1. NIH BOOT CAMP: BECOMING A MANAGER

Seminar

(Sponsored by: ASIP Committee for Career Development and Diversity and the FASEB Maximizing Access to Research Careers (MARC) Office)

Fri. 8:30 am—Boston Convention & Exhibition Center, Room 206B

Chair: S. Milgram and L. Conlan, Off. of Intramural Trng. and Educ., NIH

Career Development

Leadership and Management Training for PhD-level Scientists and Senior-level Graduate Students who will be leading their own groups in academics, industry, non-profits and government (research and non-research related positions)

Management of people and resources is a key component to being successful as you move forward in your career. Staff from the NIH OITE has developed an intense course to give advanced PhD-level scientists and senior-level graduate students an overview of common management concepts that are not often taught in a research environment. The topics covered will be applicable to all sectors (academics, industry, non-profits, government, etc.)

8:30 Welcome and Introductions.
9:00 Self-Awareness: The Key to Professional Success.
12:30 Lunch on Your Own.
1:15 Relating to Those Around You: Emotional Intelligence, Communication, Culture and Diversity.

2. ASBMB GRADUATE AND POSTDOCTORAL TRAVEL AWARD PROFESSIONAL NETWORKING EVENT

Special Event

Fri. 5:30 pm—Boston Convention & Exhibition Center, Room 255

Cochair: C. Heinin and T. O’Connell

Invitation only. Required participation by all Graduate/Postdoctoral and Underrepresented Graduate Student Travel Award recipients.

3. Biochemistry and Molecular Biology

4. ASN SPONSORED SATELLITE PROGRAM: WHOLE-MILK DAIRY FOODS IN NUTRITION AND HEALTH: AN EVALUATION OF THE CURRENT STATE OF THE SCIENCE

ASN Satellite

(Sponsored by: The National Dairy Council)

Fri. 8:30 am—Renaissance Boston Waterfront Hotel, Pacific Grand Ballroom ABCD

5. ASN SPONSORED SATELLITE PROGRAM: SCIENCE AND POLICY: ADOPTING A FRUITFUL VEGETABLE ENCOUNTER FOR OUR CHILDREN

ASN Satellite

(Sponsored by: The Alliance for Potato Research and Education)

Fri. 1:00 pm—Renaissance Boston Waterfront Hotel, Pacific Grand Ballroom ABCD
6. ASN SPONSORED SATELLITE PROGRAM: NEURAL - PHYSIOLOGIC MECHANISMS REGULATING SODIUM APPETITE

ASN Satellite
(Sponsored by: The Grocery Manufacturers Association)
FRI. 1:00 PM—RENAISSANCE BOSTON WATERFRONT HOTEL, PACIFIC GRAND BALLROOM EFG

6A. ASN CAROTENOID AND RETINOID INTEGRATIVE GROUP (CARIG) RIS ANNUAL SYMPOSIUM

Ris Forum
(Sponsored by: CARIG RIS)
FRI. 1:00 PM—RENAISSANCE BOSTON WATERFRONT HOTEL, ATLANTIC 2/3

SATURDAY, MARCH 28
Across Societies – Experimental Biology

7. NIH BOOT CAMP: BECOMING A MANAGER

Seminar
(Sponsored by: ASIP Committee for Career Development and Diversity and the FASEB Maximizing Access to Research Careers (MARC) Office)
SAT. 9:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 206B
CHAIR: S. MILGRAM AND L. CONLAN, Off. of Intramural Trng. and Educ., NIH

Leadership and Management Training for PhD-level Scientists and Senior-level Graduate Students who will be leading their own groups in academics, industry, non-profits and government (research and non-research related positions)

Management of people and resources is a key component to being successful as you move forward in your career. Staff from the NIH OITE has developed an intense course to give advanced PhD-level scientists and senior-level graduate students an overview of common management concepts that are not often taught in a research environment. The topics covered will be applicable to all sectors (academics, industry, non-profits, government, etc.)

9:00 Conflict, Feedback and Difficult Conversations.
10:30 Staffing Your Units.
12:00 Lunch on Your Own.
1:00 Supervisory, Mentoring and Advocacy Relationships in Work Environments.
3:00 Motivating Your Staff.

Visit the Exhibits
March 29 – March 31

Exhibit Hours
Sunday – Tuesday
9:00 AM – 4:00 PM
8. **HOW TO MENTOR: BASIC SCIENCE, CLINICAL SCIENCE, AND EDUCATIONAL SCHOLARSHIP SKILLS FOR GRADUATE STUDENTS AND POSTDOCS**

**Symposium**

**SATURDAY ANATOMY**

**8:00 AM — BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104C**

**CHAIR: L. MAY AND J. WISCO**

**Professional Development**

**Career Development**

8:00 What Every Young Investigator Needs to Know about Establishing a Basic or Clinical Science Research Program and Where to Get Help S. Thakur. UCLA David Geffen Sch. of Med.

8:30 Discussion.

8:40 Writing Papers Can be a Scary Thing: How to Mentor Students to Navigate the Monsters and See that Manuscript to Publication M. Loukas. St. George’s Univ. Sch. of Med.

9:10 Discussion.


9:50 Discussion.

9. **LEANING IN WITHOUT FALLING OVER: SUPPORTING THE SUCCESS OF WOMEN IN SCIENCE**

**Symposium**

**SATURDAY ANATOMY**

**SATURDAY ANATOMY**

**2:00 PM — BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104AB**

**CHAIR: H.W. LAMBERT**

**Professional Development**

**Career Development**

10:30 9.1 Creating Change in Scientific Institutions through Subversion, Revolution (Title IX) and Climate Change D. Rolison. U.S. Naval Res. Lab., Washington, DC.

11:00 9.2 "Just the Facts, Ma'am": The Gender Gap in Academia, from the Classroom to the Bank L. Lee. Univ. of Colorado Sch. of Med. Aurora.


12:00 9.4 I Say Assertive, You Say Bossy; I Say Leader, You Say Bi***: Gender Bias in Academia V. O’Loughlin. Indiana Univ. Sch. of Med., Bloomington.

10. **“BACK TO BASICS” ANATOMY FOR EVERYDAY PRACTICE: INTEGRATING ANATOMY EDUCATION INTO THE CLINICAL YEARS**

**Symposium**

**SATURDAY ANATOMY**

**2:00 PM — BOSTON CONVENTION & EXHIBITION CENTER, ROOM 102AB**

**CHAIR: N. LACHMAN**

**Education & Teaching**

**Education**

2:00 10.1 Expanding Program Specific Anatomy Education during Residency: New Opportunities and Challenges A. Agur. Univ. of Toronto.

2:30 10.2 Integrating Anatomical Education into a Residency Curriculum of a Surgical Specialty G. Cundiff. Univ. of British Columbia.


11. **ANATOMY OF AGING**

**Symposium**

**SATURDAY ANATOMY**

**2:00 PM — BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104AB**

**CHAIR: H.W. LAMBERT**

**Professional Development**

**Career Development**

2:00 11.1 The Aging Brain L. McCullough. Univ.of Connecticut Hlth. Ctr.


3:00 11.3 You Are as Old as Your Arteries – and Microvessels Z. Ungvari. Univ. of Oklahoma Hlth. Sci. Ctr.


Are You Tweeting About EB 2015? To Tweet use #expbio Be sure to follow EB on Facebook and Twitter.
12. VASCULAR AND CONNECTIVE TISSUE IMAGING IN SITU: RETURNING BONE TO THE SKELETON

Symposium
SAT. 2:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104C
CHAIR: M. SERRAT

Developmental Biology
2:00 Introduction.
2:05 12.1 Imaging the Dynamics of Bone Elongation: Integrating Macro- and Micro-scale Processes at the Organ Level In Situ C. Farnum. Cornell Univ.
2:49 12.3 Conversion of Bone Marrow Blood Vessels into Bone Leads to “Microvascular Dead Space”: A Potential Etiology for Bone and Bone Marrow Disease with Advancing Age R. Prisby. Univ. of Delaware.
3:55 Discussion.

13. CREATION OF TISSUE-LIKE STRUCTURES IN VITRO USING ADVANCED TECHNOLOGIES

Symposium
(Sponsored by: The Anatomical Society)
SAT. 2:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 105
CHAIR: S. PRZYBORSKI

Cell Biology
Regenerative Medicine (Stem Cells, Tissue Regeneration, Biomaterials)
3:00 13.3 Development of 3D In Vitro Models of Nerve and Skin for Disease, Disorder and Testing Studies J. Haycock. Univ. of Sheffield.

14. WELCOME AND KEYNOTE

Keynote Lecture
SAT. 4:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104AB
Welcome and Introduction by AAA President Lynne Opperman
4:30 Introduction.
4:45 14.1 Evo-Devo and an Expanding Evolutionary Synthesis S. Carroll. Univ. of Wisconsin-Madison.
Biochemistry and Molecular Biology

15. **ASBMB PROFESSIONAL DEVELOPMENT PROGRAM FOR GRADUATE STUDENTS AND POSTDOCTORAL TRAINEES**

   **Special Session**
   
   **SAT. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 253A**
   
   **CHAIRING:** C. HEINEN AND T. O'CONNELL

   Invitation only. Required participation by all Graduate/Postdoctoral and Underrepresented Graduate Student Travel Award recipients.

16. **HOW TO INCORPORATE SCIENCE OUTREACH INTO YOUR PORTFOLIO – BEST PRACTICES AND BROADER IMPACTS**

   **Workshop**
   
   **SAT. 9:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 252B**
   
   Advance event registration required.

   This session will serve to showcase past grant recipients from the ASBMB HOPES and Outreach Seed Grant programs, and to promote upcoming ASBMB funding opportunities. The session will also provide insight into the National Science Foundation’s Broader Impacts requirement.

17. **ASBMB UNDERGRADUATE STUDENT ANNUAL MEETING ORIENTATION**

   **Special Session**
   
   **SAT. 11:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 254AB**
   
   **CHAIRING:** J. PROVOST

   Orientation open to all undergraduates attending the poster competition. No registration required.

18. **ASBMB 19TH ANNUAL UNDERGRADUATE STUDENT RESEARCH POSTER COMPETITION**

   **Special Event**
   
   **SAT. 1:00 PM—BOSTON CONVENTION & EXHIBITION CENTER—EAST REGISTRATION**
   
   **CHAIRING:** K. CORNELLY, K. FOX, P.A. ORTIZ

   Pre-registration required. Check in and set up begin at noon.

19. **ASBMB CAREERS SPEED DATING: A WORKSHOP FOR UNDERGRADUATES**

   **Workshop**
   
   **SAT. 4:45 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 257AB**
   
   Students learn about a variety of exciting career options in this fun and fast-paced workshop.

20. **ASBMB BUSINESS MEETING**

   **Business Meeting**
   
   **SAT. 6:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM WEST**

21. **ASBMB OPENING LECTURE: HERBERT TABOR RESEARCH AWARD LECTURE**

   **Award Lecture**
   
   **SAT. 6:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM WEST**
   
   6:00 Meeting Introduction, the State of the Society and Award Presentation.

22. **ASBMB OPENING RECEPTION**

   **Special Event**
   
   **SAT. 7:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM PRE-FUNCTION AREA**

   Immediately follows the ASBMB Opening Lecture. ASBMB members and biochemistry attendees welcome. Science Outreach and ASBMB Student Chapter Activity Posters will be presented during the reception for attendees to explore and become inspired.
23. ASBMB SCIENCE OUTREACH AND STUDENT CHAPTERS ACTIVITY POSTERS

Poster Discussion

SAT. 7:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM PRE-FUNCTION AREA

Science Outreach and ASBMB Student Chapters activity posters will be featured during the ASBMB Opening Reception.

All posters presented at 7:30 PM.

1) The Jackson Laboratory Expanding Quantitative Biology Outreach to Many More Learners through Online Education. N. Schafheimer. MIT
3) Science in the News: Graduate Student Outreach Group at Harvard University K. Taylor. Harvard Univ.
4) Optimizing conditions for high throughput screening of small molecules for inhibiting Lysyl Oxidase-like 2 (LOXL2) T. Ronnebaum. Univ. of Kansas.
7) University of Arizona’s UAN Chapter In Sync with the Tucson Community J. Hazzard. Univ. of Arizona.
8) Transforming Undergraduate Education in the Molecular Life Sciences—A Special Summer Symposium M. Huff. Bellarmine Univ.
10) Inspiring Students and the General Public through Outreach at the Broad Institute R. Gesserman. The Broad Inst.
11) What's it like to be a B.O.S.S.? C. Streu. St. Mary's Col. MD
15) Fostering Undergraduate Biology Students' Engagement in Active Community Education A. Shor. Saint Leo Univ.
16) The University of Tampa’s ASBMB-UAN Chapter Outreach Z. Connelly. Univ. of Tampa.
18) ASBMB UAN at UMass Amherst: Life Science Research, Careers and Community Outreach J. Normanly. UMass Amherst.
19) Chapter Activities at the Suffolk University UAN C. Peterson. Suffolk Univ.
20) UAN Outreach at Otterbein University J. Tansey. Otterbein Univ.
21) ASBMB UAN at the University of South Carolina Z. Roth. Univ. of South Carolina
22) Teen Meetings Outside the Box: Building Science Communication Skills through a Network of Graduate Level Trainees, Science Teachers and High School Teens T. Evans. Univ. of Texas Southwestern Med. Ctr.
Nutrition

24. ASN SPONSORED SATELLITE PROGRAM: SWEETENERS AND HEALTH: CURRENT UNDERSTANDINGS, RECENT RESEARCH FINDINGS AND DIRECTIONS FOR FUTURE RESEARCH

ASN Satellite
(Sponsored by: The Rippe Lifestyle Institute)
Sat. 6:30 AM—Boston Convention & Exhibition Center, Room 153AB

25. ASN SPONSORED SATELLITE PROGRAM: BODY WATER REGULATION: VASOPRESSION AS NEW PREDICTOR OF DISEASE RISK?

ASN Satellite
(Sponsored by: Danone Nutricia Research)
Sat. 6:30 AM—Boston Convention & Exhibition Center, Room 156BC

26. CREATING THE FUTURE OF EVIDENCE-BASED NUTRITION RECOMMENDATIONS, USING LIPID RESEARCH CASE STUDIES

Symposium
(Supported by: International Life Sciences Institute, North America)
(Sponsored by: International Life Sciences Institute, North America)
Sat. 8:00 AM—Boston Convention & Exhibition Center, Grand Ballroom East
Chair: K.H. Rubin and J.T. Dwyer

Global and Public Health Nutrition

8:30 Chair’s Introduction.
8:45 Conducting Research to Inform Future Evidence-Based Dietary Guidance T. Psota. USDA Nutr. Evidence Library.
9:30 Inflammatory Biomarkers in Lipid Studies K.L. Fritzsche. Univ. of Missouri-Columbia.
10:20 Break.

10:40 Research Informing Dietary Guidance on Omega-3 Fatty Acids W.S. Harris. OmegaQuant.

