DNS Receives Excellent Rating in Doctoral Assessment

The UIUC Graduate College recently completed a comprehensive assessment of the Division of Nutritional Sciences. The Division’s doctoral program had been previously evaluated by the Graduate College in 2011 and received a rating of “Category 1-Good Program Effectiveness.” The assessment from 2011 included suggestions for DNS to increase teaching opportunities for students and to continue to strive for diversity in the doctoral program.

As part of the review process, which will be repeated every five years, the Division supplied the assessment committee with extensive program data covering a variety of topics including student accomplishments, publications and job placement information. New to the assessment this year, the Graduate College administered a confidential survey to current DNS students and recent graduates.

According to Rodney Johnson, DNS Director, it was rewarding to go through the assessment process again to demonstrate that DNS has taken steps to improve in those areas, shown by the new “Category 1- Excellent Program Effectiveness” rating. The improved rating put DNS among the very top applied health and social sciences programs campus wide.

“We developed a central location on our website where students can get information about teaching opportunities. We also changed our annual review form to help identify students interested in a career in academia. This allowed us to better help students gain the teaching experience they need.”

Which proved to work, as the Division was reported to show a “strong, promising effort with emerging evidence of impact” on the assessment’s improvement scale. The Division was also given an “Excellent” rating for both Program Effectiveness and Student Evaluation of Satisfaction and Preparedness.

Johnson says this can be attributed, in part, to the passion faculty members have in training their graduate students.

“In our program, faculty members put a lot of effort into training – they care about each student and strive to see them reach their goals,” said Johnson.

This is evident in the more than 90 percent of DNS students who reported meeting with their advisors at least once or twice a month. Additionally, more than 80 percent reported they were “very or extremely satisfied” with their relationship with their advisor.

The ranking also highlighted recent student placement data: 50 percent obtained postdoc positions, and for the last 5 years, 68 percent of PhD recipients are employed in some type of academia. Eight percent overall went into industry.

“It’s refreshing to see the students’ favorable rating of the program – they are proud to say they earned their degree in the Division of Nutritional Sciences at the University of Illinois,” said Johnson.

By Elizabeth Koehler

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(217) 333-4177 • http://www.nutritionalsciences.illinois.edu
2014 Endowed Student Awards Banquet

January 29, 2014

Experimental Biology 2014

University of Illinois Nutrition Mixer

Monday, April 28 ~ 6-8 p.m.
San Diego Convention Center
San Diego, CA

Co-sponsored by
Ed Ulman, Research Diets, Inc.
Division of Nutritional Sciences
Department of Food Science and

DNS Students on the UIUC List of Teachers Ranked as Excellent—Fall 2013

ACES 101: Contemporary Issues in ACES
Brett Loman

FSHN 416: Food Chemistry Laboratory
*Michelle Johnson

FSHN 420: Nutritional Aspects of Disease
*Peter Fitschen ● Reeba Jacob ● Brett Loman
Heather Mangian ● *Brendon Smith ● *Josh Smith
*Brigitte Townsend ● *Patricia Wolf

VM 606,626: Cell and Tissue Biology, Microbiology
Vanessa Peters

*Indicates they were given an outstanding rating (top 10%)
A new University of Illinois study finds that obese children are slower than healthy-weight children to recognize when they have made an error and correct it. The research is the first to show that weight status not only affects how quickly children react to stimuli but also impacts the level of activity that occurs in the cerebral cortex during action monitoring.

"I like to explain action monitoring this way: when you're typing, you don't have to be looking at your keyboard or your screen to realize that you've made a keystroke error. That's because action monitoring is occurring in your brain's prefrontal cortex," said Charles Hillman, a U of I professor of kinesiology and faculty member in the U of I's Division of Nutritional Sciences.

As an executive control task that requires organizing, planning, and inhibiting, action monitoring requires people to be computational and conscious at all times as they process their behavior. Because these higher-order cognitive processes are needed for success in mathematics and reading, they are linked with success in school and positive life outcomes, he said.

"Imagine a child in a math class constantly checking to make sure she's carrying the digit over when she's adding. That's an example," he added.

In the study, the scientists measured the behavioral and neuroelectric responses of 74 preadolescent children, half of them obese, half at a healthy weight. Children were fitted with caps that recorded electroencephalographic activity and asked to participate in a task that presented left- or right-facing fish, predictably facing in either the same or the opposite direction. Children were asked to press a button based on the direction of the middle (that is, target) fish. The flanking fish either pointed in the same direction (facilitating) or in the opposite direction (hindering) their ability to respond successfully.

"We found that obese children were considerably slower to respond to stimuli when they were involved in this activity," Hillman said.

