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*Excellence in Nutrition Research and Practice*  
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## Emerging Leaders in Nutrition Science Poster Competition

*Recognizing the highest quality research presented by students and young investigators at ASN's Scientific Sessions and Annual Meeting at Experimental Biology 2017*

Organized by ASN's Research Interest Sections and Councils

Thank you to those that were able to attend the event on Saturday, April 22, 2017 from 5:00 PM to 7:00 PM at the Hall F Swing Space of the McCormick Place Convention Center in Chicago, IL.

**The following individuals have been announced as the winners of the competition.**

**Please join us in congratulating them!**

Number and type of award (e.g., first/second/third place, grand prize winners) varied by each participating ASN Research Interest Section (RIS) and Council.

## Aging and Chronic Disease RIS

### **Graduate Student – First Place:**

**9. Lauren O'Connor**, Purdue University. *“Daily Red Meat Intake does not Affect Improvements in Cardiovascular Disease Risk Factors Induced by Consuming the USDA's Healthy Mediterranean-Style Eating Pattern.”*

### **Graduate Student – Second Place:**

**10. Shirin Pourafshar**, Florida State University. *“Genistein in Combination with Fructooligosaccharides Prevents Bone Loss in Ovariectomized Rats.”*

### **Graduate Student – Third Place:**

**13. Alexander Smith**, University of Utah. *“A Low Magnesium Diet Worsens Metabolic Disturbances And Insulin Sensitivity In Diabetic Mice.”*

### **Graduate Student – Fourth Place:**

**15. Marta Zamroziewicz**, University of Illinois Urbana-Champaign. *“Prefrontal Cortex Structure Mediates the Relationship between Plasma Phospholipid Stearidonic Acid and Fluid Intelligence in Healthy, Older Adults.”*

### **Postdoctoral Fellow – First Place:**

**3. Zheting Bi**, University of Minnesota. *“Identification of p-cresol sulfate and secondary bile salts in human urine as sensitive biomarkers of fecal microbiota transplantation in R-CDI patients.”*

### **Postdoctoral Fellow – Second Place:**

**5. Gregory Guthrie**, USDA/ARS Children's Nutrition Research Center, Baylor College of Medicine. *“Phytosterols Have Limited Direct Effect on Hepatocyte Transporter Expression but Synergize with Endotoxin to Enhance Kupffer Cell Inflammatory Response.”*

## Carotenoid and Retinoid Interactive Group (CARIG) RIS

### **First Place:**

**33. Bryan Gannon**, University of Wisconsin-Madison. *“Increased Study Length of Retinol Isotope Dilution with Compartmental Modeling Alters Kinetic Parameters and Calculated Vitamin A Stores.”*

### **Second Place:**

**35. Emily Mohn**, Jean Mayer USDA Human Nutrition Research Center on Aging, Tufts University. *“The Ratio of HDL to LDL in Serum Is Related to Macular Pigment Density and Cognitive Function in Older Adults: Potential Insights into Lutein Transport to Neural Tissue.”*

### **Third Place:**

**32. Rachel Chiaverelli**, Tufts University. *“β-cryptoxanthin protection against cigarette smoke-induced inflammatory responses in the lung is due to the action of its own molecule.”*

### **Fourth Place:**

**34. Sookyoung Jeon**, University of Illinois at Urbana-Champaign. *“A comparison of lutein bioaccumulation in infant rhesus macaques fed breast milk, carotenoid-supplemented formula, or unsupplemented formula.”*

**Fifth Place:**

**36. Yan Yuan**, Ohio State University. *“Potential Roles of Lutein in Mammary Gland Development and Breast Cancer Cell Growth.”*

Community and Public Health Nutrition RIS

**First Place:**

**18. Godfred Boateng**, Northwestern University. *“Early Childhood Learning Activities Buffer Adverse Effects of HIV Exposure on Infant Cognitive Development: A Longitudinal Study.”*

**28. Myat (Crystal) Pan Hmone**, University of Sydney. *“Impact of SMS Text Messages to Improve Exclusive Breastfeeding: A Randomized Controlled Trial in Myanmar.”*

**Second Place:**

**17. Lauren Blacker**, Cornell University. *“Household food insecurity and gender inequity is associated with high prevalence of maternal depression amongst female farmers with young children in rural Tanzania.”*

Diet and Cancer RIS

**First Place:**

**46. Sumira Phatak**, Utah State University. *“Ancestral and multi-generational consumption of the total Western diet in mice promotes colitis-associated colorectal cancer in third-generation offspring.”*