27. CLINICAL EMERGING LEADERS AWARD COMPETITION

Award Competition
(Supported by Medical Nutrition Council (MNC))
(Sponsored by: Medical Nutrition Council )
Sat. 8:00 AM—Boston Convention & Exhibition Center, Room 151AB
Chair: C. Bales

ASN Competition

8:00 Introductory Remarks.
8:30 Patterns of Self-Reported Dieting and Energy Intake in 15y Girls K.N. Balantekin, L.L. Birch and J.S. Savage. Penn State and Univ. of Georgia. (597.9)
8:45 Effect of a High Protein, High Egg Diet on Muscle Composition, Metabolic Health and Systemic Inflammation in Overweight and Obese, Older Adults C.S. Wright, J. Zhou, R.D. Sayer, J-E. Kim and W.W. Campbell. Purdue Univ. (270.6)
9:00 Common rs3808607 Polymorphism in the Cholesterol 7α-Hydroxylase (CYP7A1) Gene Determines the Degree of Responsiveness of Circulating Cholesterol Concentrations to Dairy Consumption M. Abdullah, P. Eck, P. Couture, B. Lamarche and P. Jones. Univ. of Manitoba and Laval Univ., Quebec. (751.1)
9:15 Genetic Variants in GLUT14 Gene Enhance Susceptibility to Inflammatory Bowel Disease M. Amir Shaghaghi, C.N. Bernstein and P. Eck. Univ. of Manitoba. (591.3)
28. GLOBAL NUTRITION: NUTRITION AND COGNITIVE AND NEUROLOGICAL OUTCOMES

Minisymposium

(Sponsored by: Global Nutrition Council)

SAT. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153C

CHAIR: M. BLACK

COCHAIR: A. DIGIROLAMO


9:45 28.8 Effect of Vitamin B12 Supplementation on B12 Status and Neurophysiological Function in Older Chileans Analyzed by the Combined Indicator of B12 Status A. Brito, J.W. Miller, R. Green, S.N. Fedosov, D. Harvey, S. Shahab-Ferdows, R. Verdugo, H. Sanchez, C. Albala, R. Uauy and L.H. Allen. USDA, Davis, Rutgers Univ., Univ. of California, Davis, Aarhus Univ. and INTA, Univ. of Chile.

29. THE POSTDOCTORAL RESEARCH AWARD COMPETITION

Award Competition

(Supported by DuPont Nutrition and Health)

(Sponsored by: Young Professional Interest Group)

SAT. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153AB

CHAIR: E. CIAPPINO

ASN Competition

9:30 Chair’s Introduction.

9:40 Slower Rate of Fat Absorption at Dinner versus Lunch Is Associated with Lower Concentrations of Triacylglycerols the Following Morning M. Jacome-Sosa, Q. Hu, C. Manrique and E.J. Parks. Univ. of Missouri-Columbia. (744.7)

10:00 Diet Influences the Oral Microbiota of Infants during the First Six Months of Life H.D. Holscher, R.A. Mathai, J. Kim and K.S. Swanson. Univ. of Illinois, Urbana, Dominican Univ., IL and East Carolina Univ. (121.8)


11:00 Vitamin D Supplementation and Quality of Life following Diagnosis in Stage II Colorectal Cancer Survivors C.M. Lewis, P. Xun and K. He. Indiana Univ. (253.6)

11:20 Loss of Lipoprotein Lipase Expression Reduces Circulating Monocytes and Decreases Bone Marrow Myeloid Proliferation C.L. Chang, A.J. Murphy, I.J. Goldberg and R.J. Deckelbaum. Columbia Univ. and NYU. (913.5)

11:40 Conclusion.
30. MATERNAL/FETAL NUTRITION AND PROGRAMMING: WHAT HAVE WE LEARNED FROM FARM ANIMAL MODELS?

Symposium
(Supported by Mead Johnson Pediatric Nutrition Institute)
SAT. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 157ABC
CHAIR: G.M. HILL AND T.A. DAVIS

Pediatric Nutrition and Early Development
10:30 Select Nutrients and Their Effects on Conceptus Development in Mammals F.W. Bazer. Texas A & M Univ.
11:00 Altering Specific Functions of the Ruminant Placenta: New Approaches to Assess Causation of Fetal Growth Restrictions R.V. Anthony. Colorado State Univ.
12:00 The Role of the Small Intestine in Developmental Programming: Impact of Maternal Nutrition on the Dam and Offspring A.M. Meyer. Univ. of Missouri.

31. GLOBAL NUTRITION: RECENT INSIGHTS INTO GROWTH AND GROWTH MONITORING

Minisymposium
(Sponsored by: Global Nutrition Council)
SAT. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153C
CHAIR: A. STEIN
COCHAIR: B. CROOKSTON


32. CAROTENOIDS AND RETINOIDS IN HUMAN HEALTH

Minisymposium
(Sponsored by: Carotenoid and Retinoid Interactive Group (CARIG) RIS)
SAT. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 156A
CHAIR: S. TANUMIHARJO AND L. JAHNS

STUDENT CHAIR: STUDENT CHAIR: J. COOPERSTONE

10:30 32.1 The Uptake of Vitamin A into the Neonatal Brain J.K. Urbanek, L. Tan, A.C. Ross and M.H. Green. Penn State.
11:15 32.4 BALB/c and C57BL/6 Mice Develop Distinct Levels of Tissue Retinol Depending on Growth Stage and Dietary Vitamin A Exposure C-H. Wei, Y. Li and A.C. Ross. Penn State.
11:45 32.6 Astaxanthin Prevented and Reversed the Activation of Mouse Primary Hepatic Stellate Cells by Inhibiting the Myocyte Enhancer Factor 2-Dependent Expression of Histone Deacetylase 9 Y. Yang, M. Bae, B. Kim, S. Rudraiah, J. Manautou, Y-K. Park, S.L. Koo and J-Y. Lee. Univ. of Connecticut and Univ. of Connecticut.


12:15 32.8 Avocado Consumption Increases Neural Lutein and Improves Cognitive Function E.J. Johnson, R. Vishwanathan, E.S. Mohn, J. Haddock, H.M. Rasmussen and T.M. Scott. USDA at Tufts Univ.

33. ASN YOUNG MINORITY INVESTIGATOR ORAL COMPETITION

Award Competition
(Sponsored by DSM Nutritional Products)
(Sponsored by: Minority and Diversity Affairs Committee)
Sat. 11:30 AM—Boston Convention & Exhibition Center, Room 151AB
Chair: C. Pratt

ASN Competition
Finalists are chosen after the publication deadline for this Program. Please see the addendum and/or the ASN Onsite Program for details on presentations.

34. ASN SPONSORED SATELLITE PROGRAM: CURRENT PERSPECTIVE ON PROTEIN QUALITY AND PRACTICAL IMPLICATIONS FOR POLICY

ASN Satellite
(Sponsored by: DuPont Nutrition and Health)
Sat. 12:45 PM—Boston Convention & Exhibition Center, Room 153AB

35. ASN SPONSORED SATELLITE PROGRAM: YOGURT IN NUTRITION: THE ROLE OF YOGURT IN WEIGHT MANAGEMENT

ASN Satellite
(Sponsored by: The Danone Institute International and the American Society for Nutrition)
Sat. 12:45 PM—Boston Convention & Exhibition Center, Room 156BC

35A. PHENHRIG ANNUAL SYMPOSIUM

Symposium
(Sponsored by: Plant Phenolic and Human Health Research Interest Group (PhenHRIG))
Sat. 1:00 PM—Boston Convention & Exhibition Center, Room 154

Understanding Polyphenolic Bioactives: Highlights of Recent Progress
PHENHRIG information, including speakers, is available at www.phenhrig.org

36. GRADUATE STUDENT RESEARCH AWARD COMPETITION

Award Competition
(Sponsored by: Nutritional Sciences Council)
Sat. 1:30 PM—Boston Convention & Exhibition Center, Room 151AB
Chair: C. Davis

ASN Competition


1:45 Prebiotic Fiber Consumption Decreases Energy Intake in Overweight and Obese Children M. Hume, A. Nicolucci and R. Reimer. Univ. of Calgary. (597.3)

2:00 Prostate Specific Antigen Ratio Is Negatively Associated with Blood Cadmium Concentration and Smoking Status T.M. Vance and O.K. Chun. Univ. of Connecticut. (918.5)


2:45 Vitamin D Status and Functional Health Outcomes: A Randomized Vitamin D Dose-Response Trial in 2-8 Year Olds N.R. Brett, P. Lavery, C.A. Vanstone, J. Maguire, F. Rauch and H.A. Weiler. Sch. of Dietetics and Human Nutr., McGill Univ., Univ. of Toronto and McGill Univ. (734.5)

3:00 The Uptake of Vitamin A into the Neonatal Brain J.K. Urbanek, L. Tan, A.C. Ross and M.H. Green. Penn State. (32.1)
3:15 Novel Ferroxidases in Mammalian Intestinal Epithelial Cells  
Univ. of Florida and Izmir Inst. of Technol., Turkey. (263.8)

3:30 Dysfunctional Cardiac Fatty Acid Metabolism in  
Cystathionine-beta-Synthase +/- Mice with Obesity  
and A.M. Devlin. Univ. of British Columbia and Univ. of Alberta. (919.18)

3:45 Epigenetic Regulation of the FXR by High Fat Diet and  
APC in Colon Cells  
A. Lyon, O. Selmin, C. Fang, J.W. Smith, T. Doetschman, P. Thompson, J. Martinez,  
P. Lane and D. Romagnolo. Univ. of Arizona and Sanford-Burnham Med. Res. Inst. (394.2)

4:00 Cystathionine Gamma-Lyase Inhibition in Primary  
Human Hepatocytes Affects the Production of Hydrogen Sulfide Biomarkers through the  
Transsulfuration Pathway  
B. DeRatt, R. da Silva, M. Ralat, R.L. Jacobs and J.F. Gregory. Univ. of Florida  
and Univ. of Alberta. (919.2)

4:15 Green Tea Extract Attenuates Oxidative Stress,  
Inflammation, and Lipogenesis through Nrf2-  
Dependent and -Independent Mechanisms in  
Diet-Induced Obese Mice with Nonalcoholic  
Steatohepatitis  
J. Li, T.N. Sapper, K.E. Schill, C. Chitchumroonchokchai, M.V. Moller, P.R. Rohrer,  
S. Rudraiah, J.E. Manautou and R.S. Bruno. The Ohio State Univ. and Univ. of Connecticut. (390.4)

38. ASN ENERGY AND MACRONUTRIENT  
METABOLISM RIS HOT TOPICS SEMINAR  
RIS Forum  
(Sponsored by: Energy & Macronutrient Metabolism RIS)  
SAT. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER,  
ROOM 152  
CHAIR: A. THALACKER-MERCER

39. GLOBAL NUTRITION: UNDERSTANDING AND  
PREDICTING PROGRAM IMPACT  
Minisymposium  
(Sponsored by: Global Nutrition Council)  
SAT. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER,  
ROOM 153C  
CHAIR: K. DICKIN  
COCHAIR: R. HEIDKAMP

3:00 39.1 Calcium Supplementation for Preeclampsia  
Prevention: Estimated Risk of Excessive Intake in Ethiopian Women  
B. Tesfaye, S. Wuehler, K. Baye, L.M. De-Regil,  

3:15 39.2 Household Poverty Does Not Correlate with  
Micronutrient Malnutrition: Preliminary Findings from a Cross-  
Sectional Survey in Madhya Pradesh  
Children, Univ. of Toronto Dalla Lana Sch. of Publ. Hlth., Publ. Hlth. Fndn. of India and Global Alliance for Improved Nutr., India and Switzerland.

3:30 39.3 Mixed Methods Approach to Characterize  
Longitudinal Food Insecurity and Coping Strategies in the  
Peruvian Amazon  

3:45 39.4 Influence of Inflammation on Breast Milk  
Retinol Concentrations of Apparently Healthy Women in Rural  
Zambia  
A.C. Palmer, J. Chileshe, M. Barffour, A.G. Hall,  

4:00 39.5 Effects of Small-Quantity Lipid-Based Nutrient  
Supplement on Hemoglobin and Iron Status of Pregnant  
Ghanaian Women  
S. Adu-Afarwuah, A. Larney, H. Okronipa,  
J.M. Peerson, P. Ashorn and K.G. Dewey. Univ. of Ghana, Univ. of California, Davis and Univ. of Tampere, Finland.
4:15 39.6 Anemia Prevalence May Be Reduced among Countries that Fortify Flour H. Pachon, J.S. Barkley and K.S. Wheeler, Food Fortification Init., U.S. and Emory Univ.


40. ASN’S EMERGING LEADERS IN NUTRITION SCIENCE POSTER COMPETITION

Award Competition
(Supported by PepsiCo, Inc.)

(Sponsored by: Research Interest Sections, Global Nutrition Council, Medical Nutrition Council and Public Policy Committee)

SAT, 5:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM EAST

CHAIR: K. SCHALINSKE, L. Neufeld and C. Bales

ASN Competition


5:00 Effects of Dietary Blueberry on Cognition and In Vivo and In Vitro Inflammatory Status M.G. Miller, D.R. Fisher, M.E. Kelly, D.F. Bielinski and B. Shukitt-Hale. USDA at Tufts Univ. (900.2)

5:00 mTORC1 Nutrient Signaling and Autophagy in Young and Older Skeletal Muscle after Bed Rest and Rehabilitation R. Tanner, L. Brunker, J. Agergaard, O.-S. Kwon, K. Barrows, D. McClain and M. Drummond. Univ. of Utah. (737.2)


5:00 The Effect of a Symbiotic Diet on Bone Structure in Aging Male Mice M.T. Choman, C. Blanton and A. Gabaldón. Colorado State Univ. – Pueblo and Idaho State Univ. (738.1)


Dietary Inflammatory Index Scores and C-Reactive Protein Concentrations among Older Adults J.M. Houdek, C.C. Tangney, K.A. Roehl, K.A. Varady, N. Shivappa, J.R. Hebert, D.A. Bennett and M.C. Morris. Rush Univ. Med. Ctr., Univ. of Illinois at Chicago and Univ. of South Carolina. (589.1)

Creatine Supplementation Increases Muscle Branched-Chain Amino Acids in an Alzheimer Mouse Model F. Farshidfar, M. Suh, W.M. Snow, B.C. Albensi and S.B. Myrie. Univ. of Manitoba. (383.5)

Dietary Intake among Home-Delivered Meal Recipients before and after Receiving Meals B. Moore, S. Marceaux, B.J. Friedman and S. Crixell. Texas State Univ., San Marcos and Meals on Wheels and More, Austin. (589.3)

Assessing Nutritional and Vitamin D Status of Postmenopausal Obese and Osteosarcopenic Obese Women J.E. Inglis, O.J. Kelly and J.Z. Ilich. Florida State Univ. and Abbott Nutr., Columbus. (738.2)

Do Food Group Intake and Physical Activity during Growth Spurt Have Impact on Bone Health during Adulthood E. Movassagh and H. Vatanparats. Univ. of Saskatchewan. (738.3)


Validation of ALIVE® Block Food Frequency Questionnaire for Use with College Students J. Ross, A. Schweitzer, C. Klein, E.R. Mackey and D.K.Y. Lei. Univ. of Maryland College Park and Children’s Natl. Med. Ctr. (584.4)

Replacement of Sugar-Sweetened Beverages with Water and its Impact on Insulin Sensitivity among Overweight Adolescents and Young Adults R. Jin, L. Collin, M. Vos and J. Welsh. Children’s Healthcare of Atlanta and Emory Univ. (584.12)
5:00 Food Insecurity and Its Association with Depression among Injection Drug Users with or without HIV in Chennai, India. J. Sackey, K. Chui and A. Tang. Tufts Univ. Friedman Sch. of Nutr. Sci. and Policy and Tufts Univ. Sch. of Med. (585.1)

5:00 Oxidative Stress in Healthy Subjects with Cardiometabolic Risk Factors. B.E. Martinez-Carrillo, M. Neri, A.D. Benitez, R. Valdes-Ramos and J.A. Escoto-Herrera. Autonomous Univ. of Mexico State, Toluca. (584.9)


5:00 Changes in Self-Efficacy and Fruit and Vegetable Intake in the FAITH Trial. A. Morel L’Horset, A.M. Schoenthaler, W. Chaplin, G. Ogedegbe and K.J. Lancaster. NYU, NYU Sch. of Med. and St. Johns Univ. NY. (584.6)