The researchers also found that healthy-weight children were better at evaluating their need to change their behavior in order to avoid future errors. "The healthy-weight kids were more accurate following an error than the obese children were, and when the task required greater amounts of executive control, the difference was even greater," he reported.

A second evaluation measured electrical activity in the brain "that occurs at the intersection of thought and action," Hillman said. "We can measure what we call error-related negativity (ERN) in the electrical pattern that the brain generates following errors. When children made an error, we could see a larger negative response. And we found that healthy-weight children are better able to upregulate the neuroelectric processes that underlie error evaluation."

Scientists in the Hillman lab and elsewhere have seen a connection between healthy weight and academic achievement, "but a study like this helps us understand what's happening. There are certainly physiological differences in the brain activity of obese and healthy-weight children. It's exciting to be able to use functional brain imaging to see the way children's weight affects the aspects of cognition that influence and underlie achievement," said postdoctoral researcher and co-author Naiman Khan.

"The Negative Association of Childhood Obesity to Cognitive Control of Action Monitoring" is available pre-publication online in Cerebral Cortex at http://cercor.oxfordjournals.org/content/early/2012/11/09/cercor.bhs349.short. The U of I's Hillman, Khan, Lauren B. Raine, Mark R. Scudder, and Eric S. Drollette; Keita Kamijo of Waseda University, Tokorozawa, Japan; Matthew B. Pontifex, Michigan State University; Ellen M. Evans, University of Georgia; and Darla M. C3astelli, University of Texas at Austin, are co-authors of the study. Funding was provided by the National Institute of Child Health and Human Development.
Some of the attendees of the 2013 NSGSA Holiday Party. Pictured (l to r): Dr. Johnson, Brian Leyshon, Josh Smith, Brendon Smith, Matthew Panasevich and Lauren Conlon.

**2014 Margin of Excellence Research Fund Recipients**

Research funds support research conducted by students and provide them with experience in preparing research proposals. Students are selected by the quality of the proposed research and are provided $800 to $2,000.

**Tim Abbott (Ph.D. Nakamura)**
Mechanisms by which reduced testes docosahexaenoic acid (DHA) impairs sperm health and male fertility

**Kathryn Ahamed (M.S. Swanson)**
Understanding the relationship between obesity, gastrointestinal physiology, and the microbiome in the Ossabaw obese pig model

**Kirsten Berding (M.S. Donovan)**
Influence of dietary manipulation on the gut-brain axis in piglets

**Allyson Bower (Ph.D. de Mejia)**
Mechanism of action of natural inhibitors of DPP-IV in the development of diabetic nephropathy in vitro

**Lauren Conlon (Ph.D. Erdman)**
The effects of soy germ and equol on epigenetic changes in prostate cancer

**Peter Fitschen (Ph.D. Wilund)**
Effects of intradialytic whey protein supplementation on the plasma amino acid profile during hemodialysis: a pilot study

**Trisha Gibbons (M.S. Johnson)**
Dietary luteolin influences microglial cells in aged to a unique anti-inflammatory and neuroprotective phenotype

**Reeba Jacob (M.S. Dilger)**
Effect of neonatal diets on structural and functional aspects of small intestinal development

**Michelle Johnson (Ph.D. de Mejia)**
Comprehensive in vitro and in vivo evaluation of anthocyanins and proanthocyanidins from blueberry and blackberry fermented beverages to reduce type-2 diabetes

**Brian Leyshon (M.S. Johnson)**
Effects of iron deficiency upon oligodendrocytes and myelination in the porcine model

**Tzu-Wen Liu (Ph.D. Swanson)**
Resistant starch to limit fat mass gain and shift gut microbiota to protect against inflammation

**Brett Loman (Ph.D. Tappenden)**
Altered butyrate metabolism in GI microbiota & infants with short bowel syndrome

**Courtney Marques (M.S. Teran-Garcia)**
Common variations in the BCMO1 gene locus and their association with lipopolysaccharide profile, obesity, and β-carotene intake in young Mexican adults

**Jane Naberhuis (Ph.D. Tappenden)**
Validating a scoring tool to assess neonatal feeding intolerance and necrotizing enterocolitis risk

**Marissa Pallotto (M.S. Swanson)**
Effects of weight loss and feeding a high-protein, high-fiber diet on fecal microbiota, blood metabolite profiles, and voluntary physical activity in overweight cats

**Matt Panasevich (Ph.D. Dilger)**
Effects of weight loss and feeding a high-protein, high-fiber diet on fecal microbiota, blood metabolite and inflammatory profiles in overweight dogs