**Second Place:**

**41. Candice Mazewski**, University of Illinois at Urbana-Champaign. *“Comparison of the inhibitory potential of anthocyanin-rich plant extracts on colon cancer cell proliferation and their mechanism of action in vitro.”*

**Third Place:**

**47. Blaine Sherman**, Texas State University. *“The Efficacy of Silibinin to Reduce the Impact of Obesity on Invasive Prostate Cancer.”*

**Fourth Place:**

**50. Zhe Yin**, Michigan State University. *“Oxylipids derived from arachidonic and dihomo-gamma-linolenic acids are associated with colon polyps in adult males.”*

**Fifth Place:**

**45. Yong-Moon Park**, National Institute of Environmental Health Sciences. *“High dietary acid load is associated with risk of breast cancer: findings from the Sister Study.”*

Dietary Bioactive Components RIS

**Graduate Student – First Place:**

**65. Patrick Solverson**, USDA. *“Seven Day Blackberry Feeding Lowers the Respiratory Quotient in Males And Improves Insulin Sensitivity.”*

#### Graduate Student – Second Place:

**55. Jessica Ellis**, Tufts University. *“Absorption and Excretion of Vitamin K Varies by Age and Triglycerides: A Metabolic Study in Older and Younger Adults Using Deuterium-Labeled Collard Greens.”*

#### Graduate Student – Third Place:

**53. Marianne Collard**, Wake Forest School of Medicine. *“Muscadine Grape Extract Inhibits Proliferation and Migration of Triple Negative Breast Cancer Cells in Association with a Reduction in TWIST.”*

**62. Stephanie Mondloch**, University of Wisconsin-Madison. *“Small servings of vegetables or a cruciferous supplement do not affect urinary estrogen metabolites in premenopausal women.”*

**67. Lei Wang**, University of Minnesota Twin Cities. *“Identification of activation of tryptophan-NAD<sup>+</sup> pathway as a central metabolic response to chemical stress from feeding thermally-oxidized soybean oil in mouse through metabolomics-based biochemical analysis.”*

#### Postdoctoral Fellow – First Place:

**61. Sonia Manca**, University of Nebraska-Lincoln. *“The Bioavailability and Distribution of Bovine Milk Exosomes is Distinct from that of their Cargos in Mice.”*

#### Postdoctoral Fellow – Second Place:

**68. Xian Wu**, Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University. *“Oral administration of curcumin and salsalate attenuates high fat diet-induced up-regulation of pro-inflammatory colonic cytokines and suppresses Akt/NFκB signaling in azoxymethane-treated mice.”*

#### Undergraduate Student – First Place:

**56. Samantha Gonzalez**, Texas Tech University. *“Mechanisms Mediating Effects of Eicosapentaenoic Acid in Hepatic Steatosis in High Fat Fed Mice and in HepG2 Hepatoma Cells.”*

#### Undergraduate Student – Second Place:

**57. Justin Guice**, LSU AgCenter. *“Beneficial Effects of Fermentation of Whole Grains (WG) and Whole Grain Resistant Starch (RS) in Lean Zucker Diabetic Fatty (ZDF) Rats.”*

### Energy and Macronutrient Metabolism RIS

#### First Place:

**82. Jessica Hill**, University of Memphis. *“Glucocorticoids In Combination With a High Fat Diet Increase Acute Phase Proteins and Alters PUFA metabolism in Visceral Adipose Tissue.”*

#### Second Place:

**90. Karen Switkowski**, Harvard Medical School and Harvard Pilgrim Health Care Institute. *“Protein Intake in Early Childhood is Not Associated with Adiposity, Height, or IGF-I in Mid-Childhood among Well-Nourished Children in a U.S. Cohort.”*

**93. William Yakah**, Michigan State University. *“Whole Blood Saturated Fatty Acids Are Negatively Associated with Executive Function in 2 to 6-Year-Old Ghanaian Children.”*

### Third Place:

**74. Jahmal Brooks**, University of Toronto. *"Variable Intensity Exercise Increases Protein Requirements in Active Male and Female Adolescents as Determined by the Indicator Amino Acid Oxidation (IAAO) Technique."*

**92. Christian Wright**, Purdue University. *"Effects of Dietary Protein Source and Amount on Bone Quantity and Body Composition following a High-Protein Weight-Loss Diet in a Rat Model of Postmenopausal Obesity."*

### Experimental Animal Nutrition RIS

### First Place:

**99. Heather Paul**, University of Calgary. *"Longitudinal<sup>1</sup>H NMR Metabolomics Analysis Identifies Differences in Maternal Response to Pregnancy and Lactation between Lean and Diet-Induced Obese Sprague-Dawley Rats."*