5:00 Who Reads Nutrition Labels? Label Usage by College Students in a Dining Hall Setting. M.J. Christoph and B.D. Ellison. Univ. of Illinois at Urbana-Champaign. (904.5)

5:00 Employed U.S. Adults’ Support for Food and Beverage Worksite Wellness Strategies and Sugar-Sweetened Beverage Intake during the Workday. S.H. Lee-Kwan, L. Pan, J. Kimmons, J. Foitz and S. Park. Ctrs. for Dis. Control and Prevent. (903.19)

5:00 Chemopreventive Effects of Nobiletin on Azoxymethane-Induced Colon Carcinogenesis in Rats Is Associated with Inhibition of Heat Shock Proteins. X. Wu, M. Song, Z. Gao, J. Zheng and H. Xiao. Univ. of Massachusetts Amherst. (752.20)

5:00 Docosahexaenoic Acid and Doxorubicin Act Synergistically to Disrupt Cell Cycle and Increase Cell Death of MDA-MB-231 Breast Cancer Cells. M. Newell, V. Mazurak and C.J. Field. Univ. of Alberta. (752.16)

5:00 Delta Tocotrienol Inhibits MMP-9 Dependent Invasion and Metastasis of Non-Small Cell Lung Cancer Cell by Suppressing Notch-1 Mediated NF-κB and uPA Pathways. L.D. Rajasinghe, R.S.H. Pindiripolu, N. Razalli, Y. Wu and S.V. Gupta. Wayne State Univ. (752.18)

5:00 Selenoprotein W Inhibits the c-Met Oncogene by Regulating Receptor Ubiquitination. C.R. Wilcox, Z. Alkan and W.C. Hawkes. Univ. of California, Davis and USDA, Davis. (752.17)

5:00 Walnut Phenol Extracts Inhibit Stemness of Colon Cancer Stem Cells In Vitro. Y-S. Kim, S-W. Choi, S-J. Min, J. Lee and Y. Kim. Ewha Womans Univ. and CHA Univ. (752.10)

5:00 Inhibition of Colon Carcinogenesis by 5-Demethylnobiletin in Azoxymethane-Treated Rats. M. Song, X. Wu, M. Wang and H. Xiao. Univ. of Massachusetts Amherst. (753.5)

5:00 Relationships of Prostaglandin E2 with Fatty Acid Concentrations and Gene Expression in Colon of Individuals at Increased Risk of Colon Cancer. E.H. Sidahmed, A. Sen, J. Ren, K. Turgeon, M. Ruffin, D. Brenner and Z. Djuric. Univ. of Michigan. (753.9)

5:00 Tumor Progression Locus 2 Depletion Inhibits Hepatic Inflammation and Steatosis and Incidence of Hepatocellular Carcinoma. X. Li, C. Liu, C.P. Stice, B.C. Ip, K-Q. Hu, A.S. Greenberg and X-D. Wang. USDA at Tufts Univ. and Sch. of Publ. Hlth., Med. Col. of Soochow Univ. (752.11)

5:00 Obesity-Induced Intestinal Tumorigenesis Is Associated with Inflammatory Cytokines and Activation of Pro-tumorigenic Signaling Pathways in the Colon. A.C. Pfaflzer, L. Iyer, L.D. Parnell, A. Tai, Z. Liu, J.B. Mason and J. Crott. USDA at Tufts Univ., Tufts Univ. Sch. of Med., Tufts Univ., Univ. of Massachusetts Amherst and USDA, Boston. (753.16)


5:00 Differentiated Caco-2 Cell Monolayers Exhibit Differential Adaptation to Chronic Exposure of Green Tea and Grape Seed Extracts Rich in Flavan-3-ols. B.W. Redan and M.G. Ferruzzi. Purdue Univ. (249.4)

5:00 Ellagic Acid Supplementation Attenuates Sarcopenia-Induced Obesity and Metabolic Complication in C57BL/6 Mice. I. Kang, T.P. Carr and S. Chung. Univ. of Nebraska-Lincoln. (402.6)

5:00 Cranberry Phenolic Compounds Decrease Fat Accumulation in Caenorhabditis elegans. Q. Sun, P. Shen, J. Yang and Y. Park. Univ. of Massachusetts Amherst and Amherst Regional H.S. (608.16)

5:00 Anthocyanin-Rich Black Elderberry Extract Improves Inflammatory Markers and Insulin Resistance in a High-Fat-Diet-Induced Obesity Model of Mice. N.J. Farrell, G.H. Norris, J. Ryan and C. Blesso. Univ. of Connecticut. (402.1)

5:00 Identification and Characterization of Tocotrienols in Muscadine Grape Seed Oil and their Inhibitory Effects on Adipogenesis and Inflammation. L. Zhao, Y. Yagiz, C. Xu, L. Jiang, S. Chung and M. Marshall. Univ. of Florida, China Agr. Univ. and Univ. of Nebraska-Lincoln. (390.8)

5:00 Metabolic Syndrome and Hepatic Steatosis Is Reduced in C57BL/6J Mice Fed High-Fat Diets Supplemented with Soy Isoflavones. T. Luo, S.M. Smith, B.S. Zhao, J.M. Hamilton-Reeves, D.K. Sullivan and N.F. Shay. Oregon State Univ. and Univ. of Kansas Med. Ctr. (402.4)
NUTRITION SATURDAY

5:00 Shiitake-Derived β-Glucan, Lentinan, Reduces CCL3/MIP-1α Production via Down-Modulation of TLR2- and TLR4-Mediated NFκB Activation and TLR2 Expression in Human THP-1 Monocytes. X. Dai and S.S. Percival. Univ. of Florida. (130.6)


5:00 Acute Peanut Consumption Benefits Postprandial Endothelial Function in Overweight Healthy Males. X. Liu, A.M. Hill, S.G. West, R.M. Gabauer, C.E. McCrea, J.A. Fleming and P.M. Kris-Etherton. Penn State and Univ. of South Australia. (259.6)

5:00 Structure-Function Analysis of Ursolic Acid and its Analogs to Identify Their Anti-inflammatory Mechanism of Action. H.N. Nguyen, H.S. Kim, S. Ullevig and R. Asmis. Univ. of Texas Hlth. Sci. Ctr. at San Antonio and Univ. of Texas at San Antonio. (390.6)

5:00 Black Raspberries Prevent Angiotensin II-Induced Senescence in Vascular Smooth Muscle Cells. R.G. Feresin, Y. Zhao and G. Salazar. Florida State Univ. (118.5)

5:00 Nanoemulsion-Based Delivery Systems for Nutraceuticals: Influence of Carrier Oil Type on Bioavailability of Pterostilbene. Y. Sun, Z. Xia, J. Zheng, P. Qiu, L. Zhang, D.J. McClements and H. Xiao. Univ. of Massachusetts Amherst and Ocean Univ. of China, Qingdao. (249.5)

5:00 Effects of Early Administration of Conjugated Linoleic Acid on Development of Obesity in NescentBasic Helix-Loop-Helix 2 Knockout Mice. Y. Kim, D.J. Good and Y. Park. Univ. of Massachusetts Amherst and VPI and State Univ. (608.19)

5:00 The Effect of EGCG and EGCG Nanoparticles on Body Weight and Body Composition in LDL Receptor Null Mice. Y. Zu, J. Zhang, S. Nie and S. Wang. Texas Tech Univ. (402.5)

5:00 GojiBerry Attenuates Dextran Sulfate Sodium-Induced Colitis. Y. Kang, Y. Xue, M. Du and M. Zhu. Sch. of Food Sci., Washington State Univ. and Sch. of Food Sci., Univ. of Idaho. (271.1)


5:00 Grape Seed Extract Enhances Jejunum Epithelial Differentiation Likely through Suppressing Inflammation in IL10−/− Mice. S. Bibi, Y. Kang, M. Du and M-J. Zhu. Sch. of Food Sci., Washington State Univ., Washington State Univ. and Sch. of Food Sci., Univ. of Idaho. (380.1)

5:00 Characterization of Serum and Urinary Zearalenone and its Metabolites (Z) and its Association with Dietary Intake. T. Mauro, B. Buckley, S. Schneider, C. Pop, M. Liu, B. Chang and S. Shapses. Rutgers-New Brunswick and Rutgers Robert Wood Johnson Med. Sch. (924.36)


5:00 Cranberry Extract Ameliorates Obesity-Related Liver Inflammation via the Toll-Like Receptor 4 Pathway. S.L. Glisan and J.D. Lambert. Penn State. (118.3)

5:00 Potato Phenolics Modulate Rate of Glucose Transport in a Caco-2 Human Intestinal Cell Model. S.E. Moser, I. Aragon, A. Furrer, J. Van Klinken, M. Kaczmarszyk, B.-H. Lee, B. Hamaker and M.G. Ferruzzi. Purdue Univ. and PepsiCo Global R&D. (606.6)

5:00 The In Vivo Effect of Oil Palm Phenolics in Atherogenic Diet-Induced Rat Model of Alzheimer’s Disease. Y. Wu, V. Srirajavatsavai, K. Monplaisir, R. Sambanthamurthi and S. Gupta. Wayne State Univ. and Malaysian Palm Oil Board, Selangor. (271.8)

5:00 The Effect of Fresh Preparation and Industrial Processing on Stability of Potato Phytochemicals. A. Furrer, D. Cladis, A. Kurlich, G. Hawkins, R. Manoharan and M. Ferruzzi. Purdue Univ and McCain Foods Ltd. (924.18)

5:00 Green Tea Extract Attenuates Oxidative Stress, Inflammation, and Lipogenesis through Nrf2-Dependent and -Independent Mechanisms in Diet-Induced Obese Mice with Nonalcoholic Steatohepatits. J. Li, T.N. Sapper, K.E. Schill, C. Chitchumroonchokchait, M.V. Moller, P.R. Rohrer, S. Rudraiah, J.E. Manautou and R.S. Bruno. The Ohio State Univ. and Univ. of Connecticut. (390.4)

5:00 Green Tea Consumption Reduces Oxidative DNA Damage and Lipid Peroxidation in Smokers and Non-smokers. Y. Liu, Z. Wang, A.D. Fly and J.E. Klaunig. Indiana Univ. Sch. of Publ. Hlth. (922.8)

5:00 Dietary Cocoa Improves Hepatic Mitochondrial Function in Obese Mice. M. Sun, L. Tao, Y. Gu and J.D. Lambert. Penn State. (271.7)


5:00 Effect of Grape Consumption on Biomarkers of Endothelial and Cardiovascular Health. Q. Hu, J.M. Randolph, K.A. Giebler, A.M. Stevens and F.M. Steinberg. Univ. of California, Davis. (923.5)


5:00 Tolerance and Efficacy of a Probiotic Supplement Delivered in Capsule Form. G.M. Labellarte, S.T. E.M.T. Padhi, A. Hawke, H.J. Steinberg. Univ. of California, Davis. (923.5)

SATURDAY
5:00 Comparison of Different Tea Types on Osteoblast Activity. L.A. Nash and W.E. Ward. Brock Univ., Canada. (924.34)

5:00 Formononetin Enhances the Expression of Genes Related to Adipocyte Differentiation and Insulin Sensitivity. S-Y. Yu, Y. Choi, Y-I. Kwon, R. Wood and Y-C. Kim. Univ. of Massachusetts Amherst and Hannam Univ. South Korea. (607.20)


5:00 Transport of MicroRNA-Containing, Milk-Borne Extracellular Vesicles by Human Colon Carcinoma Caco-2 Cells. T.Wolf, S. Baier and J. Zempleni. Univ. of Nebraska-Lincoln. (924.2)

5:00 Dried Plums Promote Increased Antioxidant Capacity in Smokers and Nonsmokers. A. Zawilski, S. Nelson, B. McGill, M. McIntosh, M.Y. Hong, S. Hooshmand and M. Kern. San Diego State Univ. (922.15)

5:00 Polyphenols Extracted from Grape Powder Induce Lipogenesis and Glucose Uptake during Differentiation of Murine 3T3-F442A Preadipocytes. S. Torabi and N.M. DiMarco. Texas Woman’s Univ. (608.22)

5:00 Sulforaphane Reduces Inflammatory Gene Expression in Microglia from Aged Mice. B.E. Townsend, J.L. Rytych and R.W. Johnson. Univ. of Illinois at Urbana-Champaign. (922.23)


5:00 Resistant Starch and Lactobacillus Feeding Improve Metabolic Functions in Diet-Induced Obese Mice. J. Barouei, D. Mishchuk, D. Kieffer, A. Martinic, R. Martin, C. Slupsky and M. Marco. Univ. of California and USDA-ARS. (924.29)

5:00 Carnosic Acid as the Major Bioactive Component in Rosemary Extract Ameliorates High-Fat Diet-Induced Obesity and Metabolic Syndrome in Mice. Y. Zhao, R. Sedighi, P. Wang, H. Chen, Y. Zhu and S. Sang. North Carolina A&T State Univ. (402.3)

5:00 Effect of Yoghurt and its Probiotics on Fecal Probiotic Content: A Randomized Controlled Trial. K.L. Ivey, R. Yang, U. Ryan, S-Y. Lin, J. Hodgson and R. Prince. Sch. of Med. and Pharmacol., Univ. of Western Australia and Murdoch Univ. Australia. (924.35)

5:00 The Change in Human Microvascular Function and its Relationship to Plasma Epoxide Content after Short-Term Walnut Intake. R.R. Holt, S.J. Yim, G.C. Shearer, C.L. Keen, D. Djurica, J.W. Newman and R.M. Hackman. Univ. of California, Davis and Penn State. (923.9)

5:00 Metabolites of Blueberry Anthocyanins Suppress Lipotoxicity-Induced Endothelial Inflammation. R. Cavalcanti, N. Begaye, M. Costa, L.P. Bharath, J.D. Symons, T. Jalil, N.S. Rajasekaran, Z. Jia and P.V.A. Babu. Col. of Hlth., Univ. of Utah, Univ. of Utah, Univ. of North Carolina at Greensboro and Univ. of Alabama at Birmingham. (118.6)

5:00 Prebiotic Fiber Consumption Decreases Energy Intake in Overweight and Obese Children. M. Hume, A. Nicolucci and R. Reimer. Univ. of Calgary. (597.3)

5:00 Probiotics Do Not Enhance Anti-hypertensive Effect of Blueberry Diets in Hypertensive Rats. L. He, C. Blanton, K. Gottschall-Pass and M.I. Sweeney. Univ. of Prince Edward Island and Idaho State Univ. (608.34)

5:00 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. V.L. Choo, V. Ha, S. Blanco Mejia, C.W.C. Kendall, R.J. de Souza, D.J.A. Jenkins and J.L. Sievenpiper. St. Michael’s Hosp., Univ. of Toronto and McMaster Univ., Canada. (595.19)

5:00 Effects of Milk Protein Concentrate on Energy Restriction-Induced Changes in Body Composition and Indices of Metabolic Syndrome. J. Zhou, J.E. Kim and W.W. Campbell. Purdue Univ. (595.22)


5:00 Effects of a Diet-Based Weight-Reducing Intervention on Obese Women Resistant to Weight Loss. S. Panahi, C. Couture, C. Lepage, V. Drapeau and A. Tremblay. Laval Univ., Quebec City. (595.6)


5:00 Effect of a High Protein, High Egg Diet on Muscle Composition, Metabolic Health and Systemic Inflammation in Overweight and Obese, Older Adults. C.S. Wright, J. Zhou, R.D. Sayer, J.-E. Kim and W.W. Campbell. Purdue Univ. (270.6)

5:00 The Impact of Beverages Varying in Macronutrient Content on Appetite and Energy Intake. A. Dougkas and E. Östman. Lund Univ. (597.4)

