Joint Degrees Offer Students Exciting Opportunities

Communicating across disciplines and to a variety of audiences is a key skill that students participating in joint degree programs must develop. The multidisciplinary training these students experience will form the foundation of their graduate research and clinical training and position them for professional success in the future. In DNS, students have the unique opportunity to choose from three different joint degree programs. These options include the Doctor of Veterinary Medicine (DVM) & PhD, Master of Public Health (MPH) & PhD and Doctor of Medicine (MD) & PhD degree programs.

Currently, seven DNS students are enrolled in these special multidisciplinary degree programs – two in the DVM/PhD (Megan Caputo and Caitlyn Getty), two in the MPH/PhD (Julia Kim and Katie Robinson) and three in the MD/PhD (Laura Moody, Vanessa Peters and Anthony Wang).

Each of the joint degree participants develop this combined training in their respective programs. Another prevalent component to all joint degrees is the practice of application, according to MPH/PhD student, Katie Robinson.

“I believe translation is essential in research,” said Katie. “In my joint degree, I received the traditional training of a PhD, but was also able to practice application during my MPH coursework and practicum.”

Overall, the joint degree programs are rigorous, but rewarding for those driven in their areas. According to Julia Kim, a MPH/PhD student, that drive is what leads you to success.

“My experience is unique and I would not trade it for anything else,” said Julia. “There are ups and downs as with any other PhD program, but with proper guidance and helpful team members, I have learned a lot academically and grown as a person.”

These alternative degree programs have led each of the seven DNS students to expand their skill set and prepare for real-world applications.

Endowed Awards Ceremony
January 28, 2015
Urbana, IL

DNS Recruiting Weekend
February 26-27, 2015
Urbana, IL

NSGSA Nutrition Symposium
March 19, 2015
Urbana, IL

Experimental Biology Meeting
March 28 - April 1, 2015
Boston, MA

ACES Funk Awards Ceremony
April 13, 2015
Urbana, IL

ACES Spring Commencement
May 17, 2015
Urbana, IL

External Advisory Committee Meeting
September 10, 2015
Urbana, IL

Fall Nutrition Quiz Bowl
October 14, 2015
Urbana, IL

I-TOPP Biennial Symposium
October 8-9, 2015
Urbana, IL
Emeriti Faculty at the 2015 Endowed Student Award Ceremony
Pictured (l to r): Dr. Jim Robinson, Dr. George Fahey, Dr. John Erdman and Dr. Terry Hatch

DNS Students on the UIUC List of Teachers Ranked as Excellent Fall 2014
FSHN 416: Food Chemistry Lab
*Michelle Johnson
FHSN 420: Nutritional Aspects of Disease
FHSN 466: Food Product Development
Nathan Pratt
HDFS 105: Intro. to Human Development
*Julia Kim
College of Medicine 606 & 626: Cell and Tissue Biology & Medical Microbiology
Vanessa Peters
*Indicates an outstanding ranking (top 10%)

Experimental Biology 2015
University of Illinois Nutrition Mixer
Monday, March 30 ~ 6-8 p.m.
Renaissance Boston Waterfront Hotel
Boston, MA
Co-sponsored by:
Ed Ulman, Research Diets, Inc. Division of Nutritional Sciences
Department of Food Science and Human Nutrition
Department of Animal Sciences

In Memoriam
Barbara Klein, Professor Emerita of Foods and Nutrition passed away on Feb. 17, 2015. She was internationally recognized in the area of sensory sciences. She also contributed to our understanding of flavor, phytochemical, and nutrient changes during food processing, preparation and storage. She advanced the knowledge of soy protein chemistry and soy foods acceptability by consumers. Dr. Klein authored or co-authored over 100 peer-reviewed, original research and review articles, more than 10 chapters and textbooks and more than 200 presentations. She served on several Institute of Medicine Advisory committees for the National Academy of Sciences, in addition to serving a 4-year term as the Associate Scientific Editor of the Journal of Food Science. She provided service to several national competitive grants panels and review programs. On campus, she served as Department Head of FSHN for two years, and was a faculty member for 25 years before achieving emerita status. She was a Member of the Division of Nutritional Sciences, Functional Foods for Health Program, and Co-Director of the Illinois Center for Soy Foods. In 2014, Barbara received the College of Agricultural, Consumer and Environmental Sciences Alumni Association’s Award of Merit. Fittingly, this award represented Dr. Klein’s life as she lived it – demonstrating outstanding professional achievement, outstanding leadership and service and significantly enhancing and improving the lives of others.