### Second Place:

**95. Ronique Beckford**, Univ. of Tennessee. *"Mechanisms for Programming Reduced Adiposity through Maternal Dietary Fish Oil."*

**96. Jerad Dumolt**, State University of New York at Buffalo. *"Maternal Hypercholesterolemia and Phytosterol Intervention on Oxysterol Concentrations in Newly-Weaned ApoE Deficient Mice."*

**97. Lauren Fowler**, University of Alabama at Birmingham. *"Sex-Specific Differences in the Development of Diet-Induced Obesity in a Zebrafish Model."*

### Global Nutrition Council

### First Place:

**121. Shruthi Cyriac**, Emory University. *"Understanding Stakeholder Networks for Nutrition Policy: Lessons from a Network Analysis Study in India."*

### Second Place:

**116. Ekta Amarnani**, McGill University. *"Food Insecurity in the Global Youth: an Analysis of Income-Related Inequalities."*

**122. Sarah Dumas**, Cornell University. *"Local Egg Production Centers Significantly Increase Maternal and Child Egg Consumption in Rural Zambia."*

### Maternal, Perinatal and Pediatric RIS

**101. Cora Best**, Cornell University. *"Serum 24,25-dihydroxyvitamin D Is Suppressed Across Pregnancy In Adolescents with Low Vitamin D Status."*

**104. Carrie-Ellen Briere**, Connecticut Children's Medical Center. *"Stem-Like Cells in Breastmilk for Hospitalized Preterm Infants."*

**107. Erin Davis**, University of Illinois at Urbana-Champaign. *“Early Life Milk Intake Among Infants of Different Feeding Modes.”*

**110. Austin Mudd**, University of Illinois. *“Dietary Sialyllactose Influences Magnetic Resonance Imaging Outcomes in the Piglet Corpus Callosum.”*

**115. Samantha Weaver**, University of Wisconsin-Madison. *“Administration of Fluoxetine or a Small Molecule TPH1 Inhibitor Affects Litter Size, Pup Mortality, and Milk Yield During Murine Pregnancy and Lactation.”*

#### Medical Nutrition Council

##### **Graduate Student – First Place:**

**128. Junrui Cheng**, Tufts University Friedman School of Nutrition Science and Policy. *“Ablation of systemic SIRT1 activity promotes nonalcoholic fatty liver disease by affecting liver-mesenteric adipose tissue fatty acid mobilization.”*

##### **Postdoctoral Fellow – First Place:**

**132. Tho Pham**, University of Connecticut. *“Nicotinamide Riboside, an NAD<sup>+</sup> Precursor, Attenuates The Activation of Hepatic Stellate Cells.”*

#### Neurobiology

(sponsored by the Aging and Chronic Disease RIS, Nutrition Translation from Bench to Consumer RIS, and Obesity RIS)

##### **First Place:**

**177. Kelly Sheppard**, The Research Institute at Nationwide Children's Hospital. *“The Omega-6 to Omega-3 Fatty Acid Ratio Predicts Brain Activity During Planning Tasks in Middle Childhood.”*

##### **Second Place:**

**178. Anne-Julie Tessier**, McGill University. *“Dairy Product Intake is Associated with Cognition but not Cognitive Decline in the NuAge Community-Dwelling Older Adult Cohort.”*

##### **Third Place:**

**173. Caitlyn Edwards**, University of Illinois at Urbana Champaign. *“Domain-specific relationships between cognitive control and disordered eating attitudes.”*

#### Nutrient-Gene Interactions RIS

**146. Krittikana Chanpaisaeng**, Purdue University. *“Femoral and L5 Spine Trabecular Bone are Differentially Influenced by Dietary Calcium Restriction and Genetics in Growing Mice.”*

**147. Wei Guo**, University of North Carolina Greensboro. *“Regulation of Endogenous Dusp4 by Agonist-Specific MAPK Activation in Adipocytes.”*

## Nutrition Education and Behavioral Sciences RIS

### **First Place:**

**137. Deborah Fetter**, University of California, Davis. *“Impact of Healthy Choices in Motion on Physical Activity Knowledge.”*

**139. Gabriella McLoughlin**, University of Illinois at Urbana Champaign. *“School Lunch and Physical Activity During Recess: Interactive Effects of Health Behaviors in the School Setting.”*

### **Second Place:**

**135. Alexandra Cowan**, Fairfield University. *“More to Gain: Diet Energy Density is Associated with Smoking Status in US Adults.”*

### **Third Place:**

**141. Jazmin Rodriguez-Jordan**, University of California, Davis. *“Implementation of an adapted garden-enhanced nutrition curriculum for use among fourth-grade students in an urban city in Mexico: A feasibility study.”*

