



American Society for Nutrition  
*Excellence in Nutrition Research and Practice*

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## **Emerging Leaders in Nutrition Science Competition**

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

Organized by ASN's Research Interest Sections and Councils

Thank you to those that were able to make the event on Saturday, March 28, 2015 from 5:00 PM – 7:00 PM held in the Boston Convention and Exhibition Center - Grand Ballroom East

**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 and Council.

This event was sponsored by an unrestricted grant from:



**PEPSICO**

### Medical Nutrition Council

5. ***"Balancing the Risk of Infant Low Birth Weight and Macrosomia: an Examination of Gestational Weight Gain or Weight Loss among Obese Women."*** Nicholas P. Deputy, Emory University

12. ***"Dietary Protein Source Impacts Bone, Acid Load and Calcium Excretion in Murine and Human Phenylketonuria."*** Bridget M. Stroup, University of Wisconsin-Madison

13. ***"Improvement of Metabolic Parameters in Mice Supplemented with Vitamin D throughout Life."*** Christopher R. Villa, University of Toronto

### Aging and Chronic Disease RIS

#### Graduate Student First Place:

23. ***"Dietary Supplementation with Quercetin Rejuvenates Cognitive Performance Independent of Adult Hippocampal Neurogenesis."*** Kristy Du, University of Illinois at Urbana-Champaign

#### Graduate Student Second Place:

25. ***"Dietary Inflammatory Index Scores and C-Reactive Protein Concentrations among Older Adults."*** Jamie M. Houdek, Rush University Medical Center

#### Postdoctoral Fellow Winner:

32. ***"Effects of dietary blueberry on cognition and in vivo and in vitro inflammatory status."*** Marshall G. Miller, USDA-ARS, HNRCA at Tufts University

### Diet & Cancer RIS

#### Graduate Student Winners:

##### First Place:

39. ***"Relationships of Prostaglandin E2 with Fatty Acid Concentrations and Gene Expression in Colon of Individuals at Increased Risk of Colon Cancer."*** Elkhansa H. Sidahmed, University of Michigan

##### Second Place:

37. ***"Obesity-induced Intestinal Tumorigenesis is Associated with Inflammatory Cytokines and Activation of Pro-tumorigenic Signaling Pathways in the Colon."*** Anna C. Pfalzer, HNRCA, Tufts University

##### Third Place:

38. ***"Delta Tocotrienol Inhibits MMP-9 Dependent Invasion and Metastasis of Non-Small Cell Lung Cancer (NSCLC) Cell by Suppressing Notch-1 Mediated NF-kb and uPA Pathways."*** Lichchavi D. Rajasinghe, Wayne State University

#### Postdoctoral Fellow Winners:

##### First Place:

46. ***"Fatty Acid Patterns and the Risk of Prostate Cancer in the Physicians' Health Study."*** Meng Yang, Harvard School of Public Health

##### Second Place:

45. ***"Global DNA Methylation and Hydroxymethylation Differ in Hepatocellular- and Cholangio-Carcinoma and Relate to Survival Rate."*** Silvia Udali, University of Verona

### Lactation RIS

48. ***"The Role of ZnT2 in the Mammary Gland during Lactation."*** Sooyeon Lee, Penn State Hershey College of Medicine/Pennsylvania State University

49. ***"Milk Mineral and Cytokine Concentrations Differ in Guatemalan Mothers with Subclinical Mastitis (SCM) by Stage of Lactation."*** Chen Li, McGill University

50. ***"A Longitudinal Study of Human Milk Composition Beyond One Year Postpartum."*** Maryanne T. Perrin, North Carolina State University

53. ***"Infection-Specific Responses of Breastmilk Leukocytes."*** Foteini Hassiotou, University of Western Australia

54. ***"Diet influences the oral microbiota of infants during the first six months of life."*** Hannah D. Holscher, University of Illinois

\*55. ***"Milk osteopontin may promote brain development via up-regulating osteopontin expression in vivo."*** Rulan Jiang, University of California, Davis (presenter will be available from 5:00 pm – 6:00 pm)

57. ***"Human Milk Leptin, Insulin and N6/N3 Fatty Acids are associated with Early Differences in Gut Microbiome of Infants Born to Normal Weight and Obese Mothers."*** Dominick Lemas, University of Colorado Anschutz Medical Campus

#### Nutrient-Gene Interactions RIS

67. ***"Diet-gene interaction in arachidonic (ARA) and docosahexaenoic (DHA) acid synthesis shows compensatory upregulation."*** Hang Su, University of Illinois at Urbana-Champaign

69. ***"Pulsatile Delivery of Cortisol Regulates Lipid Storage in Adipocytes in Vitro and Human Adipose Gene Expression in Vivo."*** Kalypso Karastergiou, Boston University School of Medicine