**Elizabeth Reznikov (Ph.D. Donovan)**
Bacterial species in the ascending colon contents and stool of neonatal piglets fed bovine lactoferrin and B. infantis-supplemented formula

**Joshua Smith (Ph.D. Erdman)**
Loss of β-carotene-15, 15'-monoxygenase or β-carotene-9', 10-dioxygenase and alterations in hepatic and testicular lipid profiles

**Albert Towers (Ph.D. Freund)**
Role of Cytochrome P450 4A in response to calorie restriction

**Brigitte Townsend (Ph.D. Johnson)**
Induction of the Nrf2 pathway as a potential therapeutic target for suppressing neuroinflammation and oxidative stress in the aging brain

**Anthony Wang (M.D. - Ph.D. Teran-Garcia)**
Comparing the abundance of butyrate-producing bacteria in fecal microbiota of overweight and normal weight children

**Patricia Wolf (M.S. Gaskins)**
Are sulfidogenic bacteria more abundant in sigmoid biopsies of healthy high fat and high BMI patients?
Awards, Service and Personal Achievements

- **Peter Fitschen** coauthored an abstract published in the “Journal of the American Society for Nephrology” entitled “Impact of Diastolic Dysfunction on Physical Function and Body Composition in Hemodialysis Patients”. He also coauthored two manuscripts— “Perceptual effects and efficacy of intermittent vs. continuous blood flow restriction resistance exercise” was published in “Clinical Physiology and Functional Imaging” (In Press) and “Dual task costs in postural control of maintenance hemodialysis patients” was published in “Gait and Posture”.

- **Diego Hernandez** received the American Society for Biochemistry and Molecular Biology 2014 Graduate/Postdoctoral Travel Award, which allowed him to travel to Experimental Biology in April.

- **Michelle Johnson** passed her prelim exam in October and is part of a de Mejia lab Vision 20/20 Grant from DNS awarded in November.

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2013 Nutritional Sciences Gamma Sigma Delta Awards Banquet

Pictured (l to r): back: Dr. Andrade, Dr. O’Brien, Dr. Miller, Diego Hernandez, Michelle Johnson, Brendon Smith, Dr. de Mejia, Dr. Hartke; middle: Julia Kim, Annabel Biruete, Virginia Luchini, Vanessa Peters; front: Natasha Cole, Richard Bukenya, Katie Paige and Fang Yang

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2014 Certificate in Business Administration Scholarship Recipients

Lauren Conlon • Virginia Luchini • Matt Panasevich

The University of Illinois College of Business Certificate in Business Administration program is designed to provide non-business graduate students with a strategic framework for making informed business decisions. The course offers a concentrated, detailed program that examines an array of topics such as: marketing, financial management, organizational behavior and leadership, innovation technology and management, business ethics. Scholarships for this program are sponsored by Abbott Nutrition.

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2014 Endowed Student-Award Recipients

- **David H. Baker Nutrition Scholar Award**: Dipti Dev
- **James L. Robinson Nutrition Impact Award**: Nathan Pratt
- **Toshiro Nishida Research Travel Award**: Annabel Biruete, Virginia Luchini
- **William C. Rose Research Travel Award**: Timothy Abbott, Trisha Gibbons, Courtney Marques, Matthew Panasevich
- **Frank W. Kari Memorial Travel Award**: Allyson Bower, Diego Hernandez, Jane Naberhuis, Brigitte Townsend

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December Graduate

Dipti Dev

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2013 Margin of Excellence Travel Award Recipients

Timothy Abbott
Whitney Ajie
Allyson Bower
Gabriel Chiu
Lauren Conlon
Dipti Dev
Kristy Du
Michelle Johnson
Claudia Luevano Contreras
Morgan Moon
Jonathan Mun
Jane Naberhuis
Elizabeth Reznikov
Brendon Smith
Pablo Torres-Aguilar
Brigitte Townsend
Anthony Wang

Travel funds provide the opportunity for students to travel to national and international scientific conferences to present their research and interact with leading researchers and other graduate students.
Brenna Ellison is currently serving on the International Scientific Committee for a symposium entitled “Consumer Behavior in a Changing World: Food, Culture, and Society”. She also gave invited seminars at the W.P. Carey School of Business at Arizona State University and for DNS. She was a Co-PI on a funded grant through the American Jersey Cattle Association/ National All-Jersey, Inc. and an investigator on a funded FIRE grant through the College of ACES.

Sharon Donovan was selected as the 2014 FSHN Outstanding Advisor/Mentor award winner.

John Erdman was selected to present the 52nd Tanner Lecture to the Chicago Section of IFT in May, 2014. He also will welcome his first grandchild, Townes Paulin, son of daughter Jackie and Christian Paulin in November.