ACES Family Academies
The NSGSA will be participating the the ACES Family Academies this summer! Students will teach participants to discover the importance of healthy eating with family fun activities in their course: “Nutritional Sciences: Fun with Healthy Eating.”
http://acesalumni.illinois.edu/familyacademies/
Although there’s no scientific definition of picky eating, parents say they know it when they see it. Now a University of Illinois study shows that picky eaters do exhibit definable preferences and mealtime behaviors.

Why is this important? “If we better understand the behaviors that parents associate with picky eating, we can develop specific recommendations targeted at those behaviors,” said Sharon Donovan, a U of I professor of nutrition.

The new study showed that kids deemed picky eaters by their parents did react differently to common foods and behaved differently at mealtime than kids whose parents said their kids weren’t choosy. The differences were significant and occurred across 16 assessed behaviors, according to U of I sensory scientist Soo-Yeun Lee.

The two-week study investigated differences in picky eaters’ and non-picky eaters’ behaviors and food selections. Parents of 170 two- to four-year-olds observed their children’s responses to five standardized meals brought into participants’ homes, evaluating their behavior in real time, not from memory. At the beginning of the study, 83 children were described by their parents as picky eaters; 87 children were not.

Significant differences existed between the two groups, with the behavior of picky eaters ranging from simple suspicion of an unfamiliar food to crying, crying, and gagging, Lee said.

“Non-picky eaters on average were perceived by their parents to have consumed more of the meal and had higher acceptance scores for most of the foods evaluated. They also displayed significantly fewer negative behaviors—they were more ‘willing to come to the table to eat’ and ‘participate in mealtime conversation,’” she said.

Lee explained that picky eaters can be divided into four groups: (1) Sensory-Dependent Eaters, who reject a food because it’s mushy, slippery, bitter, or lumpy; (2) Behavioral Responders, who cringe or gag when food’s not prepared in the “right” way or refuse to come to the table at mealtime; (3) Preferential Eaters, who won’t try new foods and avoid foods that are mixed or have complex ingredients; and (4) General Perfectionists (by far the largest group), who have very specific needs, little variety in their diet, and may insist that foods not touch each other.

Are there strategies parents can use to broaden their child’s eating horizons? “A parent’s response to pickiness can determine how bad the behavior will be and how long it will persist. Don’t let every meal become a battle,” Donovan said.

Lee too cautioned against mealtime strategies that may aggravate the behavior. “Requiring kids to eat their broccoli before they can have dessert may simply give the child negative feelings about broccoli in the long run. The child then regards broccoli as something he has to get through to get a reward.”

Donovan said that food preferences are established early in life. “Studies conducted at the U of I in the 1980s showed that exposing kids to different flavors, textures, and food groups was linked to better acceptance of those foods,” she said.

The researchers suggest serving a new item with a food the child likes and taking apart combined foods like sandwiches and casseroles to show what the dish contains.

“Some parents give up on a food if their child rejects it two or three times, but we encourage parents to keep exposing the child to the food. Don’t pressure them to eat it but show them that parents and siblings are eating the food and enjoying it,” Donovan said.

Also, realize that a certain amount of this behavior can be attributed to a toddler’s developmental stage, Donovan said.

“Picky eating peaks between two and three, and at this age, children simply don’t like new things.”

Although picky eating behaviors are not the same in each child, the study suggests that patterns are emerging that can be used to characterize different types of picky eaters. The researchers’ long-term goal is to develop specific strategies for the different types of behaviors for parents to try, Donovan explained.

“In the meantime, trust your child’s ability to eat what and how much they need,” she added. “The best thing parents can do is be gatekeepers over what food comes into the house, then let the child decide what she is going to consume, and allow for the occasional treat.”

Dr. Donovan’s laboratory conducts basic and translational research in the area of pediatric nutrition. During this phase of life, proper nutrition is of key importance for growth, development and long-term functional outcomes, such as cognition and immune response. On-going work in the lab is focusing on optimizing intestinal and cognitive development of neonates, development of the gut microbiome and prevention of childhood obesity and picky eating in children.
Focus on Students

NSGSA Officers
Matt Panasevich
Chair
Tzu-Wen Liu
Co-Chair
Kristy Du
Treasurer
Patricia Wolf
Co-Treasurer
Sasha McCorkle
Secretary
Cassandra Nikolaus
Media Representative
Josh Smith
Student Representative to the Faculty
Marissa Pallotto
Networking Chair

December Graduates
• Nathan Pratt, Ph.D.
  Advisor: Manabu Nakamura
• Brendon Smith, Ph.D.
  Advisors: William O’Brien
  John Erdman

Student Awards at Nutrition Symposium
Oral Session 1: Matt Panasevich
Oral Session 2: Josh Smith
Poster Session: Lauren Conlon
Reeba Jacob
Jane Naberhuis
Brigitte Townsend

Congratulations and thank you to all of the student and faculty presenters, judges and volunteers who helped to make this year’s Nutrition Symposium a success!