5:00 Early Childhood Malnutrition Increases Metabolic Syndrome in Adulthood. L. Fischer and J. Galler. Harvard Med. Sch. (258.2)
5:00 Soy-Dairy Protein Blend Supplementation during 3 Months of Resistance Exercise Training Enhances Lean Body Mass

5:00 Higher Total Protein Intake and Change in Total Protein Intake Impact Body Composition Changes in Adults Who Performed Exercise Training for 36 Weeks
J.E. Kim, T.B. Conley, E.M. Weinheimer-Haus and W.W. Campbell. Purdue Univ. (270.7)

5:00 Quenching of Cytotoxic Reactive Carbonyl Species by Black Rice with Giant Embryo M. Colzani, Y-M. Lee, S-I. Han, G. Aldini and K-J. Yeum. Univ. of Milan, Konkuk Univ. and Nati. Inst. of Crop Sci., RDA, Misyang, South Korea. (595.14)

5:00 Adipocyte Ablation of Long-Chain Acyl-CoA Synthetase-4 (ACSL4) Protects against Diet-Induced Obesity E.A. Killion, M-J. Lee, R.A. Coleman and A.S. Greenberg. USDA at Tufts Univ., Boston Univ. Sch. of Med. and Univ. of North Carolina at Chapel Hill. (743.1)

5:00 Influence of High Fat Diet on Macrophage Behavior and Metabolic Processes in Obesity-Sensitive and -Resistant Mice: Role of Monocyte Chemoattractant Protein 1 T.L. Cranford, R.T. Enos, K.T. Velazquez, J.L. McCllellan, M. Nagarkatti and E.A. Murphy. Univ. of South Carolina Sch. of Med. (595.31)

5:00 The Effect of Diet and Exercise in Women with Polycystic Ovary Syndrome
D. Kieffer, J.W. Newman, D. Cooper, L. Welch, W. Horn, M. Marco, C. Pelkman and N. Keim. Univ. of California, Davis, USDA, Davis and Ingredion, MIRYANG, South Korea. (595.14)


5:00 Inter-relationship between the In Vivo Metabolism of Apolipoprotein B_{100}-Containing Lipoproteins and LDL Particle Size and LDL Particle Number M. Leclerc, E.M. Ooi, P. Couture, C. Richard, S. Desroches, J. Marin, A-J. Tremblay and B. Lamarche. Laval Univ., Canada and Univ. of Western Australia. (248.3)

5:00 Glycemic and Insulinemic Responses Are Blunted by the Consumption of a Smoothie-Type Beverage Containing a Whole-Grain Fiber Composite Ingredient L.E. O’Connor and W.W. Campbell. Purdue Univ. (379.2)

5:00 Omega-3 Polyunsaturated Fatty Acids Have Sex-Specific Effects on the Phospholipid Fatty Acid Composition and Neurtrophin Expression in the Brain of C57BL/6 Mice B.A. Feltham, K.A. Balogun and S.K. Cheema. Mem. Univ. of Newfoundland. (401.8)

5:00 A Diet High in Protein Reduces Weight Gain, Food Intake and Liver Weight in Obese Zucker Rats W.W. French, S.A. Shouse, X. Gu, S-O. Lee and J.I. Baum. Univ. of Arkansas. (129.7)

5:00 Low Serum Sphingolipids in Attention Deficit Hyperactivity Disorder M. Henriquez-Henriquez, S. Solari, F. Allende, T. Quiroga, B. Kim, R.J. Deckelbaum and T.S. Worgall. Col. of P&S, Columbia Univ., Pontifical Catholic Univ. of Chile, Santiago and Colombia Univ. (389.4)

5:00 Marine Sources but Not Plant Sources of Omega-3 Fatty Acids Prevents Progression of Hepatic Steatosis in fa/ fa Zucker Rats L. Hong, P. Zahradka and C.G. Taylor. Univ. of Manitoba. (595.12)

5:00 C/EBP-beta Regulates Lipid Homeostasis and Autophagy Activation in Liver and Macrophages M.K. Zaihd, A. Doyel, R.C. Janssen, S. Wang, J.E. Friedman and S.M. Rahman. Texas Tech Univ. and Univ. of Colorado Denver, Aurora. (743.16)

5:00 Impact of Liquid Sugar Reduction on Behavioral and Brain Responses to Food Viewing C. Crezé, M-L. Bieler, J-F. Knebel, V. Campos, L. Tappy, M.M. Murray and U. Toepel. Univ. and Hosp. Ctr., Univ. of Lausanne and Ctr. for Biomed. Imaging, Lausanne. (597.6)

5:00 Patterns of Self-Reported Dieting and Energy Intake in 15y Girls K.N. Balantekin, L.L. Birch and J.S. Savage. Penn State and Univ. of Georgia. (597.9)


5:00 Correspondence between Effects of Dietary Cholesterol versus Plant Sterols on Plasma Cholesterol Responsiveness and Cholesterol Trafficking in Healthy Humans P.A.S. Alphonse, V.R. Ramprasad and P.J.H. Jones. Univ. of Manitoba. (248.5)

5:00 The Effects of Consuming High Protein Solid versus Beverage Breakfasts on Changes in Body Weight and Body Composition in Overweight, Breakfast Skipping Adolescents J.A. Gwin and H.J. Leidy. Univ. of Missouri-Columbia. (599.1)

5:00 Role of Acyl-Coenzyme A:Cholesterol Acyltransferase 1 in Lipogenesis in Adipocytes Y. Zhu, C-Y. Chen and K-H. Kim. Purdue Univ. (248.7)

5:00 Obesity Is Associated with Changes in Plasma Oxylipids C.A. Pickens, L. Sordillo, S-S. Comstock and J.I. Fenton. Michigan State Univ. (389.1)

5:00 High-Protein Diet during Gestation Promotes Adiposity and Food Intake in Female Rat Pups in the Longer Term C. Desclée de Maredsous, A. Oosting, C. Delteil, F. Blachier, P. Barbillon, T. Mary-Huard, D. Tomé, R. Ozeeer and A-M. Davila. AgroParisTech/INRA and Danone Nutricia Res., Utrecht. (270.2)
5:00 Sugar Consumption and Cardiovascular Risk Factors in College Students E.R. Nelson, B.M. Navrkal, I.E. Lofgren and K.J. Melanson. Univ. of Rhode Island. (379.6)

5:00 Effect of Prolonged Enteral Leucine Supplementation on Muscle Protein Synthesis and mTOR Activation in Neonatal Pigs Fed a Restricted Protein Diet D.A. Columbus, J. Steinhoff-Wagner, A. Suryawan, H.V. Nguyen, A. Hernandez-Garcia, M.L. Fiorotto and T.A. Davis. CNRC, Baylor Coll. of Med. (129.2)

5:00 Frequent Consumption of Meals Prepared Outside Home Influence Dietary Adequacy and Diversity in Korean Adults K.W. Lee, W.O. Song and M.S. Cho. Michigan State Univ. and Ewha Womans Univ., South Korea. (597.1)

5:00 Omega-3 Fatty Acids Modify Treatment Effect of High-Dose B Vitamins in Cognitively Impaired Elderly F. Jernerén, A.K. Elshorbagy, A. Oulhaj, S.M. Smith, H. Refsum and D. Smith. Univ. of Oxford, Univ. of Alexandria, United Arab Emirates Univ. and Univ. of Oslo. (401.1)

5:00 Association between Fatty Acid Status and Executive Function in Tanzanian Children Aged 2-6 T. Jumbe, S. Hahn, W.S. Harris, J. Kinabo, M. Pontifex and J.I. Fenton. Michigan State Univ., Univ. of South Dakota and OmegaQuant Analytics, LLC and Sokoine Univ. of Agr., Tanzania. (598.8)


5:00 Breakfasts Higher in Protein Increase Postprandial Energy Metabolism in Overweight, Breakfast Skipping Women A.C. Dunn, B.L. Neumann, D. Johnson, J.D. Adams and J.I. Baum. Univ. of Arkansas. (270.1)

5:00 Early Exposure to Phytosterols Protects Offspring from Hypercholesterolemia Induced by Maternal Cholesterol Feeding in Syrian Golden Hamsters J. Liu, A. Raslawsky, C. Movsesian, M.S. Patel and T.C. Rideout. SUNY at Buffalo. (754.9)

5:00 Postnatal Iron Deficiency Impairs White Matter Development in Neonatal Piglets B.J. Leyshon and R.W. Johnson. Univ. of Illinois, Urbana. (754.10)

5:00 Tissue Distribution of Oxidases and Transaminases mRNA in Broiler Chickens Fed with Methionine Isomers or Precursors S. Zhang, B. Saremi, E. Gilbert and E. Wong. Virginia Tech and Evonik Industries AG, Hanau, Germany. (754.25)

5:00 Protein Synthesis Is Impaired in Low Compared to Normal Birth Weight Neonatal Pigs H. Zhu, Y. Chen, S.R. McCauley and S.W. El-Kadi. Virginia Tech. (754.20)

5:00 Leucine Antagonizes Protein Degradation Induced by Endotoxin in Skeletal Muscle of Neonatal Pigs A. Hernandez-Garcia, R.A. Orellana, A. Suryawan, D. Columbus, R. Manjarin, H. Nguyen and T. Davis. CNRS, Baylor Coll. of Med. and Texas Children’s Hosp., Houston. (755.3)

5:00 The Effect of Dietary Saturated and Unsaturated Fatty Acid on Gene Expression and Fatty Acid Composition of Various Tissues in Pre-ruminant Calves C.Y. Tsai, W.I. Loucks, K.C. Ramsey, C.M. Scholte, M.E. Doumit and P. Rezamand. Univ. of Idaho. (755.4)

5:00 Effects of Contaminated Fish Oil on Hepatic FAS and HMGC Gene Expression and Liver Function Enzyme Activities J.C. Lumibao and M.Y. Hong. San Diego State Univ. (755.6)


5:00 Anti-hyperglycemia Effect of Lactobacillus reuteri GMNL-89 through Modulating of PPARs and Energy Metabolism Related Genes Expression in Insulin-Resistant Rats M.H. Fan, W.-K. Huang, C-H. Chan and H-Y. Huang. Shih Chien Univ. (756.5)

5:00 Investigating Tissue Level Gene-by-Diet Interactions with Metabolomics A. Wells, B. Barrington, D. Threadgill, S. Campagna and B. Voy. Univ. of Tennessee, Knoxville and Texas A&M Univ. (755.19)

5:00 Breastmilk Vitamin B12 Concentration Is Low among Women in Western Kenya and Is Not Associated with Animal Source Food Intake or Food Insecurity A. Williams, C. Chantry, S. Young, C. Null and C. Stewart. Univ. of California, Davis, Univ of California Davis Med. Ctr., Cornell Univ. and Intl. Policy Res. and Eval., Mathematica. (133.4)

5:00 The Relationship of Breast Milk Intake as Assessed with Deuterium Dilution on Growth and Body Composition of Infants in Jamaica S.N. Whyte, T. Royal-Thomas, A.V. Badaloo and M.E. Reid. Univ. of the West Indies, Jamaica. (133.6)

5:00 Diet Influences the Oral Microbiota of Infants during the First Six Months of Life H.D. Holscher, R.A. Mathai, J. Kim and K.S. Swanson. Univ. of Illinois, Urbana, Dominican Univ., IL and East Carolina Univ. (121.8)

5:00 Milk Osteopontin May Promote Brain Development Via Up-Regulating Osteopontin Expression In Vivo R. Jiang, C. Prell and B. Lönnерdal. Univ. of California, Davis. (121.4)

5:00 Early Supplementation of Phospholipids and Gangliosides Affects Brain and Cognitive Development in Neonatal Piglets E.C. Radiowski, H. Liu, M.S. Conrad, Y. Li, R.N. Dilger and R.W. Johnson. Univ. of Illinois, Urbana and Northeast Agr. Univ. (121.5)

5:00 A Longitudinal Study of Human Milk Composition Beyond One Year Postpartum M.T. Perrin, A.D. Fogleman and J.C. Allen. North Carolina State Univ. (582.6)

5:00 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 D. Lemas, B. Young, A. Tomczik, T. Hernandez, B. DeLaHoussaye, C. Robertson, M. Rudolph, N. Krebs, S. Santorico, L. Barbour, D. Frank and J. Friedman. Univ. of Colorado Anschutz Med. Campus, Aurora and Univ. of Colorado Denver. (121.1)
5:00 Infection-Specific Responses of Breastmilk Leukocytes
F. Hassanbod, D. Savigni, J. Underhill, L. Moles, P.E. Hartmann and D.T. Geddes. Sch. of Chem. and Biochem., Univ. of Western Australia, Univ. of Basel and Complutense Univ. of Madrid. (121.2)

5:00 The Role of ZnT2 in the Mammary Gland during Lactation S. Lee, D. Soybel and S.L. Kelleher. Penn State Hershey Coll. of Med. and Penn State. (121.6)


5:00 Bovine Lactoferrin Is a Transcription Factor Stimulating IL-1 Beta Gene Expression in the Small Intestine R. Jiang and B. Lönnerdal. Univ. of California, Davis. (582.1)

5:00 Milk Mineral and Cytokine Concentrations Differ in Guatemalan Mothers with Subclinical Mastitis by Stage of Lactation C. Li, H.M. Wren, N.W. Solomons, M.E. Scott and K.G. Koski. McGill Univ. and CeSASAM, Guatemala. (582.3)

5:00 The Effects of Childhood Malnutrition on DNA Methylation in Adulthood L. Fischer, C. Peter, P. Garg, A. Sharpe, S. Akbarian and J. Galler. Harvard Med. Sch. and Icahn Sch. of Med. at Mount Sinai. (749.2)

5:00 Pulsatile Delivery of Cortisol Regulates Lipid Storage in Adipocytes In Vivo K. Karastergiou, P. Pramyothin, A. Port, C.M. Apovian, M-J. Lee and S.K. Fried. Boston Univ. Sch. of Med., Mahidol Univ., Bangkok and Univ. of Maryland Sch. of Med. (405.3)

5:00 All trans-Retinoic Acid Mediates Wnt/β-Catenin Signaling through MED28 in Human Colon Cancer Cells N-T. Hsieh, C-Y. Huang, C-I. Li and M-F. Lee. China Med. Univ. and Chang Jung Christian Univ., Taiwan. (915.3)


5:00 Diet-Induced Weight Loss Changes in Gene Regulatory Networks in the Rectum: Network Analysis as a Compliment to Traditional Gene Expression Analysis A.J. Vargas, J. Quackenbush and K. Glass. Harvard Sch. of Publ. Hth., NCI, NIH and Brigham and Women's Hosp. (275.5)

5:00 The RFC1 80G>A Relates to Survival Rate According to PBMCs DNA Global Methylation in Primary Liver Cancer S. Moruzzi, S. Udali, P. Guarini, A. Guglielmi, A. Ruzzenenti, P. Pattini, S. Conci, S.A. Tammen, O. Olivieri, S-W. Choi and S. Friso. Univ. of Verona, Friedman Sch. of Nutr. Sci. and Policy, Tufts Univ. and CHA Univ., Seoul. (749.4)


5:00 Inflammation Attenuates Adaptive Thermogenesis via Autophagy and ER Stress-Associated Mechanism M. Okla, W. Wang, I. Kang and S. Chung. Univ. of Nebraska-Lincoln. (405.4)

5:00 Effects of High Fat Diets on Metabolic Gene Expression in the Liver and Adipose of the Offspring through Multi-generations via Epigenetic Alterations J.H. Park, Y. Yoo and Y.J. Park. Ewha Womans Univ., South Korea. (749.5)

5:00 Diverse Classes of Bitter Phytochemicals Modulate Carbohydrate Metabolism and Immune Responses through Gastrointestinal Bitter Taste Receptors K. Palatini, M. Wilson, J. Alley, D. Esposito and S. Komarnytsky. North Carolina State Univ., Kannapolis and Raleigh and Appalachian State Univ. (405.5)