Diana Grigsby-Toussaint coauthored an article entitled “Spatial Distribution of Underweight, Overweight and Obesity among Women and Children: Results from the 2011 Uganda Demographic and Health Survey” which was featured in the “International Journal of Environmental Research and Public Health.” She also gave an invited talk as part of the Global Health Seminar Series by the Global Health Institute at the University of Wisconsin-Madison in October 2013.

Kelly Swanson serves on the review panel for the USDA Agricultural Research Service Human Nutrition Program (NP 107 Panel 15: Animal/In Vitro Models) and the American Academy of Veterinary Nutrition/Waltham Research Grant Program. He also gave two invited talks at the 2013 Waltham International Nutritional Sciences Symposium in Portland, Ore. and two more in October 2013 at the 2013 Alltech Petfood Forum—Brazil in Sao Paulo.

I-TOPP Update

February 1, 2014 was the 3 year mark for the Illinois Transdisciplinary Obesity Prevention Program (I-TOPP), a USDA funded grant awarded to Dr. Sharon Donovan (PI) along with a number of other DNS faculty. With campus support for 3 additional students who joined this year, we now have a total of 11 I-TOPP scholars pursuing both a MPH and PhD in this joint degree program. Maria Pineros-Leano is in Social Work; Mary Christoph and Liliana Aguayo in Community Health; Jessica Jarick, Anneliese Feld, Jaclyn Saltzman and Roger Figueroa in Human and Community Development; Lauren Raine in Kinesiology; Katie Paige, Natasha Cole, and Julia Kim in Nutritional Sciences.

I-TOPP also provides opportunities for broad cross-disciplinary interactions between University of Illinois faculty and scholars with international leaders through a lectureship series, visiting faculty, and a biennial symposium. Speakers who have visited the campus recently include:

- Dr. Madeleine Sigman-Grant, from the University of Nevada Cooperative Extension presented "Mealtimes in Child Care: A Potential Avenue for Obesity Prevention in Young Children" as part of the visiting faculty program.
- Dr. Daniel Stokols, from the University of California at Irvine helped us better understand Social Ecology as framework for transdisciplinary action research.
- Dr. Anthony Comuzzie, from the Texas Biomedical Research Institute discussed his views on the genetic contribution to obesity and diabetes in children.
- Dr. Kirk Erikson from the University of Pittsburgh delivered "Exercise, Obesity, and Brain Function throughout the Lifespan" as part of his visiting faculty experience.

The final component of I-TOPP is to better understand the impact of transdisciplinary education by gathering data from our own scholars compared to traditional PhD- only or MPH- only students. We look forward to learning more about the impact of transdisciplinary training through these efforts.
Alumni Updates

Susan Zaripheh (at right) receiving her 2013 ACES Alumni Association Outstanding Young Alumni Award.

Brian Lindshield (Ph.D. 2008) was married to Erika Bono on December 7th.

Bruce Molitoris (M.S. 1975) finished his year as President of the American Society of Nephrology in November 2013. He also received a career achievement award for his research in acute kidney injury from the International Society of Nephrology in the summer of 2013.

Sara Painter (Ph.D. 2008) is working part-time as a Dietician Consultant with Health Technologies and teaches the Dietary Managers courses at Rock Valley College.

Christina Sherry (Ph.D. 2009) is an advisor for the American Society for Nutrition Young Professional Interest Group (YPIG), was promoted to Research Scientist at Abbott Nutrition and received an Abbott Excellence Award. She also was made the Board Chair of the Greater Columbus Rowing Association Board of Trustees. She gave invited talks in the Dominican Republic, Columbus, Ohio and Champaign in addition to having two articles published.

Krystle E. Zuniga (Ph.D. 2013) married Nick Dietz on May 24, 2013 in Texas. She also accepted a position at Texas State University as an Assistant Professor in the Nutrition & Foods Program beginning in Fall 2014.

Help us keep track of other alumni!

We always try to keep in touch with our alumni, whether it be through this newsletter, social media, or direct mailings. Through the years, we have lost touch with some alumni. If you have an email or mailing address for the following DNS alumni, please let us know via email at nutritionalsciences@illinois.edu.