Watch the keynote address by Dr. Michael Grandner here: http://nutrsci.illinois.edu/current_students/NSGSA/annual_nutrition_symposium

Student Recognition
Oral and Poster Award Recipients at the 2015 Nutrition Symposium
Pictured (l to r): back row: Brigitte Townsend, Dr. Michael Grandner and Reeba Jacob; front row: Jane Naberhuis, Josh Smith, Matt 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 - $2,000.

Kirsten Berding (M.S., Donovan) Gut Microbiome in Children with ADHD
Annabel Biruete (Ph.D., Wilund) Effect of Inulin Supplementation on Mineral Metabolism in Hemodialysis Patients
Richard Bukenya (Ph.D., Andrade) Development and Validation of General Nutrition Knowledge Questionnaire for Adults in Uganda
Megan Caputo (D.V.M./Ph.D., Johnson) Activity of Peroxisome Proliferator Activated Receptor Beta/Delta in Occipital Lobe of Small Gestational Age and Average for Gestational Age Piglets
Natasha Chong-Cole (Ph.D., Donovan & Lee) Parental Feeding, DRD4, and the Prediction of Picky Eating Behaviors in Toddlers
Kristy Du (Ph.D., Rhodes) Breakfast Dietary Protein Sources Affect Satiety
Sookyoun Jeon (Ph.D., Erdman) Optimization of Lutein and α-tocopherol Production in vitro Using Carrot Cell Suspension Culture
Michelle Johnson (Ph.D., de Mejia) Phenolic compounds from Blueberry and Blackberry Fermented Beverages to Reduce Obesity and Hyperglycemia in a Diet-induced Model of Type-2 Diabetes
Julia Kim (M.P.H./Ph.D., Donovan) Breastfeeding Barriers Among African-American Mothers in Champaign County
Brian Leyshon (M.S., Johnson) Effects of Iron Deficiency upon White Matter Development in the Neonatal Piglet Model
Daycare and Home Mealtime Settings
Virginia Luchini (M.S., Donovan & Lee) Location Matters: Differences in Children’s Eating Behaviors and Caregiver Strategies between Daycare and Home Mealtime Settings
Alexandra Lundquist (M.S., McBride & Donovan) Non-Parental Care as a Determinant of Breastfeeding
Josh Smith (Ph.D., Erdman) Effects of BCO1 Loss on Prostatic Androgen Signaling and Markers of Proliferation
Anthony Wang (M.D./Ph.D., Teran-Garcia) The Association of Varients in the FFAR Genomic Region on Obesity in Children
Patricia Wolf (M.S., Gaskins) Impact of Dietary Sources of Organic Sulfur on Colonic Sulfidogenic Bacterial Abundance

2015 Certificate in Business Administration Scholarship Recipients
Richard Bukenya • Brian Leyshon • Sasha McCorkle • Brigitte Townsend
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, innovative technology and management and business ethics. Scholarships for this program are sponsored by Abbott Nutrition.
• Kirsten Berding received an ACES Office of International Programs Graduate Student International Research Grant to travel to the Czech Republic on her proposal entitled “Establishing a Gnotbiotic Piglet Model to Study Mechanisms of Microbiome-Gut-Brain-Axis in ADHD.”

• Jane Naberhuis presented her abstract, “A Novel Neonatal Feeding Intolerance and Necrotizing Enterocolitis Risk Scoring Tool is Easy to Use and Valued by Nursing Staff,” at the American Society for Parenteral & Enteral Nutrition’s Clinical Nutrition Week in February.

• Fang Yang co-authored a paper entitled “Genetically Identical Co-Housed Pigs as Models for Dietary Studies of Gut Microbiomes” that was published in Microbiome Science and Medicine.

Awards, Service and Personal Achievements

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• Jane Naberhuis presented her abstract, “A Novel Neonatal Feeding Intolerance and Necrotizing Enterocolitis Risk Scoring Tool is Easy to Use and Valued by Nursing Staff,” at the American Society for Parenteral & Enteral Nutrition’s Clinical Nutrition Week in February.