5:00 Diet-Gene Interaction in Arachidonic and Docosahexaenoic Acid Synthesis Shows Compensatory Upregulation H. Su, D. Zhou, Y-X. Pan and M.T. Nakamura. Univ. of Illinois at Urbana-Champaign and Jiangnan Univ., China. (915.5)

5:00 Macronutrients Differentially Regulate PFKFB3 Expression and Increase Inflammation in Intestinal Epithelial Cells R. Botchlett, X. Hu, T. Qi, J. Zhao, H. Li and C. Wu. Texas A&M Univ. (405.1)

5:00 Skin Carotenoids Correlate with Plasma Carotenoids and Reported Intake in 4th-Grade Children L.M. Nguyen, R.E. Scherr, I.V. Ermakov, W. Gellermann, J.D. Linnell, C.L. Keen, S. Miyamoto, F.M. Steinberg, H.M. Young and S. Zidenberg-Cherr. Univ. of California, Davis, Univ. of Utah and Sch. of Nursing, Univ. of California, Davis, Sacramento. (910.2)

5:00 Teachers Don't Know What They Don't Know about Nutrition: A Case for Improving Professional Development J.D. Linnell, M.H. Smith, K.M. Brian, R.E. Scherr and S. Zidenberg-Cherr. Univ. of California, Davis. (910.4)

5:00 Physical Activity Guide Development for Parents of Preschoolers: Qualitative Analysis C. Delaney, J.T. Martin-Biggers and C. Byrd-Bredbenner. Rutgers Univ. (910.8)
5:00 One-Year and Two-Year Effects of the USDA Fresh Fruit and Vegetable Program (FFVP) on Students’ Fruit and Vegetable Intake Frequency and Variety Y-C. Lin, E.B. Foland, A. Caito-Sipe and A.D. Fly. Sch. of Publ. Hlth., Indiana Univ. and Indiana Dept. of Educ. (911.1)

5:00 Association of Video Game Playing and Lifestyle Behaviors in Adults C. Cemelli, J. Burris and K. Woolf. NYU Steinhardt. (911.2)

5:00 Supporting Autonomy in a Nutrition Intervention for Overweight/Obese Children Using Self-Determination Theory with Motivational Interviewing A.M. Maia and A. White. Univ. of Maine. (911.3)

5:00 Self-Efficacy Is Associated with Healthy Eating Behaviors for Fifth Grade Students E. Hall, W. Chai, W. Koszewski and J.A. Albrecht. Univ. of Nebraska-Lincoln and Univ. of North Dakota. (911.5)

5:00 Examine the Knowledge of Nutrition and Physical Activity among 3rd-Graders Using Two Different Teaching Methods in Elementary School S. Melhorn, T. Crook, J. Phelps and R. Hakakk. Univ. of Arkansas for Med. Sci. (911.4)

5:00 Evaluating the Discrimination of Sugar Content Thresholds in the Canadian Nutrient File Classification System J.T. Bernstein and M.R. L’Abbe. Univ. of Toronto. (124.7)

5:00 Accuracy of Consumers’ Ability in Identifying Whole Grains Foods: Implications for Policy Change M. Chea, J.S. Foster and A.R. Mobley. Univ. of Connecticut. (124.3)

5:00 A Comparison of the Healthfulness of Prepackaged Children’s Foods from Participants and Non-participants of the Canadian Voluntary Code on Marketing to Children C.W. Murray and M.R. L’Abbe. Univ. of Toronto. (124.1)

5:00 Does Mere Exposure Mediate Sensitivity to Bitter Taste on Consumer Liking and Acceptability of Whole Grain Foods? A. De Leon, M. Giovanni, W. Horn, D. Burnett and N.L. Keim. Univ. of California, Davis, California State Univ. Chico and USDA, Davis. (124.4)

5:00 Medicinal and Nutritional Plants in Rural Panama: Artisanal Lemongrass Tea Has High Community Acceptability T.P. van der Have, I. Bermudez, J. Kearney and O. Bermudez. Catholic Univ. of Leuven, Tech Univ. of Panama, Dublin Inst. of Technol. and Tufts Univ. Sch. of Med. (740.1)

5:00 Understanding Aspects of Carbohydrate Quality in Rice Related to Differences in Gastric Emptying Rate E. Pletsch and B. Hamaker. Purdue Univ. (740.5)

5:00 Trends in the Content and Forms of Vitamin K in Processed Foods M.Z. Brown-Ramos, A.J. Centi, D.B. Haytowitz and S.L. Booth. USDA at Tufts Univ. and USDA, Beltsville. (739.6)

5:00 Beverage Groups Consumed by U.S. Children and Their Impact on Nutrient Intake E.A. Parker, J.C. Clemens and A.J. Mosfhegh. USDA, Beltsville. (739.8)

5:00 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 T. Schap, A. Subar, G. Anic, S. George, S. Krebs-Smith, Y. Park and J. Reedy. NCI, NIH, Rockville and Washington Univ. (119.2)

5:00 Higher Red Blood Cell n-3 Fatty Acid Composition Prospectively Relates to Lower Depressive Symptomatology S.J. Bigornia, K.L. Tucker, L.M. Falcon and W.S. Harris. Univ. of Massachusetts Lowell and Sanford Sch. of Med. of the Univ. of South Dakota. (119.7)


5:00 Characterizing Household Food Shopping Behavior Using Novel Receipt-Based Geospatial Measures T.L. Barnes, S.A. French, N.R. Mitchell and D. Van Riper. Univ. of Minnesota, Minneapolis. (119.6)


5:00 Increased Carbohydrate Intake and Glycemic Load Are Associated with Left Ventricular Hypertrophy N. Bush, B. Gower, K. Pearson, S. Judd, J. Shikany, V. Howard, S. Soliman and G. Howard. Univ. of Alabama at Birmingham and Wake Forest. (736.31)

5:00 Are Food Processing and Convenience Linked with the Nutritional Quality of Foods Purchased by U.S. Households? J. Poti, M. Mendez, S.W. Ng and B. Popkin. Univ. of North Carolina at Chapel Hill. (587.9)

5:00 Social Support in Context and Its Association with Three Healthy Diet Indicators S.P. Arévalo, L.M. Falcón and K.L. Tucker. Univ. of Massachusetts Lowell. (736.36)

Visit the Exhibits
Sunday – Tuesday
9:00 AM – 4:00 PM

Waist size in 9-11 year-old black and white girls predicts development of cardiometabolic risk over ten years S.E. Ferreira, M.M. Mott, M.R. Singer, M.L. Bradlee, S.R. Daniels and L.L. Moore. Boston Univ. Sch. of Med. and Univ. of Colorado CO Sch. of Med. (381.2)


Overtime growth and spatial distribution of fast food industry in China during 2005-2012 X. Cheng, Y. Wang, H. Xue and W. Qu. Univ at Buffalo and Fudan Univ., Shanghai. (119.5)

Development and validation of a novel household grocery food purchase quality score P.J. Brewster, P.M. Guenther, K.C. Jordan and J.F. Hurdle. Univ. of Utah. (131.3)


Vitamin B status is associated with depression among women with inflammation J.M. Faraj, L.M. Troy, E.R. Bertone-Johnson and A.G. Ronnenberg. Univ. of Massachusetts Amherst. (587.18)


Does pollution exacerbate obesity risks? A systematic review and meta-analysis K.A. Smith, W. Qu, X. Ren and Y. Wang. Univ. at Buffalo, SUNY and Fudan Univ., China. (736.34)

5:00 Effect of Sinigrin on Vascular Cell Adhesion Molecule-1 Expression in TNF-α-Stimulated Mouse Vascular Smooth Muscle Cells via Downregulation of NF-κB Signaling Pathways H.W. Lee and K.R. Lee. Sch. of Pharm., Sungkyunkwan Univ., South Korea. (593.15)

5:00 Does the recommendation to drink 8 cups of water per day promote weight loss? J.M. Wong, C.B. Ebbeling, L. Robinson, H.A. Feldman and D.S. Ludwig. Boston Children’s Hosp. (747.18)


5:00 Obesity and Hypothalamic Inflammation from High Fat Diets of Different Fatty Acid Profile K.J. Mamounis and T.A. Roepke. Rutgers Univ. (746.2)

5:00 Nopal Consumption Attenuates Biochemical Abnormalities and Microbiota Disbiosis in a Diet-Induced Obesity Model M. Sanchez-Tapia, A.R. Tovar and N. Torres. Salvador Zubirán Natl. Inst. of Hlth. Sci. and Nutr., Mexico City. (601.1)

5:00 The Effect of Mango Supplementation on Clinical Parameters of Pre-diabetic Individuals J. Semkoff, S. Evans, S. Janthachatikun, H. Eldoumi, M. Mahmood, M. Meister, P. Payton, S. Peterson, P. Perkins-Veazie, S. Clarke, B. Smith and E. Lucas. Oklahoma State Univ. and North Carolina State Univ. (602.12)

5:00 Diet Quality and Adiposity in Adolescents K. Mellendick, L. Shanahan, L. Wideman, S. Calkins, S. Keane and C. Lovelady. Univ. of North Carolina at Chapel Hill. (747.12)

5:00 MD2 May Mediate Free Fatty Acid-Induced Inflammation and Insulin Resistance Q. Fang, Y. Pan and G. Liang. Sch. of Pharmaceut. Sci., Wenzhou Med. Univ., China. (602.14)

5:00 A randomized control trial of sugar-sweetened and artificially sweetened beverages and intrahepatic fat in overweight subjects V. Campos, C. Despland, P. Schneider, V. Brandejsky, R. Kreis, C. Boesch and L. Tappy. Univ. of Lausanne and Univ. of Bern. (602.5)


Regional Fat Mass Estimations in Caucasian Adults from Regional Subcutaneous Fat Thickness Measured by Ultrasound M. Wall, A.B. Weik and R.T. Davidson. Logan Univ., MO. (747.11)

Body Weight Status Are Associated with Biomarkers of Inflammation and Bone Turnover in Former Smokers S.G. Lee, T.M. Vance, P. Hubert, L. Xie, B. Kim, J. Lee, B.W. Boling, S-K. Lee and O.K. Chun. Univ. of Connecticut. Univ. of Wisconsin-Madison and Univ. of Connecticut Hlth. Ctr. (602.16)

Vitamin D 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 P. Manna and S.K. Jain. LSU Hlth. Sci. Ctr., Shreveport. (253.1)

Effects of Roux-en-Y Gastric Bypass on Sugar-Induced Hypertriglyceridemia A. Surowska, S. De Giorgi, F. Theytaz, V. Lecoultre, V. Campos, V. Giusti and L. Tappy. Univ. of Lausanne and Broye Intercantonal Hosp. (600.3)

Iron Bioavailability of Sorghum, Cowpea, Corn and Soybean Fortified Blended Foods K. Penumonda, S. Alavi and B.L. Lindshield. Kansas State Univ. (122.1)


Dysfunctional Cardiac Fatty Acid Metabolism in Cystathionine-beta-Synthase +/- Mice with Obesity M.B. Glier, R.B. Wambolt, R.P. da Silva, S.L. Gerrard, R.E. Aeliusunus, R.L. Jacobs, M.F. Allard and A.M. Devlin. Univ. of British Columbia and Univ. of Alberta. (919.18)


Whey-Based Supplement Added to a Plant-Based Diet Increases Total Zinc Absorption, but Not Total Iron in Mexican Children A. Pérez-Pérez, O.P. García, M. Camacho, J.E. Westcott, K.M. Hambidge, N.F. Krebs and J.L. Rosado. Sch. of Nat. Sci., Autonomous Univ. of Querétaro, Mexico and Univ. of Colorado Denver. (122.2)
5:00 Novel Ferroxidases in Mammalian Intestinal Epithelial Cells
C. Doguer, J-H. Ha, S. Gulec, S. Flores, X. Wang and Y. Han. Univ. of Florida and Izmir Inst. of Technol., Turkey. (263.8)

5:00 Dietary Fat Dose-Dependently Increases α-Tocopherol Bioaccessibility T.N. Sapper, E. Mah, C. Chithchumroonchokchai, M.L. Faila and R.S. Bruno. The Ohio State Univ. (122.8)

5:00 The Zinc Transporting Network Is a Central Component of Dysregulation in Breast Cancer P. Chandler, B. Kochapurakkal, V. Lopez, S. Alam, D. Soybel and S. Kelleher. Penn State , Dana-Farber Cancer Inst. and Consumnes River Col., CA. (921.3)

5:00 Assessing Vitamin D3 Stability in Dietary Supplements S. Su and T.C. Chen. Boston Univ. Sch. of Med. (253.5)

5:00 γ-Carboxyethyl Hydroxychroman Preserves Nitric Oxide Bioavailability by Attenuating Oxidative Stress and Inflammation in Endothelial Cells Treated with High Glucose Y. Li, L. Bharath, Y. Quan, E. Mah, Y. Guo, M. Hawkins, R.S. Bruno, P.V.A. Babu, T. Jailli and J.D. Symons. Univ. of Utah and The Ohio State Univ. (758.1)

5:00 25-Hydroxyvitamin D and Its C-3 Epimer in a Mouse Model of Non-melanoma Skin Cancer M.D. Teegarden, K.M. Riedl, K.L. Tober, S.J. Schwartz and T.M. Oberyssyn. The Ohio State Univ. and The Ohio State Univ. Wexner Med. Ctr. (758.2)

5:00 Effect of High Protein Consumption on Markers of B6 Status in a Rodent Model of Moderate Pyridoxine Deficiency S. Raposo-Blouw, S. Mayengbam and J.D. House. Univ. of Manitoba. (134.4)

5:00 Vitamin D Supplementation and Quality of Life following Diagnosis in Stage II Colorectal Cancer Survivors C.M. Lewis, P. Xun and K. He. Indiana Univ. (253.6)


5:00 Effects of Folic Acid Deficiency on the Murine Mammary Gland S.G. Miszewski, G.E. Berryhill, R. Green, A.D. Borowsky, J.W. Miller and R.C. Hovey. Univ. of California, Davis, Univ. of California Davis Med. Ctr., Sacramento and Rutgers Univ. (919.10)


5:00 Maternal Folic Acid/Vitamin B12 Imbalance Programs Hepatic Gene Expression in Female Offspring A. Aljaadi, R. Aleliunas, M. Glier, T. Green, J. Miller and A. Devlin. Univ. of British Columbia and Rutgers Univ. (919.13)

5:00 The Role of Serine Hydroxymethyltransferase and Methylene-Tetrahydrofolate Dehydrogenase in Genome Stability A. DiRisio, E. Kamynina and P.J. Stover. Cornell Univ. (919.1)

The Higher Calcium Absorption Associated with a High Fat Diet Is Not Due to Intestinal Calcium Availability E. Bandali, M. Rogers and S. Shapses. Rutgers Univ. (760.2)

Cystathionine Gamma-Lyase Inhibition in Primary Human Hepatocytes Affects the Production of Hydrogen Sulfide Biomarkers through the Transsulfuration Pathway B. DeRatt, R. da Silva, M. Ralat, R.L. Jacobs and J.F. Gregory. Univ. of Florida and Univ. of Alberta. (919.2)

Supplementation of Aging Transgenic Mice with Folic Acid and Folinic Acid Alleviates Alzheimer’s Disease-Associated Neuronal Amyloid-β Pathological Progression and Genomic Expression Profiles T-F. Chen, H-C. Hsu, M-J. Chiu and R-F.S. Huang. Natl. Taiwan Univ. Hosp., Fu-Jen Univ., Taiwan and Natl. Taiwan Univ. (919.3)