In Memoriam

Former DNS Director John Milner, 66, passed away on December 31, 2013. Dr. Milner came to UIUC in 1978, was a member of the Division for 14 years and served as Director from 1981-1989. As Director, he helped expand the program by more than doubling the number of faculty members, increasing donor numbers and helping start the joint Ph.D. program with UIC. Emeritus Professor James Robinson remembers John’s enthusiasm and willingness to try new ways of doing things. He greatly increased the visibility of the Division on campus and nationally. After leaving Illinois, he was Head of the Department of Nutrition at Penn State until 2000, when he became chief of the National Cancer Institute’s Nutrition Science Research Group and then Director of the USDA Beltsville Human Nutrition Center. He served as AIN President ‘95-’96 and was selected as an ASN Fellow in 2013. John was a towering figure in nutritional sciences, especially in the area of nutrition and cancer prevention, publishing over 250 journal articles, book chapters and monographs. Professor Emeritus John Erdman stated that “John had the ability to think big, motivate others towards his visions for the good of all. Never one to sit passively, he had the ‘can do’ attitude that always made a difference.” He will be sorely missed.
Support DNS
The Division launched its Endowment Initiative in 2001, and we are very thankful to the faculty, students, alumni and friends who have supported DNS through contributions to the Endowment Fund and the Annual Fund.

Contributions of all amounts are greatly appreciated. DNS would like to ask that you consider taking this opportunity to secure our brilliant future by making a new contribution or an additional contribution to your alma mater.

Project DEED
Project DEED is an effort to increase the DNS endowment fund by $250,000. These endowment funds will provide permanent support for the recruitment and retention of the best graduate students and strengthen the educational experience of all DNS students. To donate to Project DEED, use account #773001.

New Faculty in DNS—2013-2014

Dr. Burd is an Assistant Professor in Kinesiology & Community Health. He hopes his involvement in DNS will help him study the metabolic aspects of human nutrition and exercise by the use of stable isotope tracers.

Dr. Dailey hopes her collaboration with other DNS faculty will help her to properly define the mechanisms underlying nutrient sensing in the nervous system. She studies the crosstalk between the gastrointestinal tract and the nervous system in nutrient sensing and coordinating signals to start/stop eating. She is an Assistant Professor.

Dr. De Lisio focuses on how exercise can alter stem cell quantity and function to prevent or treat disease through protection from oxidative damage, alterations in stem cell fate decisions or optimization of the stem cell secretome. He is an Assistant Professor in Kinesiology & Community Health, and looks forward to the opportunity to collaborate with faculty and work with students.

Dr. Ellison is an Assistant Professor in ACE, where her research has focused on consumers’ preferences for, and reactions to, calorie labels on restaurant menus. As a member of DNS, she plans to work with students and faculty and hopes to utilize Bevier Café and the Spice Box to continue her research on consumers’ food choices based on labels in the marketplace.

Dr. Lezmi is an Assistant Professor in the Pathobiology department (Vet Med). He hopes his involvement in DNS will help his research on changes in the central and peripheral nervous system, with the ultimate goal of treating gastrointestinal tract inflammatory states as well as new potential opportunities to treat anxiety disorders.

Dr. Nickols-Richardson is the FSHN Dept. Head and hopes her new connection to nutritional scientists, outside of FSHN, will help enhance her research on determinants of obesity prevention and body weight regulation across the life span to lower the burden of chronic diseases, ranging from metabolic syndrome to osteoporosis.

Dr. Rhodes is an Associate Professor in the Psychology Department studying behavioral neuroscience and behavior genetics. He currently runs a core facility for conduction mouse behavior and hippocampal neurogenesis experiments for the newly funded Center for Nutrition Learning and Memory and looks forward to move

Dr. Tussing-Humphreys studies the influence of obesity on nutrient metabolism and its relationship to disease risk across the lifecycle. She is an Assistant Professor in the Division of Health Promotion Research in the UIC Department of Medicine. She hopes to collaborate with DNS students and faculty. Dr. Tussing-Humphreys

Giving Options

- DNS Excellence Endowment Fund/Project DEED (#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 Excellence Fund (#336514): Provides current funding for research and professional development opportunities for DNS students.
- DNS Annual Fund (#332984): Provides unrestricted support for DNS.
- David H. Baker Nutrition Scholar Award Fund (#771806): Recognizes students who display excellence in research as documented through peer-reviewed publications, awards and research grants.
- James L. Robinson Nutrition Impact Award Fund (#772698): Recognizes students who display excellence in professional service through activities in the NSGSA or to promote and enhance DNS and/or nutrition at the campus, state or national level.
- Frank W. Kari Memorial Award Fund (#773054): Provides travel awards to DNS students to present their scientific findings at professional meetings, such as Experimental Biology.
- Toshiro Nishida Research Award Fund (#772951): Provides support for travel to national and international scientific conferences to DNS Students.
- William C. Rose Award Fund (#770331): Provides travel awards to DNS students to attend scientific conferences in the field of nutritional sciences.