• Fang Yang co-authored a paper entitled “Genetically Identical Co-Housed Pigs as Models for Dietary Studies of Gut Microbiomes” that was published in Microbiome Science and Medicine.

2014 Nutritional Sciences Gamma Sigma Delta Awards Banquet

Pictured (l to r): back row: Juan Andrade, Matt Panasevich, Diego Hernandez, Natasha Chong-Cole, Michelle Johnson, Allyson Bower, Richard Bukeyna and Kathryn Austin; front row: Dr. Johnson, Dr. Nickols-Richardson, Dr. Hartke, Julia Kim, Alexandra Lundquist, Cassandra Nikolaus, Virginia Luchini and Dr. Lee

ASN Emerging Leaders in Nutrition Science Competitors


• Kristy Du: “Dietary Supplementation with Quercetin Rejuvenates Cognitive Performance Independent of Adult Hippocampal Neurogenesis” - first place in Aging and Chronic Diseases RIS

• Brian Leyshon: “Postnatal Iron Deficiency Impairs White Matter Development in Neonatal Piglets” - second place in Animal Nutrition RIS

• Virginia Luchini: “Differences in Utilized Mealtime Strategies Between Home- and Center-Based Daycare Providers and Parents”

• Katie Robinson: “α2-Heremans-Schmid Glycoprotein (AHSG) Polymorphisms and HOMA-IR in Young Mexican Adults.”

• Brigitte Townsend: “Sulforaphane Reduces Inflammatory Gene Expression in Microglia from Aged Mice” - first place in Dietary Bioactive Components RIS

2015 Endowed Student Award Recipients

David H. Baker Nutrition Scholar Award
Matt Panasevich

James L. Robinson Nutrition Impact Award
Lauren Conlon
Toshiro Nishida Research Travel Award
Jane Naberhuis Patricia Wolf
William C. Rose Research Travel Award
Annabel Birute Diego Hernandez Virginia Luchini Katie Robinson
Frank W. Kari Memorial Travel Award
Kirsten Berding Natasha Chong-Cole Reeba Jacob Sookyoung Jeon

2014 - 2015 Margin of Excellence Travel Award Recipients


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.
Nicholas Burd received the 2015 Peter J. Reeds Young Investigator Award for outstanding research in macronutrient metabolism accomplished within five years of completing formal training.

Ryan Dilger received the North America International Life Sciences Institute (ILSI) 2015 Future Leader Award. This is given to promising nutrition and food scientists. The funding support ($30,000 over two years) associated with this award will allow his lab to develop new neuroimaging procedures for the pig that will greatly advance the scientific questions which can be asked using the piglet model. He also received the Hy-Line International Research Award from the Poultry Science Association.

Juan Loor received the Zoetis Physiology Award from the American Dairy Science Association.

Zeynep Madak-Erdogan received the 2015 ENDO Early Investigators Award and gave invited talks in Utah, California and Turkey on “Systems Biology of Gene and Metabolic Regulation by Estrogen Receptors and Kinases in Breast Cancer and Metabolic Disease.” She also is the principle investigator in “Conjugated Estrogens+ Bazedoxifene in Metabolic and Reproductive Health,” sponsored by Pfizer.

Paul McNamara is the project director of a consortium that received $7 million from the United States Agency for International Development (USAID) for the project “Integrating Gender and Nutrition within Agricultural Extension Services” (INGENAES). This aims to strengthen gender and nutrition integration within and through agricultural extension and advisory services to ultimately reduce poverty, improve food security and reduce malnutrition.

Kelly Swanson gave an invited talk entitled “Sustainability of Pet Foods” at the 2015 American Feed Industry Association Pet Food Conference in Atlanta.

Bryan White is a Fellow in the American Academy of Microbiology - an election to a group which recognizes excellence, originality and leadership in the microbiological sciences.

Juan Andrade, Nicki Engeseth and Hao Feng received ACES Office of International Research Matching Grants Program funds to work with Zhejiang University (China) on “Plant Protein/Plant Cell Wall Polysaccharide Complex Nanostructures for Loading, Protecting, and Controlled Release of Lipophilic Compounds.”

Bryan White and Juan Loo received ACES Office of International Research Matching Grants Program funds to work with the Federal University of Paraíba (Brazil) on “Microbiome Characterization and Transcriptional Profiling of Milk and Teat of Goats Affected by Subclinical Mastitis.”
Alumni Updates

Some of the attendees at the 2015 Experimental Biology Meeting in Boston
Pictured (l to r): Lauren Conlon, Matt Panasevich, Jennifer Barnes (Ph.D. 2013) and Josh Smith

Bart Deplancke (Ph.D. 2002) is now an Associate Professor at Ecole Polytechnique Fédérale de Lausanne (EPFL).