Maternal Choline Supplementation Modulates Fetal Growth Patterns in a Mouse Model of Placental Insufficiency J.H. King, S.T. Kwan, J. Yan, V.G. Fomin, M.S. Roberson and M.A. Caudill. Cornell Univ. (919.8)

Growth Monitoring and Promotion in Rural Ghana: Lack of Motivation or Tools? M.E. Laar, G.S. Marquis, A. Larkey and K. Gray-Donald. Sch. of Dietetics and Human Nutr., McGill Univ. and Univ. of Ghana. (31.4)

Association of Blood Fatty Acids and Growth in Tanzanian Children 2-6 Years of Age S. Hahn, T. Jumbe, W.S. Harris, J. Kinabo and J.I. Fenton. Michigan State Univ., Sanford Sch. of Med., Univ. of South Dakota and OmegaQuant Analytics LLC and Sokoine Univ. of Agr., Tanzania. (31.6)


Effect of Vitamin B12 Supplementation on B12 Status and Neurophysiological Function in Older Chileans Analyzed by the Combined Indicator of B12 Status. A. Brito, J.W. Miller, R. Green, S.N. Fedosov, D. Harvey, S. Shahab-Ferdows, R. Verdugo, H. Sanchez, C. Alba, R. Uauy and L.H. Allen. USDA, Davis, Rutgers Univ., Univ. of California, Davis, Aarhus Univ. and INTA, Univ. of Chile. (28.8) 5:00


Availability and Intake of Foods with Naturally Occurring Vitamin D Deficiency. M.B. Cooper, S.S. Shanta, A.A. Mahmud, D.E. Roth and A.D. Gernand. Penn State, ICDDR, Bangladesh and Univ. of Toronto & Hosp. for Sick Children. (391.3) 5:00


Civil Conflict and Child Health in Africa: An Instrumental Variables Approach. A.F. Darrouzet-Nardi. Friedman Sch. of Nutr. Sci. and Policy, Tufts Univ. (391.4) 5:00


Women’s Economic Autonomy, Education, and Experience of Domestic Violence Are Associated with Household Food Security among Pregnant Women in MINIMat Study in Bangladesh. S. Kulkarni, E.A. Frongillo, Jr., R.T. Naved and E-C. Ekström. Univ. of South Carolina, ICDDR,B, Dhaka and Uppsala Univ. (898.3) 5:00


Goji Berry Improves Colitis in IL10-/- Mice through Modulating Gut Microbiota. Y. Kang, M. Du, G. Yang and M. Zhu. Washington State Univ. (262.7) 5:00


Dietary Protein Source Impacts Bone, Acid Load and Calcium Excretion in Murine and Human Phenylketonuria. B.M. Stroup, E.A. Sawin, S.G. Murali and D.M. Ney. Univ. of Wisconsin-Madison. (274.3) 5:00

Improvement of Metabolic Parameters in Mice Supplemented with Vitamin D throughout Life. C.R. Villa, J. Chen, B. Wen, A. Taibi, W.E. Ward and E.M. Comelli. Univ. of Toronto and Brock Univ., Canada. (274.1) 5:00

Resistant Starch Alters Gut Microbiota and Reduces Uremic Retention Solutes in Rats with Adenine-Induced Chronic Kidney Disease. D. Kieffer, B. Piccolo, S. Liu, W. Lau, M. Khazaelli, S. Nazertehrani, N. Vaziri, R. Martin and S. Adams. USDA, Univ. of California, Davis and Univ. of California, Irvine. (274.4) 5:00

Changes in Fecal Vitamin K Content Are Associated with the Gut Microbiota. R. Koci. North Carolina State Univ., Children's and Women's Hlth. Ctr. of British Columbia, Children's and Women's Hlth. Ctr. of British Columbia and Helen Keller Intl., Phnom Penh. (590.3) 5:00


Balancing the Risk of Infant Low Birth Weight and Macrosomia: An Examination of Gestational Weight Gain or Weight Loss among Obese Women. N.P. Deputy, A. Sharma and S. Kim. Emory Univ. and Ctrs. for Dis. Control and Prevent. (590.3) 5:00
**5:00** Intake of 2 Eggs or Oatmeal for Breakfast Does Not Increase Biomarkers for Heart Disease while Eggs Improve Liver Enzymes and Raise HDL Cholesterol in Young Healthy Individuals. A. Missimer, D. DiMarco, M. Vergara-Jimenez, G. Murillo, B. Creighton, C.J. Andersen and M-L. Fernandez. Univ. of Connecticut and Univ. of Sinaloa. (274.2)

**5:00** Hepcidin, Iron Status and Inflammation in School-Aged Nepalese Children. S. Baker, K. Schulze, L. Wu, P. Christian and K.P. West, Jr. Johns Hopkins Bloomberg Sch. of Publ. Hlth. (913.8)

**5:00** The Effect of a Low Glycemic Index Diet on Diabetic Nephropathy. K. Srichaikul, V. Hertzog, H. Dutton, C.W.C. Kendall, J. Sievenpiper and D.J.A. Jenkins. St. Michael’s Hosp., Univ. of Toronto and Queens’ Univ., Canada. (274.7)


**5:00** Effect of Low Glycemic Index Diet on Apolipoprotein B and LDL Particle Size. K. Srichaikul, C. Ireland, C.W.C. Kendall, J.L. Sievenpiper, B. Lamarche and D.J.A. Jenkins. St. Michael’s Hosp., Univ. of Toronto and Laval Univ., Canada. (274.8)

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**41. LUNG SYMPOSIUM: ONTOGENY AND INJURY**

**Symposium**

**Sat. 8:30 am—Boston Convention & Exhibition Center, Room 162A**

**Chair: M.E. Sunday and C.W. Frevert**

**Pulmonary Pathobiology**

**Cancer Biology**

**Inflammation/Immunity**

**8:30** Role of Lung Pericytes and Resident Fibroblasts in Development and Pathogenesis of Pulmonary Fibrosis. J. Duffield. Biogen Idec Inc.


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**42. PATHOBIOLOGY FOR BASIC SCIENTISTS: LOOKING INTO THE CRYSTAL BALL: INFLAMMASOMES AND DISEASE**

**Course**

(Supported by an unrestricted educational grant from Elsevier)

(Sponsored by: ASIP Education Committee)

**Sat. 8:30 am—Boston Convention & Exhibition Center, Room 160A**

**Chair: R.N. Mitchell and P.A. D’Amore**

**Inflammation**

**Inflammation/Immunity**

**8:30** Inflammasomes: The Basics and Beyond. M.J. Scott. Univ. of Pittsburgh.


43. **BREAST CANCER WORKSHOP: GENETIC AND PHENOTYPIC DIVERSITY**

Workshop
(Supported by an unrestricted educational grant from Elsevier and earlier.org — Friends for an Earlier Breast Cancer Test)
(Sponsored by: ASIP Breast Cancer Scientific Interest Group)

**SATURDAY**
SAT. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 160C
CHAIR: W.B. COLEMAN

Neoplasia
Cancer Biology
8:30 Session Overview and Introduction W.B. Coleman,
Univ. of North Carolina Chapel Hill Sch. of Med.

44. **F-TROOP: ROADMAP TO FELLOWSHIP GRANT APPLICATIONS**

Special Session
(Supported by an unrestricted educational grant from Elsevier)
(Sponsored by: FASEB Maximizing Access to Research Careers (MARC) Office and ASIP Committee for Career Development and Diversity)

**SATURDAY**
SAT. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 154
CHAIR: L.M. McManus and C.C. Yates

Career Development
F TROOP: Roadmap to Fellowship Grant Applications – F Troop is a hands-on workshop targeted to pre- and postdoctoral trainees who are working to prepare an application for an individual NRSA Fellowship (F Awards, including F30, F31, or F32) for submission to the NIH. Equivalent fellowship applications to other funding agencies are also encompassed by this program. IMPORTANT: Handouts and resource materials will be provided on-site.

8:30 Introduction to the Seminar and F-TROOP Team C.C. Yates, Univ. of Pittsburgh Sch. of Nursing.
8:45 Introduction to NIH and Fellowship Applications L.M. McManus, Univ. of Texas Hlth. Sci. Ctr. at San Antonio.
10:00 F-Mock Study Section. SRO C.Yates. Univ. of Pittsburgh.

Section Chair: L.M. McManus, Univ. of Texas Hlth. Sci. Ctr. at San Antonio.

45. **CELLULAR AND MOLECULAR BASIS OF LIVER TUMORS**

Minisymposium
SAT. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 160B
CHAIR: J. SANDERS AND T. WU

Liver Pathobiology
Cancer Biology
8:30 45.1 Immunohistochemical Analysis of LGR5 Expression in Pediatric Liver Disease Z. Khan, A. Orr, G.K. Michalopoulos and S. Ranganathan. Children's Hosp. of Pittsburgh and Univ. of Pittsburgh Sch. of Med.
9:00 45.3 Differential and Cooperative Roles of β-Catenin and Yap during Hepatoblastoma Pathogenesis J. Tao, X. Li, S. Singh, X. Chen and S.P. Monga. Univ. of Pittsburgh and UCF.
10:30 45.9 Bile Acids Promote Diethylnitrosamine-Induced Hepatocellular Carcinoma via Increased Inflammatory Signaling U. Apte, L. Sun, P. Borude, B. Bhushan, M.W. Manley, Jr. and H. Li. Univ. of Kansas Med. Ctr. and Third Affil.
46. MECHANISMS OF CARDIAC DYSFUNCTION

Minisymposium

SAT. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 162B
CHAIR: P. ALCAIDE-ALONSO AND D. BROWN

Cardiac Pathobiology

Obesity

8:30 46.1 The Absence of MuRF1 Protects against Calpain1-Induced Systolic Dysfunction In Vivo D.I. Brown, J. Robbins and M.S. Willis. Univ. of North Carolina at Chapel Hill and Cincinnati Children's Hosp.


9:00 46.3 Intercellular Adhesion Molecule 1 Regulates Cardiac Remodeling and Function in Pressure Overload-Induced Heart Failure A.M. Salvador, T. Nevers, M. Aronovitz, R. Blanton and P. Alcaide. Tufts Med. Ctr. and Tufts Univ. Sch. of Med.

9:15 46.4 MuRF2 Attenuates the Severity of High-Fat Diet-Induced Diabetic Cardiomyopathy by Regulating Cardiac PPAR-γ J. He, M.T. Quintana, J. Sullivan, Y. Han and M.S. Willis. Gen. Hosp. of Ningxia Med. Univ., China and Univ. of North Carolina at Chapel Hill.


9:45 46.6 Bag3+ P209L Transgene Provides a Cardiac-Specific Murine Model of Protein Misfolding and Aggregation M. Quintana, C. Yates, S. Takayama and M. Willis. Univ. of North Carolina at Chapel Hill.


11:00 46.11 Circulating Microparticles Exhibit Multiple Discrete Changes in Annexin V Binding and Calcein-AM Cleavage in Cardiovascular Disease W. Gray, A. Mitchell and C. Searles. Emory Univ. and Atlanta VA, Decatur.
2:05–2:35  Poster Presentations

P1  Resistin Promotes Angiogenesis in Endothelial Progenitor Cells through Inhibition of MicroRNA-206

P2  Novel Drug DCQ Induces Colon Cancer Cell Apoptosis through HIF-1α Pathway
A-J.T. Sougianannis, A. Saxena, K. Kaur, S. Depaeppe and R. Fayad. Univ. of South Carolina. (926.10)

P5  Atg6v1c1 Facilitates Breast Cancer Growth and Bone Metastasis through the mTORC1 Pathway

P7  Mice Lacking β-Catenin in Liver Develop Hepatic Fibrosis in Response to Iron Overload
M. Preziosi, S. Singh, T. Ganz and S.P. Monga. Univ. of Pittsburgh and UCLA. (611.6)

P9  Circulating CXCL-9, -10 and -11 Levels Improve the Discrimination of Risk Prediction Models for Left Ventricular Dysfunction

P11  Anti-fibrotic Effects of Chinese Herbal Formula ALF in Mice
Z. Xin, K. Chi Man, K. Chun Hay, Y. Tai Wai, L. Clara Bik San, L. Ping Chung and F. Kwok Pui. The Chinese Univ. of Hong Kong. (611.7)

Oral Presentations

2:35  Receptor Interacting Protein Kinase 3 Deficiency Exacerbates Choledochal Liver Injury in Mice

2:45  Integrin Crosstalk Regulation of Human Neutrophils Adhered to Fibronectin and β-Glucan

2:55  Caveolin-1 Loss in Human Breast Cancer Is Associated with Increased Tumor Aggressiveness and Mortality
P.C. Hart, R.D. Minshall and M.G. Bonini. Univ. of Illinois at Chicago. (284.6)

3:05–3:35  Poster Presentations

P2  Identification of MicroRNA-mRNA Dysregulations in Paroxysmal Atrial Fibrillation

P4  Distinct Roles of the Mucus Layer and Microbiota in Conferring Innate Host Defense and Susceptibility to Disease
A. Leon-Coria, F. Moreau, M. Surette and K. Chadee. Univ. of Calgary. (507.7)

P6  Loss of Cortactin Is Associated with Intestinal Epithelial Barrier Dysfunction and Development of Colitis

P8  Parenchymal Platelet-Derived Growth Factor Receptor Alpha Expression Is Dispensable for Hepatic Fibrosis during Chronic Liver Injury
A. Kikuchi and S.P. Monga. Univ. of Pittsburgh. (53.7)

P10  Analysis of the Retinoblastoma Protein in Aortic Valve Calcification
M. Freytsis, P. Hinds and G. Huggins. Tufts Univ. Sch. of Med. and Tufts Med. Ctr. (764.1)

P12  Prevalence of Metabolic Syndrome in Patients with End Stage Renal Disease and Relevance of Biomarkers

3:35  Young Scientist Leadership Award Lecture
IQGAP1 is a Critical Regulator of Transendothelial Migration. D. Sullivan. Northwestern Univ.

3:50  Concluding Remarks.

49. ASIP YOUNG SCIENTIST LEADERSHIP AWARD LECTURE

Award Lecture

Sat. 3:35 PM—BOSTON CONVENTION & EXHIBITION CENTER, Room 162B

ASIP Young Scientist Leadership Award Lecture
IQGAP1 is a Critical Regulator of Transendothelial Migration. D. Sullivan. Northwestern Univ.

50. ASIP COTRAN EARLY CAREER INVESTIGATOR AWARD LECTURE

Award Lecture

Sat. 2:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, Room 160A/B


51. HCS/STOWELL SYMPOSIUM: UNLOCKING NEW TOOLS FOR EXPERIMENTAL PATHOLOGY: ADVANCES IN DETECTION SYSTEMS, FROM SUPER RESOLUTION MICROSCOPY TO WHOLE ANIMAL IMAGING

Symposium

(Supported by The Robert E. Stowell Endowment Fund)

(Sponsored by: The Histochemical Society and ASIP Immunohistochemistry and Microscopy Scientific Interest Group)

Sat. 2:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, Room 160C

CHAIR: S.M. HEWITT

Imaging, Immunohistochemistry and Microscopy


Quantitative Imaging of Subcellular Metabolism with Stable Isotopes and Multi-Isotope Imaging Mass Spectrometry C.P. Lechene. Brigham & Women’s Hosp.
4:15 A Multimodal Imaging Agent for Correlative Investigations: From Whole Body in vivo Imaging to ex vivo Tissue Microscopy J. Grant. UHN Princess Margaret Cancer Ctr., Toronto.

52. INFLAMMATION AND WOUND REPAIR

Symposium
(Sponsored by: ASIP Cell Injury, Vascular and Mucosal Pathobiology (VAMP) and Inflammation/Immunopathology Scientific Interest Groups)

Sat. 2:00 pm—Boston Convention & Exhibition Center, Room 162A

Chair: A. Nusrat and A.I. Ivanov

Inflammation

Regenerative Medicine

Injury/Connective Tissue/Fibrosis

2:00 Adult Mesenchymal Stem Cells: The Control of Innate Regeneration/Repair Capacity A.I. Caplan. Case Western Reserve Univ.