#### Nutritional Immunology RIS

**First Place, Shaklee Emerging Leader in Nutritional Immunology Award:**

72. ***"Effects of Early Life Pathogenic Exposures and Obesity on Childhood Inflammation Levels in Galápagos, Ecuador."*** Kelly M. Houck, University of North Carolina

**Second Place:**

71. ***"Vitamin D Status and Respiratory Tract Infections: A Systematic Review and Meta-Analysis of Observational Evidence."*** Kayla Furlong, University of Toronto/The Hospital for Sick Children

**Third Place:**

76. ***"Citrobacter rodentium Infection Alters Murine Colonic microRNA Signature."*** Bijun Wen, University of Toronto

#### Nutritional Education & Behavioral Sciences RIS

**First Place:**

89. ***"Skin carotenoids correlate with plasma carotenoids and reported intake in 4th-grade children."*** Lori M. Nguyen, University of California, Davis

**Second Place:**

90. ***"Educator Interactions at Head Start Lunches: A Context for Nutrition Education."*** Taren M. Swindle, University of Arkansas for Medical Sciences

**Third Place:**

92. ***"Piloting of a Learner-Centered Nutrition Curriculum for School Nutrition Staff."*** Anna M. Jones, University of California, Davis

#### Nutrition Translation RIS

94. ***"Evaluating the Discrimination of Sugar Content Thresholds in the Canadian Nutrient File Classification System."*** Jodi T. Bernstein, University of Toronto

98. ***"Understanding Aspects of Carbohydrate Quality in Rice Related to Differences in Gastric Emptying Rate."*** Elizabeth Pletsch, Purdue University

100. ***"Beverage Groups Consumed by US Children and Their Impact on Nutrient Intake."*** Elizabeth A. Parker, USDA, Beltsville

#### Global Nutrition Council

**First Place Winners:**

107. ***"An Evaluation of Two Methods to Measure Hemoglobin Concentration among Women with Genetic Hemoglobin Disorders in Cambodia: A Method-Comparison Study."*** Crystal Karakochuk, University of British Columbia

115. ***"How Does Homestead Food Production Improve Child Nutrition? Path Analysis of the AAMA Project in Nepal."*** Julie L. Self, Emory University (presenter will be available from 6:00 pm – 7:00 pm)

**Second Place Winners:**

105. ***"Effect of vitamin B12 supplementation on B12 status and neurophysiological function in older Chileans analyzed by the combined indicator of B12 status."*** Alex Brito, USDA-ARS WHNRC

117. ***"Elevated Umbilical Cord Cytokines are Related to Birth Size in HIV-exposed and Unexposed Infants."*** Amanda L. Wilkinson, Cornell University

### Community and Public Health Nutrition RIS

#### First Place:

129. *"Employed US Adults' Support for Food and Beverage Worksite Wellness Strategies and Sugar-Sweetened Beverage Intake during the Workday."* Seung HeeLee-Kwan, Centers for Disease Control and Prevention

#### Second Place:

121. *"Pulse Pressure and Blood Triglyceride Levels among a Young Multi-Ethnic Group Living in South Florida."* Sahar Ajabshir, Florida International University

#### Third Place:

125. *"Validation of ALIVE!® Block Food Frequency Questionnaire for Use with College Students."* Jamisha Ross, University of Maryland

### Nutritional Epidemiology RIS

#### Graduate Students:

##### First Place:

143. *"Dietary Patterns and Risk of Age-Related Macular Degeneration After More Than Two Decades of Follow-Up."* Juan Wu, Harvard School of Public Health

##### Second Place:

132. *"The Association between Insomnia Symptoms and Diet Quality and Energy Intake."* Feon W. Cheng, Pennsylvania State University

##### Third Place:

137. *"Vitamin B6 Status is Associated with Depression Among Women with Inflammation."* Joycelyn M. Faraj, University of Massachusetts

#### Postdoctoral Fellow:

##### First Place:

154. *"Index-based Dietary Patterns and All-cause and Cause-specific Mortality Stratified by Body Mass Index and Race/Ethnicity: NIH-AARP Diet and Health Study."* Tusarebecca E. Schap, National Cancer Institute, NIH

##### Second Place:

147. *"Quantity and Variety in Fruit and Vegetable Intake and Cardiovascular Disease (CVD) Risk: The Women's Health Initiative (WHI)."* Shilpa N. Bhupathiraju, Harvard School of Public Health

##### Second Place:

153. *"Adherence to the DASH Diet and Risk of Incident Chronic Kidney Disease: the Atherosclerosis Risk in Communities (ARIC) Study."* Casey M. Rebholz, Johns Hopkins University

### Obesity RIS

#### First Place:

168. *"Does the recommendation to drink 8 cups of water per day promote weight loss?."* Julia M.W. Wong, Boston Children's Hospital