Hannah Holscher (Ph.D. 2012) accepted an Assistant Professorship in FSHN at UIUC beginning in August 2015 and served as the co-chair of the 2015 Lactation RIS Experimental Biology Mini-symposium, “Biology of Lactation Including Bioactive Components and Other Milk Constituents and Their Effect on the Infant.” She also published a paper entitled “Fiber Supplementation Influences Phylogenetic Structure and Functional Capacity of the Human Intestinal Microbiome: Follow-up of a Randomized Controlled Trial” in the American Journal of Clinical Nutrition. She was the grand prize winner and an award recipient in the Lactation RIS at ASN’s Emerging Leaders in Nutrition Science Poster Competition and the Postdoctoral Research Award Competition at Experimental Biology.


Theo van Kempen (Ph.D. 1993) gave invited talks and presentations concerning animal nutrition at Iowa Swine Day, VI CLANA (Latin American Congress of Animal Nutrition) in Brazil, Eurotier in Germany, the Carbohydrate Competence Center in the Netherlands and in Ghent, Belgium.

Naiman Khan (Ph.D. 2012) accepted an Assistant Professorship in Kinesiology & Community Health at UIUC to begin in fall 2015.

I-TOPP Update

I-TOPP, the USDA-NIFA funded Illinois Transdisciplinary Obesity Prevention Program, is in its final year of funding. To date, I-TOPP has funded 18 seed grant projects, totaling over $84,000 for research and interventions related to childhood obesity and well-being.

This semester, I-TOPP is hosting three invited lecturers to their Lecture Series. On April 6, Melissa Munn-Chernoff from the University of North Carolina, gave a talk entitled, “Associations Between Eating Disorders and Childhood/Adolescent Overweight: Insights from a Genetic Perspective.” April 9, Dr. David Stodden from the University of South Carolina spoke on “Examining Trajectories of Health-Related Physical Fitness and Obesity: A Developmental Perspective.” The last lecturer for the season, Dr. Kirsten Davison from Harvard T.H. Chan School of Public Health, will deliver her talk on May 4 entitled, “Effects of an Exergaming Biking Curriculum on Fitness, Impulsivity and Emotional Regulation, Among Children Aged 5-10 with Social and Emotional Disabilities.”

The final biennial symposium is scheduled for Oct. 8-9, 2015 at the iHotel. The theme of the symposium will be transdisciplinary teamwork, with two keynote speakers, I-TOPP faculty research team presentations and I-TOPP scholar presentations.

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 nutrationalsciences@illinois.edu.

Carolyn E. Spriggs Muchna (M.S. 1984) • Annette Cole Boogerd (M.S. 2000)
Giving Back

**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.

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 help secure our brilliant future by making a new contribution or an additional contribution to your alma mater.

New Faculty in DNS — Fall 2014

- **Brent McBride** is a Professor in Human & Community Development and Director of the UIUC Child Development Laboratory. He is an investigator for the STRONG Kids and I-TOPP programs. His research focuses on exploring the role of child care contexts in influencing obesity and inappropriate weight gain during the early childhood years.

- **Hope Michelson** is an Assistant Professor in Agricultural & Consumer Economics. She looks forward to interaction with other faculty in DNS who are studying nutritional outcomes and food security. Her research has two primary threads, both concerned with the relationships between agriculture, poverty, and market institutions in the developing world.

- **Carl Sather** is a Clinical Assistant Professor of Pediatrics and Medicine. As a new DNS member, he looks forward to mentoring students engaged in clinical research or pursuing the joint M.D./Ph.D. His research interests include pediatric obesity and children/youth with special healthcare needs regarding bone density, specialized nutrition and clinical assessment.

- **Andrew Steelman** is an Assistant Professor in Animal Sciences. As a member of DNS, he hopes to collaborate on research evaluating the mechanisms whereby nutrition can influence the outcome of inflammatory diseases or can facilitate repair following tissue damage. His research currently focuses on glia cell communication during neuroinflammatory conditions.

- **Carl Sather** is a Clinical Assistant Professor of Pediatrics and Medicine. As a new DNS member, he looks forward to mentoring students engaged in clinical research or pursuing the joint M.D./Ph.D. His research interests include pediatric obesity and children/youth with special healthcare needs regarding bone density, specialized nutrition and clinical assessment.

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**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.