proposals from exceptional interdisciplinary teams, for innovative nutritional sciences projects with potential for impactful and translational applications on areas such as human and animal health, food security or community nutrition. We received eight excellent submissions and after very careful consideration, three projects were selected to each receive $50,000 in funding.

- **Sharon Donovan** - Dept. of Food Science and Human Nutrition
  *Dietary Regulation of Bile Acid Metabolism in Human Infants*

- **Naiman Khan** - Dept. of Kinesiology and Community Health
  *Role of Hepatic Steatosis and Lipid Metabolites in Childhood Cognition and Brain Health*

- **Andrew Steelman** - Dept. of Animal Sciences
  *Dietary Fiber as a Treatment for Aberrant Glial Activation in Aged Mice*
Alumni Updates

**Henna Muzaffar (PhD 2012)** received the 2019 Early Career Award from the Nutrition Education and Behavioral Science Research Interest Section (RIS) of the American Society for Nutrition (ASN). She is an assistant professor at Northern Illinois University, College of Health and Human Sciences, where she is teaching four courses, has developed a new online course on health disparities research and was recently designated as the Eating Disorder & Obesity Certificate Facilitator. She served as the Chair of the Nutrition Education & Behavioral Science RIS for ASN and was elected chair-elect for the Nutrition Education for Public Dietetic Practice group of the Academy of Nutrition and Dietetics.

**Sasha Barnett (McCorkle) (MS 2016)** accepted the position of scientist at Hill’s Pet Nutrition. She received her PhD in Food Science from Washington State University in May 2019.

**Brian Berg (PhD 2004)** was a guest speaker for the DNS “Industry Immersion for Career Opportunities” course. Brian shared with students the importance of “taking opportunities at the right time,” walked us through a day in the life of a Medical Science Liaison, and shared many other insights from his career.

**Dipti Dev (PhD 2014)** was promoted to Associate Professor with tenure at the University of Nebraska-Lincoln.

**Kirstie Canene-Adams (PhD 2004)** was a guest speaker for the DNS “Industry Immersion for Career Opportunities” course. Kirstie presented “Nutrition Career Insights and Hurdles” and used her unique career path as an example. Kirstie encouraged students to use their training in DNS to “Find YOUR sense of purpose”.

**Kristen Harris (PhD 2007)** initiated a new co-op program for DNS students at Pepsi-Co.

**Chris (PhD 2009)** and **Dolores Guest (PhD 2009)** welcomed their second son, Cyrus Lee Guest on October 10th, 2019.

**Guy Johnson (PhD 1976)** was awarded the Trailblazer Award sponsored by the Academy of Nutrition & Dietetics and IFT.

**Virginia Luchini (MS 2016)** hosted DNS students at Curion Insights. Students learned about project management and got to conduct a sensory experiment.

**Matt Panasevich (PhD 2015)** was promoted to Senior Nutrition Scientist with General Mills.

**Lauren Panasevich (Conlon) (PhD 2015)** completed her DVM at the University of Missouri and has accepted a position as a small animal general practitioner in Dallas, Texas.

**Keri Poi (Kles) (PhD 2002)** hosted DNS students at Eli Lilly and Company. During the visit, Keri gave us a tour of their Heritage Hall and held a panel discussion for DNS students and Eli Lilly staff.

**Krystal Zuniga (PhD 2013)** accepted the position of Assistant Professor in the Department of Oncology at Dell Medical School, University of Texas at Austin and is a Registered Dietician at LIVESTRONG Cancer Institutes, UT Health Austin.

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Giving Back

We are very thankful to the faculty, students, alumni and friends who have supported DNS through contributions to the Endowment Fund, the Annual Fund, and the Margin of Excellence Fund. Contributions of all amounts are greatly appreciated. DNS would like to ask that you consider taking this opportunity to help secure our brilliant future by making a new contribution or an additional contribution to your alma mater.

Support DNS

In recognition of the DNS 50th Anniversary, the maximum budget for Margin of Excellence Research projects was temporarily increased from $2,000 to $5,000. DNS received 26 Margin of Excellence research proposals. All proposals were reviewed and rated by a faculty committee. Six proposals received the highest ranking of “Excellent” from all reviewers. These proposals are listed below. A total of $78,000 was distributed through the Margin of Excellence Research Program in 2019.

Andrew Dinsmoor (MS, advised by Drs. Khan and Donovan)
Testing the Reliability and Efficacy of a Novel Macular Pigment Assessment Technique among 4-6-year-olds

Colleen McKenna (PhD, advised by Dr. Burd)
Interdialytic Exercise to Enhance Postprandial Muscle Protein Synthesis in Hemodialysis Patients

Erin Davis (PhD, advised by Dr. Donovan)
Impact of Probiotic Yogurt Consumption on the Human Milk Metagenome

Jonathan Cerna (MS, advised by Dr. Khan)
Exploratory Analysis of Inflammation, Carotenoids, and Retinal Morphometry in Multiple Sclerosis

Lucy Mailing (MD-PhD, advised by Dr. Woods)
Efficacy of the Autoimmune Protocol Diet on the Gut Microbiome and Gut barrier Function in Eczema and Psoriasis Patients

Ruyu Liu (MS, advised by Dr. Khan)
Genetic Determinants of Macular Pigments in Children

The Margin of Excellence Research program supports original research proposed by DNS students and provides students with experience preparing research proposals and project management.

The Margin of Excellence is a unique opportunity for our DNS students that will continue to prepare them for their professional careers. Thanks to donors like you we have been able to successfully endow the Margin of Excellence fund to ensure sustainability. However, we want to also ensure we can continue to grow this fund to impact more students annually. Your gift to the Nutritional Sciences Margin of Excellence Fund supports conference travel grants and seed-grant funding for research projects such as those listed above. Please contact Matt Smith (msmi@illinois.edu) to learn more about how you can support the Margin of Excellence program.

Giving Options

- **Nutritional Sciences Margin of Excellence Fund (#339154)** Provides conference travel grants and research seed-grant funding to DNS students on a competitive basis

- **DNS Excellence Endowment Fund (#773001)** Provides permanent funding for the recruitment and retention of the best graduate students and enhanced research and professional development experiences for all DNS students

- **DNS Annual Fund (#332984)** Provides unrestricted support for DNS

- **Frontiers in Nutritional Sciences Fund (#339153)** Supports the weekly DNS seminar series for University of Illinois faculty and students

Dr. Barbara Kochanowski (PhD, 1984) and Dr. Elvira de Mejia at the Illinois Nutrition Mixer at ASN.