3:30 The Function of the Inflammatory System During Breast Development and Regeneration Z. Werb. UCSF.

4:15 Wound Healing Signals in the Nematode C. Elegans A.D. Chisholm. UCSD.

53. CELLULAR AND MOLECULAR MECHANISMS UNDERLYING HEPATIC INJURY AND FIBROSIS

Minisymposium

Sat. 2:00 pm—Boston Convention & Exhibition Center, Room 161

Co-Chaired: H. Francis and B. Copple

Liver Pathobiology

Injury/Connective Tissue/Fibrosis

2:00 53.1 15-PGDH Prevents LPS-induced Acute Liver Injury through Activation PPAR-γ L. Yao, C. Han and T. Wu. Tulane Univ. Sch. of Med.


2:30 53.3 Mitochondrial-Targeted Antioxidant Treatment in a Mouse Model of Non-alcoholic Fatty Liver Disease M.D. Thompson, M. Cismowski, H.K. Bid and P.A. Lucchesi. Nationwide Children’s Hosp., Columbus.


3:00 53.5 Regulation of Kupffer Cell Activation by Hepatic Stellate Cells K. Roth, R. Albee and B. Copple. Michigan State Univ.


54. SIGNALING MECHANISMS IN LUNG CANCER INITIATION AND PROGRESSION

Minisymposium

Sat. 2:00 pm—Boston Convention & Exhibition Center, Room 160A/B

Chair: D. Panigrahy and M. Hsiao

Pulmonary Pathobiology

Cancer Biology

2:00 ASIP Cotran Early Career Investigator Award Lecture:

3:00 54.1 Different Pattern of ATP-Mediated Increases in [Ca2+]i Contributes to ATP-Induced Increase in Bcl-2/Bax Ratio in Lung Cancer Cells but Not in Normal Control Cells S. Song, K.N. Jacobson, K.M. McDermott, A. Makino and J.X.-J. Yuan. Univ. of Arizona.


55. ASIP TRAINEE WELCOME RECEPTION
Special Event
(Sponsored by: ASIP Committee for Career Development and Diversity)
Sat. 4:00 PM—BOSTON CONVENTION & EXHIBITION CENTER – NORTHWEST LOBBY A

56. ASIP OUTSTANDING INVESTIGATOR AWARD LECTURE
Award Lecture
Sat. 5:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 160A/B
5:00 High Throughput Sequencing for Discovering New Biology A. Dutta. Univ. of Virginia Hlth. Systs.

Pharmacology

57. SPEED NETWORKING FOR CAREERS BEYOND THE ACADEMIC BENCH
Symposium
(Sponsored by: The Division for Pharmacology Education and co-sponsored by all Divisions)
Sat. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 106
CHAIR: J.E. CLARK AND P. MCGONIGLE

Education
Career Development
9:30 Introduction & Biomedical Careers in the Pharmaceutical Industry J.E. Clark. NIMH, NIH.
10:15 Science Policy as a Biomedical Career Path M. Fox. NIMH, NIH.
10:30 The Scientific Review Officer and Program Officer Career Paths A. Pawlyk. NIDDK, NIH.
11:00 Science: A Constant Rewrite C.G. Thomas. NINDS, NIH.
11:15 Small Discussion Groups.

58. 2015 TEACHING INSTITUTE: TRAINING STUDENTS FOR TEACHING CAREERS
Symposium
(Sponsored by: The Division for Pharmacology Education)
Sat. 12:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 108
CHAIR: K. KARPA AND K. HARDY

Education
Career Development
12:00 Overview K. Karpa and K. Hardy Penn State Univ. Col. of Med. and Lipscomb Univ. Col. of Pharm.
12:05 Why Train our Trainees to Train? W.T. McCormack. Univ. of Florida Col. of Med.
12:35 Giving STEM Doctoral Students a FAST (Future Academic Scholars in Teaching) Start for Academic Careers H. Campa III Michigan State Univ.
1:05 Your Future Craft: How Gaining Experience in the Classroom is Essential for Life Outside the Lab J. Neiswinger. NIA, NIH.
1:35 Mentoring Future Educators C.N. Fuhrmann. Univ. of Massachusetts Med. Sch.
2:05 Panel Discussion.
59. GRADUATE STUDENT-POSTDOCTORAL COLLOQUIUM: HOW TO GET STARTED

Colloquium
(Sponsored by: Mentoring and Career Development Committee)
SAT, 2:45 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 109AB
CHAIR: A.T. HANNA-MITCHELL AND H. GOTTlieB

Education
Career Development
2:45 Who Owns the Data I Generated and How do I Transition from Graduate School/Postdoctoral to an Independent Career L. Wecker. Univ. of South Florida Morsani Col. of Med.
3:15 10 Things I Wish I Had Known When I Graduated H. Gottlieb and U.B. Chu UIW Feik Sch. of Pharm., San Antonio and Univ. of Wisconsin-Madison.
3:35 Working for America D.L. Birkle Dreer. NCCAM, NIH.
4:15 Table Breakout Sessions.

60. ASPET BUSINESS MEETING AND AWARDS PRESENTATION

Business Meeting
SAT. 6:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 107AB
Hear updates on Society activities and initiatives. Celebrate with us as we present the ASPET 2015 Scientific Achievement Awards, Travel Awards and PhRMA Foundation Awards.

61. ASPET OPENING AND AWARDS RECEPTION

Special Event
SAT. 7:30 PM—BOSTON CONVENTION & EXHIBITION CENTER — SOUTHWEST PREFUNCTION AREA — LEVEL 1
The Opening Reception immediately follows the conclusion of the Business Meeting. ASPET members and pharmacology attendees are welcome.

62. IT'S ALL IN YOUR HEAD — A REFRESHER COURSE ON THE BRAIN AND SYSTEMS CONTROL

Symposium
(Sponsored by: Education Committee)
SAT. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210A
CHAIR: C.G. YOUNG AND D.W. RODENBAUGH

Education
8:00 The Brain and the Cardiovascular System R. Dampney. Univ. of Sydney.
9:00 The Brain and the Immune System F. Abboud. Univ. of Iowa.
11:00 The Brain and the Gut G.M. Mawe. Univ. of Vermont.

63. MICROCIRCULATION: OXYGEN/BLOOD FLOW

Symposium
(Sponsored by: Microcirculatory Society)
SAT. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205B
CHAIR: M. FRAME
10:00 Oxyhemoglobin and Flow Measures in Cerebral Arterioles With Specific Neuronal Stimulation C. Du. Stony Brook Univ.
10:30 The Effect of Gap Junction Blockade on Renal Autoregulation and Phase Synchronization of Autoregulation Dynamics N. Mitrou, B. Braam and W.A. Cupples. Simon Fraser Univ., Canada and Univ. of Alberta. (787.2)
SATURDAY PHYSIOLOGY


11:00 Microscopic Study of PO2 and VO2 Kinetics in Contracting Rat Spinotrapezius Muscle A.S. Golub, W.H. Nugent, B.K. Song and R.N. Pittman. Virginia Commonwealth Univ. (787.7)


64. BIG DATA WORKSHOP

Workshop
Sat. 1:00 pm—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 206A

CHAIR: J. LARKIN and M.L. LINDSEY

Education

1:00 What Does Big Data Mean? H.M. Berman. Rutgers Univ.
2:00 How to Train the Next Generation for Big Data Projects: Building a Curriculum C.G. Wilson. Loma Linda Univ.
2:30 Joint Discussion: How to Use Big Data Resources for Your Own Projects.

65. REPRODUCIBILITY IN RESEARCH: WHAT ARE THE PROBLEMS? HOW CAN WE FIX THEM? WHAT HAPPENS IF WE DON’T?

Symposium
(Sponsored by: Science Policy Committee)
Sat. 1:00 pm—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 209

CHAIR: C. NORTHCOTT

Science Policy

1:00 How Do We Improve Research Methods and Reporting? S. Silberberg. NINDS, NIH.

66. SECOND ANNUAL APS PHYSIOLOGICAL GENOMICS GROUP CONFERENCE

Mini-Meeting
(Supported by Vector BioLabs)
(Sponsored by: APS Physiological Genomics Group)
Sat. 1:00 pm—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 211

67. MICROCIRCULATION: INFLAMMATION

Symposium
(Sponsored by: Microcirculatory Society)
Sat. 1:30 pm—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205B

CHAIR: A. GONZALEZ

2:00 Monocyte Recruitment from Venules During Angiogenesis S. Peirce. Univ. of Virginia.
2:30 Platelet-Endothelial Association with Fibrinogen/Fibrin, Coupled with Oxidative Stress, Protein Nitrosylation, and Fibrosis May Underlie Pulmonary Endothelial Cell Dysfunction in a Mouse Model of Type 1 Diabetes A.M. Roberts, R. Jagadapillai, J.T. Dixon, Y. Tan, L. Ca and E. Gozal. Univ. of Louisville Sch. of Med. (634.8)
2:45 miR155 Expression Is Increased by Inflammation and Modulates the Expression of CD11a in Monocytes S. Syed, M.A. Amin and B.J. Rabquer. Albion Col., MI and Univ. of Michigan. (634.6)

68. WATER AND ELECTROLYTE HOMEOSTASIS SECTION TRAINEE FINALISTS SESSION AND DATA DIURESIS

Award
(Sponsored by: APS Water and Electrolyte Homeostasis Section)
Sat. 2:15 pm—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205C

CHAIR: P. O’CONNOR

Predoctoral Award Finalist Presentations

PHYSIOLOGY SATURDAY


Postdoctoral Award Finalists Presentations


2:55 Intracellular Renin in the Brain Contributes to Cardiovascular and Metabolic Control K. Shinohara, B.J. Weidemann, M.D. Folcher, X. Liu, D.A. Morgan, K. Rahmouni, J.L. Grobe and C.D. Sigmund. Univ. of Iowa. (968.6)

3:05 Agonistic Autoantibodies to the Angiotensin II Type 1 Receptor Enhance ANGII Binding on Vascular Endothelial Cells M.W. Cunningham, J. Faulkner, L. Endothelial Cells 1 Receptor Enhance ANGII Binding on Vascular Endothelial Cells K. Rahmouni, J.L. Grobe and C.D. Sigmund. Univ. of Iowa. (968.2)

3:15 Mingle with Open Bar.

Data Diuresis Brief Presentations

3:50 Evidence of an Impaired Neuroimmune Pathway in Autoimmune-Associated Hypertension K.W. Mathis. Univ. of North Texas Hlth. Sci. Ctr. (811.13)


4:00 Evidence that Vascular Endothelial-Derived Endothelin-1 Promotes Development of Tunicamycin-Induced Endoplasmic Reticulum Stress in Renal Vessels C. De Miguel, M.A. Rodriguez, D.M. Pollock and J.S. Pollock. Univ. of Alabama at Birmingham. (811.15)

4:05 Radiofrequency Renal Denervation Produces Sustained Decreases in Blood Pressure and Cytokines, Tumor Necrosis Factor α and Interleukin 17, in Spontaneously Hypertensive Rats J. Gao, D.J. Polhemus, F. Smart, D.J. Lefer and D.R. Kapusta. Univ. of Iowa. (811.27)


69. DATA NCARNATION

Award

(Sponsored by: APS Neural Control and Autonomic Regulation Section)

Sat. 3:00 pm—Boston Convention & Exhibition Center, Room 212

Chaired: A. CreCelius and T. Dick

3:00 Introduction H. Schultz. Univ. of Nebraska Med. Ctr.

Theme: Autonomic Functions in Humans


3:20 The Effect of Multiple Sclerosis on Carotid Baroreflex Control of Heart Rate and Blood Pressure M. Huang, D.R. Allen, D.M. Keller and S.L. Davis. Southern Methodist Univ., Univ. of Texas at Arlington and Univ. of Texas Southwestern Med. Ctr. (652.18)

3:25 Discussion and Break.

Theme: Cell Signaling

3:45 Sympathetic Tone Differentially Regulates MHC-II Expression by Macrophages and Enteric Glia in the Gastrointestinal Tract R.J. Vanderkamp, A. Chow, H. Garver, G. Fink and B. Gulbransen. Michigan State Univ. (652.19)

3:50 Dissociating the Metabolic and Cardiovascular Effects of Leptin through mTORC1 Signaling M. Rouabhi, B.B. Bell, D.A. Morgan and K. Rahmouni. Univ. of Iowa. (652.20)

Neuron-Specific (Pro)renin Receptor Deletion Regulates Renin-Angiotensin Components and Contributes to the Amelioration of DOCA-Salt Hypertension A. Ali, W. Li, M.N. Sullivan and Y. Feng. Colorado State Univ. (652.21)


4:05 Discussion and Break.
Theme: Central Regulation of Peripheral Function

4:25 Lesion of the Area Postrema Reduces Cardiac Sympathoexcitation and Improves Cardiac Function in Heart Failure Y. Abukar, C.J. Thomas, R. Ramchandra, S.T. Yao and C.N. May. Univ. of Melbourne and La Trobe Univ., Australia. (652.23)

4:30 Selective Inhibition of the Adrenergic C1 Neurons Reduces the Hypoxic Ventilatory Response in Unanesthetized Rats M.R. Malheiros-Lima, A.C. Takakura and T.S. Moreira. Univ. of São Paulo. (652.24)


4:45 Discussion and Wrap-Up.

70. COMMUNICATING WITH THE MEDIA (ALAN ALDA CENTER FOR COMMUNICATING SCIENCE)

Symposium

(Sponsored by: Communications Committee)

Sat. 3:15 pm—Boston Convention & Exhibition Center, Room 207

Chair: B. Goodman

Career Development

Facilitators S. E. Kaplan-Liss and S. Reiner Alan Alda Ctr. for Communicating Sci. and Stony Brook Univ. Sch. of Journalism.

71. PROTEOMICS FOR THE PHYSIOLOGIST

Workshop

(Sponsored by: Communications Committee)

Sat. 3:15 pm—Boston Convention & Exhibition Center, Room 207

Chair: B. Adhikari and J. Reinhart

Education


3:40 Discussion.


4:10 Discussion.


4:45 How to Train the Next Generation of Physiologists for Proteomics Projects: Building a Curriculum P.A. Welling. Univ. of Maryland Sch. of Med.

5:10 Discussion.

72. MICROCIRCULATION: SIGNALING/CHANNELS

Symposium

(Sponsored by: Microcirculatory Society)

Sat. 3:30 pm—Boston Convention & Exhibition Center, Room 205B

Chair: J. Butcher

3:30 Calcium Signaling Regulation at the Myoendothelial Junction J. LeDeaux. Univ. of Montreal.


4:30 Recruitment of RG5 Protein to Mechanically Activated AT1R in Arteriolar VSMC K. Hong, M. Li, G.A. Meininger and M.A. Hill. Univ. of Missouri-Columbia. (636.5)


73. PHYSIOLOGY IN PERSPECTIVE — THE WALTER B. CANNON MEMORIAL AWARD LECTURE

Lecture

(Supported by Sucampo AG)

Sat. 5:30 pm—Boston Convention & Exhibition Center, Room 210BC

Solving the Mystery of Sleep: from Orphan Receptors to Forward Genetics M. Yanagisawa. Univ. of Tsukuba.

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74. CAREER DEVELOPMENT WORKSHOPS

Workshop

Sun. 9:00 AM—Boston Convention & Exhibition Center, Hall B

Career Development

The following workshops will be held in the EB2015/FASEB Career Center. There is no fee or pre-registration associated with the workshops — just walk in and sit down!