## Nutrition Translation from Bench to Consumer RIS

**171. Yasmeen Nkrumah-Elie**, University of Colorado, Anschutz Medical Campus. *“Foodomics Application: Analysis of Dietary Components of the DASH Diet Pre and Post Consumption.”*

## Nutritional Epidemiology RIS

### **First Place:**

**150. Hassan Dashti**, Massachusetts General Hospital. *“Email administered web-based dietary assessment from the UK Biobank captures chronotype-specific reporting behaviors: implications for population-based dietary sampling.”*

**162. Jiayi Xu**, Cornell University. *“Meta-Analysis of the Association of Omega-3 Fatty Acids Biomarkers with Pulmonary Function.”*

### **Second Place:**

**151. Anna Grummon**, University of North Carolina, Chapel Hill. *“Nutritional Profile of Supplemental Nutrition Assistance Program Household Food and Beverage Purchases.”*

**160. Ambika Satija**, Harvard TH Chan School of Public Health. *“Plant-Based Diets and the Risk of Coronary Heart Disease in US Adults.”*

### **Third Place:**

**155. Yi-Hsuan Liu**, The Pennsylvania State University. *“A prospective study of taste and smell dysfunctions and the risk of hypertension.”*

**157. Melanie Mott**, Boston University School of Medicine. *“DIETARY CHOLESTEROL LOWERS RISK OF TYPE 2 DIABETES IN THE FRAMINGHAM OFFSPRING STUDY.”*

## Nutritional Immunology and Inflammation RIS

### **First Place:**

**164. Ryan Calvert**, Purdue University. *"Myeloid Derived Suppressor Cells (MDSC) Are Vitamin D Targets and 1 $\alpha$ , 25 Dihydroxyvitamin D (1,25(OH) $_2$ D) Inhibits their Ability to Suppress T Cell Function."*

### **Second Place:**

**165. William Green**, University of North Carolina at Chapel Hill. *"Altered Metabolism and Function of T Cells Isolated from Influenza Vaccinated Obese Adults."*

### **Third Place:**

**168. Jennifer Rebeles**, UNC Chapel Hill. *"Obesity Resets the Metabolic Profile of T Cells, Resulting in Reduced Memory T Cell Responses to Influenza Infection."*

## Obesity RIS

### **First Place:**

**190. Diana Obanda**, LSU AgCenter. *"Obese prone CD rats robustly ferment resistant starch (RS) with no increased weight and fat accretion."*

### **Second Place:**

**188. Lucy Mailing**, University of Illinois at Urbana-Champaign. *"Effects of a 6 Week Aerobic Exercise Intervention on Gut Bacterial Metabolites in Lean and Obese Adults."*

### **Third Place:**

**187. Tzu-Wen Liu**, University of Illinois at Urbana-Champaign. *"Diet Differentially Impacts Gastrointestinal Integrity, Fecal  $\beta$ -glucuronidase Activity, and Longitudinal Fecal Microbial Communities of C57BL/6J Mice in Response to Ovariectomy-Induced Obesity."*

## Policy

(sponsored by the Public Policy Committee)

**203. Shauna Downs**, Johns Hopkins University. *"Salt and the city: a preliminary examination of New York City's sodium warning labels."*

## Vitamins and Minerals RIS

**194. Laura Hackl**, ETH Zürich. *"A novel, high precision multiple-meal stable isotope method to compare iron absorption from extruded FePP-fortified rice containing different zinc compounds, citric acid/trisodium citrate and EDTA in Ghanaian children."*

**195. Samantha Jones**, Iowa State University. *"Whole Egg Consumption as a Dietary Prevention and Treatment Intervention Increases Serum 25-hydroxyvitamin D Concentrations in Rats with DSS-Induced Colitis."*

**198. Leila Larson**, Emory University. *"Home fortification with multiple micronutrient powders improves infant and young child development in Bihar, India."*



**200. Cassondra Saande**, Iowa State University. *"Vitamin D Derived from Dietary Whole Egg is more Effective than Supplemental Vitamin D3 in Maintaining Vitamin D Balance in Type 2 Diabetic Rats."*

**201. Elizabeth Stremke**, Purdue University. *"Twenty-Four-Hour Urine Phosphorus is Highly Variable in Patients with Moderate Chronic Kidney Disease on a Controlled Phosphorus Intake."*

**202. Ying Xiao**, Regenerative Medicine Research Center, West China Hospital, Sichuan University. *"Deactivation of Fibroblasts and Reduction of Fibrosis by Target-Specific Copper Supplementation in Rhesus Monkey Model of Myocardial Ischemic Infarction."*

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