#### Second Place:

167. *"Dyslipidemia Induces Independent Mechanisms Regulating Skeletal Muscle Protein Metabolism and Glucose Balance in Human Obesity."* Lee Tran, Arizona State University/Mayo Clinic

#### Third Place:

159. *"Diet Quality and Adiposity in Adolescents."* Kevan Mellendick, University of North Carolina Greensboro

### Energy & Macronutrient Metabolism RIS

173. *"High Fructose Corn Syrup and Sucrose do not Differ in Their Effects on Cardiometabolic Risk Factors: A Series of Systematic Reviews and Meta-Analyses of Randomized Controlled Trials."* Vivian L. Choo, St. Michael's Hospital/University of Toronto

174. *"Influence of High Fat Diet on Macrophage Behavior and Metabolic Processes in Obesity Sensitive and Resistant Mice: Role of Monocyte Chemoattractant Protein 1."* Taryn L. Cranford, University South Carolina

**189. "Glycemic and insulinemic responses are blunted by the consumption of a smoothie-type beverage containing a whole-grain fiber composite ingredient."** Lauren E. O'Connor, Purdue University

**202. "Low Serum Sphingolipids in Attention Deficit Hyperactivity Disorder (ADHD)."** Marcela Henríquez-Henríquez, Columbia University/Pontificia Universidad Católica de Chile

**203. "Omega-3 Fatty Acids Modify Treatment Effect of High-Dose B Vitamins in Cognitively Impaired Elderly."** Fredrik Jernerén, University of Oxford

#### Experimental Animal Nutrition RIS

##### Grand Prize:

**219. "Leucine Antagonizes Protein Degradation Induced by Endotoxin in Skeletal Muscle of Neonatal Pigs."** Adriana Hernandez-Garcia, Baylor College of Medicine

##### First Place:

**211. "Immunohistochemical Detection of Gut-Brain-Axis Markers along the Gastrointestinal Tract of Formula-Fed Piglets."** Kirsten Berding, University of Illinois

##### Second Place:

**213. "Postnatal Iron Deficiency Impairs White Matter Development in Neonatal Piglets."** Brian J. Leyshon, University of Illinois

#### Dietary Bioactive Components RIS

##### Graduate Students

##### First Place:

**227. "Cranberry Extract Ameliorates Obesity-Related Liver Inflammation via the Toll-Like Receptor 4 Pathway."** Shannon L. Glisan, Pennsylvania State University

##### First Place:

**252. "Sulforaphane Reduces Inflammatory Gene Expression in Microglia from Aged Mice."** Brigitte E. Townsend, University of Illinois at Urbana-Champaign

##### Second Place:

**226. "Effect of Fresh Preparation and Industrial Processing on Stability of Potato Phytochemicals."** Amber Furrer, Purdue University

##### Third Place:

**230. "Ellagic Acid Supplementation Attenuates Sucrose-Induced Obesity and Metabolic Complication in C57BL/6 mice."** Inhae Kang, University of Nebraska-Lincoln

##### Third Place:

**241. "Potato Phenolics Modulate Rate of Glucose Transport in a Caco-2 Human Intestinal Cell Model."** Sydney E. Moser, Purdue University

##### Postdoctoral Fellows

##### First Place:

**261. "The Change in Human Microvascular Function and its Relationship to Plasma Epoxide Content After Short-Term Walnut Intake."** Roberta R. Holt, University of California, Davis

##### Undergraduate Student

##### First Place:

**265. "Probiotics Do Not Enhance Anti-hypertensive Effect of Blueberry Diets in Hypertensive Rats."** Leo He, UPEI

#### Vitamins and Minerals RIS

**272. "Novel Ferroxidases in Mammalian Intestinal Epithelial Cells."** Caglar Doguer, University of Florida

**274. "Maternal Choline Supplementation Modulates Fetal Growth Patterns in a Mouse Model of Placental Insufficiency."** Julia H. King, Cornell University

281. *“Placental Zip 8 expression is associated with heme and non-heme iron trafficking proteins.”* Yuan Ru, Cornell University

283. *“Association between Transcobalamin II C776G Polymorphism and Neuropathy is Modified by Folate Intake in Vitamin B-12 Sufficient Elders.”* Hathairat Sawaengsri, Jean Mayer USDA HNRCA, Tufts University

288. *“Vitamin D (VD) prevents oxidative stress via regulating NOX4/Nrf2/Trx signaling cascade and upregulates SIRT1-mediated AMPK/IRS1/GLUT4 pathway and glucose uptake in high glucose treated 3T3L1 adipocytes.”* Prasenjit Manna, LSU Health Sciences Center

289. *“The Role of Serine Hydroxymethyltransferase and Methylene-Tetrahydrofolate Dehydrogenase in Genome Stability.”* Aislyn DiRisio, Cornell University

## ***Special Thanks to our Travel Award Sponsors***

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