Critiquing of CV/Resumes is by appointment and starts at 9:00 AM on Sunday and continues until 3:00 PM on Wednesday. Sign up on-site in the EB2015/FASEB Career Center, Hall B.

9:00 The Strategic Postdoc: How to Find & Leverage Your Postdoc Experience A. Green. Univ. of California, Berkeley.


9:30 How to Choose Your Ideal Career B. Lindstaedt. UCSF.


10:30 Global Interview Skills D. Behrens. Univ. of California, Berkeley.

10:30 Transforming Your CV N. Saul. UCSF.

11:00 Understanding Search Committees & Finding Job Announcements A. Green. Univ. of California, Berkeley.

11:00 But I have no Skills! J. Lombardo. Med. Col. of Wisconsin and Marquette Univ.

1:00 Job Search in Academia & Industry D. Behrens. Univ. of California, Berkeley.

1:00 Job Hunting in Biotech Part 1: Finding & Applying for Scientist Positions B. Lindstaedt. UCSF.

1:30 Creating Effective CV’s Cover Letters, Research & Teaching Statements A. Green. Univ. of California, Berkeley.

2:00 Job Hunting in Biotech Part 2: Interviewing for Scientist Positions B. Lindstaedt. UCSF.


2:30 Talking About Yourself N. Saul. UCSF.

3:30 Nailing the Job Talk & Interview Prep A. Green. Univ. of California, Berkeley.

3:30 But I have no Skills! J. Lombardo. Med. Col. of Wisconsin and Marquette Univ.

4:00 Job Hunting in Biotech Part 3: Compensation Negotiation for Scientist Positions B. Lindstaedt. UCSF.


75. CARDIOVASCULAR BIOLOGY

PLENARY SESSION

Plenary

Sun. 8:30 AM—Boston Convention & Exhibition Center, Room 104AB

CHAired: M. Simons and A. Eichmann

Cardiovascular

Part of the Cardiovascular Biology Mini-meeting

8:30 Chair’s Introduction.

8:34 75.1 Molecular Parallels between Neural and Vascular Development Anne Eichmann. Yale Univ. Sch. of Med.


76. ANATOMY EDUCATION ROUNDTABLE

– DEVELOPING EFFECTIVE COGNITIVE STRATEGIES FOR FUTURE LONG-TERM RECALL OF MEDICAL KNOWLEDGE

Education Roundtable

Sun. 10:00 AM—Boston Convention & Exhibition Center, Room 102AB

CHAired: J. Walker

Education & Teaching

Education

10:00 76.1 Developing Effective Cognitive Strategies for Future Long-Term Recall of Medical Knowledge: What Are the Questions We Need to Answer? J. Pelley. Texas Tech Univ. Hlth. Sc. Ctr. Sch. of Med.

10:30 General Discussion.
77. VASCULAR ORGANIZATION AND PATTERNING

Mini-Meeting

SUN. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104AB

CHAIR: M. SIMONS AND A. EICHHMANN

Cardiovascular

Part of the Cardiovascular Biology Mini-meeting

11:20 77.3 Role of Flow in Lymphatic Vessel Remodeling and Patterning M. Kahn. Univ. of Pennsylvania Sch. of Med.

78. STRUCTURES AND FUNCTIONS OF PRIMARY CILIA

Symposium

SUN. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104C

CHAIR: T. INOUE

Cell Biology

10:30 78.1 IFT25 and IFT27 Couple the BBSome to the IFT Particle for Maintenance of the Ciliary Signaling Compartment T. Eguether and G. Pazour. UMass Med. Sch.
11:00 78.2 Restricted Access: The Transition Zone Controls Ciliary Composition and Signaling J.F. Reiter. UCSF.
11:30 78.3 New Insights into the Complex Physiologic Role of the Cilium in Secretory Epithelia L. Satlin. Icahn Sch. of Med. at Mount Sinai.

79. AAA LANGMAN GRADUATE STUDENT PLATFORM AWARD SESSION

Award Competition

SUN. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 105

Graduate Student finalists present oral presentations to compete for Platform Award

10:45 Neural Stem/Progenitor Cells of the Spinal Cord are Activated in Response to Tail Loss in the Leopard Gecko E.A.B. Gilbert and M.K. Vickaryous. Univ. of Guelph, Canada. (346.2)
11:00 Identification and Characterization of a Francisella tularensis Protein Required for Vacuole Escape and Tularemia Development K.Y. Lo, S. Visram, A.W. Vogl, J. Shen and J.A. Gutman. Simon Fraser Univ., BC and Univ. of British Columbia. (86.4)
11:15 BMP-pSmad1/5/8 Pathway Activation in Calcific Aortic Valve Disease M.V. Gomez and K.E. Yutzey. Cincinnati Children’s Hosp. and Univ. of Cincinnati. (553.4)
11:45 Lmx1b-Mediated Emx2-Associated Regulatory Region Active during Limb Development E.J. Kim, E. Haro, C.U. Pira, L. Tegeler and K.C. Oberg. Loma Linda Univ. (871.3)

80. EDUCATIONAL NEUROSCIENCE: TOWARDS THE SCIENCE OF LEARNING

Symposium

SUN. 2:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 102AB

CHAIR: A. ZUMWALT

Education & Teaching

Education

2:30 Introduction.
2:35 80.1 Advancing the Neuroscience of Learning P.R. Bergethon. Pfizer Neurosci.
3:05 80.2 Cerebral Blood Flow and Spatial Ability T. Wilson. Western Univ., Canada.
4:05 Break.
4:10 e-Poster Slam.

81. ENDOTHELIAL-TO-MESENCHYMAL TRANSITION

Mini-Meeting

SUN. 2:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104AB

CHAIR: M. SIMONS AND A. EICHHMANN

Cardiovascular

Part of the Cardiovascular Biology Mini-meeting

3:00 81.1 The Pathological Modifications of the Blood Brain Barrier and Cerebral cavernous Malformations E. Dejana, N. Rudini, R. Cattani, L. Bravi and M. Grazia. Univ. of Milan.
3:30 81.2 Endothelial-to-Mesenchymal Transition in Cardiovascular Pathology M. Simons. Yale Univ. Sch. of Med.
82. **CILIA IN DEVELOPMENT**

*Symposium*

*SUN. 2:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104C*

*CHAIR: J. AMACK*

**Cell Biology**

2:30 **82.1** Cilia and Extracellular Vesicles Are Signaling Organelles *M. Barr, J. Wang, M. Silva, D.H. Hall and J. Maguire.* Rutgers Univ., Piscataway and Albert Einstein Col. of Med.

3:00 **82.2** Motile and Sensory Cilia Function in Zebrafish *I. Drummond.* Massachusetts Gen. Hosp.


4:00 **82.4** Planar Cell Polarity, Ciliogenesis, and Human Disease *J. Wallingford.* Univ. of Texas at Austin.

83. **MAJOR TRANSFORMATIONS OF THE AMNIOTE NOSE**

*Symposium*

*SUN. 2:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 105*

*CHAIR: T. OWERKOWICZ*

**Evolution/Anthropology**

2:30 **83.1** Origin of the Mammalian Nose *A.W. Crompton.* Harvard Univ.


3:30 **83.3** Using airflow patterns to aid inferences of nasal soft-tissue reconstructions in dinosaurs *J. Bourke, R. Porter, R.C. Ridgely and L.M. Witmer.* Ohio Univ.

4:00 **83.4** Respiratory Turbinates in Endotherms and Ectotherms *T. Owerkowicz.* California State Univ.

84. **DEVELOPMENTAL BIOLOGY AWARD HYBRID SYMPOSIUM**

*Hybrid Symposium*

*SUN. 5:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 102AB*

**Developmental Biology**

Regenerative Medicine (Stem Cells, Tissue Regeneration, Biomaterials)

H.W. Mossman Award Lecture in Developmental Biology featuring 2015 Young Investigator Award Recipient, Dirk Hockemeyer

5:00 **84.1** Elucidating Telomerase Function in Human Tumor and Stem Cell *D. Hockemeyer.* Univ. of California, Berkeley.

5:30 **84.2** TBX1 Protein Interactions and microRNA-96-5p Regulation Controls Stem Cell Proliferation during Craniofacial and Dental Development *B.A. Amendt, S. Gao, M. Moreno, S. Eliason, F.B. Bidlack, H.C. Margolis and A. Baldini.* Univ. of Iowa and The Forsyth Inst.


6:00 **84.3** Developmental Origins for Kidney Disease in Shroom3 Deficient Mice *D. Bridgewater, H. Khalili, A. Sull and T. Drysdale.* McMaster Univ., Canada and Univ. of Western Ontario.

6:15 e-Poster Slam.

85. **CARDIOVASCULAR BIOLOGY PLATFORM SESSION**

*Mini-Meeting*

*SUN. 5:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104AB*

*CHAIR: K. BENTLEY*

**Cardiovascular**

Part of the Cardiovascular Biology Mini-meeting

5:00 **85.1** Targeting BMP Signaling for the Treatment of Neovascular Age-Related Macular Degeneration *B. Larrivee and K. Ntumba.* Univ. of Montreal.

5:15 **85.2** Semaphorin 3A and VEGF Promote Inflammation in Retinopathy *P.M. Sapieha, G. Mawambo and D. Agnieszka.* Univ. of Montreal.

5:30 **85.3** Context-Specific Regulation of VEGF Receptor Signaling *F. Mac Gabhann and L. Clegg.* Johns Hopkins Univ.

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**Visit the Exhibits**

Sunday – Tuesday

9:00 AM – 4:00 PM


Postdoc finalists present oral presentations to compete for Platform Award


Neural Crest-Derived Valve Interstitial Cells Calcify in the Klotho-Deficient Mouse Model of Aortic Valve Disease. E.E. Wirrig and K.E. Yutzey. Cincinnati Children's Hosp. Med. Ctr. (553.8)

Heart Specific Deletion of RNA Binding Protein Rbfox1 Sensitizes Mice to Pressure Overload-Induced Cardiac Dysfunction. W. Zhu, I. Bender, A. Yellamilli and J. van Berlo. Univ. of Minnesota, Minneapolis. (553.2)

Delineating the Cellular Hierarchy of Glioblastoma and Gliosarcoma for Identification of Therapeutic Targets. F. Hassiotou, M. Jackson, T. Seymour and A. Nowak. Sch. of Chem. and Biochem., Univ. of Western Australia and Sch. of Med. and Pharmacol., Univ. of Western Australia. (706.6)

Diminished Ang-2 Expression and Microvascular Density in COX-2 Knockout Mouse Cerebral Cortex in Moderate Hypobaric Hypoxia. G.F. Bendorro, K. Xu and J.C. LaManna. Case Western Reserve Univ. (706.8)

Facial Development and Alterations in FGF Signaling in a Mouse Model of Crouzon Syndrome. K. Brakora, Y. Ho, A. Lainoff, J. Wong and R. Marcucio. UCSF and UCSF Sch. of Dent. (872.11)

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Biochemistry and Molecular Biology

88. ASBMB PLENARY LECTURE

Plenary
SUN. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM WEST

8:00 Plenary Lecturer Introduction.
8:05 88.1 Manipulating Quorum Sensing to Control Bacterial Pathogenicity B.L. Bassler. Princeton Univ., HHMI.

89. EARL AND THRESSA STADTMAN DISTINGUISHED SCIENTIST AWARD LECTURE

Award Lecture
SUN. 8:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM WEST

8:45 Award Lecturer Introduction and Award Presentation.

90. MULTITALENTED LIPIDS

Symposium
SUN. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 252AB

CHAIR: W. Cho

Follow the conversation: #lipids

9:45 Chair’s Introduction.
9:50 90.1 Phosphoinositide Signaling in the Control of Membrane Dynamics and Interactions P. De Camilli. Yale Univ., HHMI.
10:15 Investigating the Role of Cellular Lipid Recognition in Trafficking and Viral Particle Formation by Ebola Virus Matrix Protein VP40 K.A. Johnson and R.V. Stahelin. Univ. of Notre Dame and Indiana Univ. Sch. of Med., South Bend. (886.6)
10:55 Phosphoinositide Binding to ErbB3-Binding Protein 1 Contributes to Its Nucleolar Localization A.E. Lewis, T. Karlsson and A. Altankhuyag. Univ. of Bergen. (715.25)
11:10 The Lipid Transfer Protein STARD3: An Architect from Inside the Cell C.L. Tomasetto, F. Alpy, G. Drin and T.P. Levine. IGBMC- U964 INSERM, Strasbourg, University Col. London and Univ. of Nice Sophia-Antipolis. (568.1)
11:50 Discussion.

91. MEASURING AND PREDICTING MICROBIAL COMMUNITY DYNAMICS

Symposium
SUN. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 254AB

CHAIR: L. HOOPER

Follow the conversation: #microbiome

9:45 Chair’s Introduction.
10:20 Source Tracking of Fecal Contamination along San Luis Obispo Creek D.R. Shapiro, J.D. Kent, M.F. Zuleta, C.L. Kitts, M.W. Black and J. VanderKelen. California Polytech State Univ., San Luis Obispo. (575.12)
11:05 Production of Antimicrobial Substances by Nonpathogenic Neisseria Species J. Ogle, A. Finck and E. Aho. Concordia Col., MN. (575.7)
11:20 91.3 The Extraordinary Evolution of the Great Ape Microbiome H. Ochman. Univ. of Texas at Austin.
11:50 Discussion.

92. INTERACTIONS OF GROWTH FACTORS AND INTEGRINS WITH THE EXTRACELLULAR MATRIX

Symposium
SUN. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 257AB

Follow the conversation: #ECM

9:45 Chair’s Introduction.
10:15 Trimeric G Protein Activation by the Non-receptor Protein GIV/ Girdin Is Required for Integrin Signaling A. Leyme, L. Perez-Gutierrez, L.T. Nguyen and M. Garcia-Marcos. Boston Univ. (719.5)
10:30 92.2 Members of the CCN Family of Matricellular Proteins are Required for the Formation and Maintenance of Multiple Skeletal Tissues K.M. Lyons. UCLA.
10:55 Endothelial Deficiency of the Extracellular Matrix Protein CCN1 Alters Developmental and Pathological Angiogenesis B. Chaqour, I. Krupska, L. Yan, L. Lau, M.B. Grant and H. Chintala. SUNY Downstate Med. Ctr., Univ. of Illinois at Chicago and Indiana Univ. (719.2)
11:10 Extracellular Matrix Fibronectin Attenuates PDGF-Induced Intracellular Calcium Release C.S. Farrar and D.C. Hocking. Univ. of Rochester. (719.3)
93. NEW REACTIONS OF OLD COFACTORS

Symposium

SUN. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258A

CHAIR: C. Fierke

Follow the conversation: #enzyme

9:45 Chair’s Introduction.

9:50 93.1 Cofactor Dynamics and Ammonia Selectivity in GMP Reductase L. Hedstrom, Brandeis Univ.

10:15 Fresh Surprises from the Old Cofactor NAD(P) H R.G. Rosenthal, B. Vögeli, G. Stoffel and T.J. Erb. ETH Zurich. (573.9)

10:30 93.2 The Mechanistic Enzymology of Thiamin Biosynthesis T.P. Begley, Texas A&M Univ.


11:10 Radically New Methylation Reactions in Antibiotic Biosynthesis Insights into the Mechanism of B₂⁺-Dependent Radical SAM Enzymes O. Berteau, S. Pierre, A. Benjdia, C. Gherasim and R. Banerjee. INRA, Jouy en Josas

11:25 93.3 Natural Product Biosynthesis – A Treasure Trove of Multitalented Flavoenzymes B. Moore, Scripps Inst. of Oceanography and Skaggs Sch. of Pharm. and Pharmaceut. Sci., UCSD.

11:50 Discussion.

94. STRUCTURE AND FUNCTION OF THE TRANSCRIPTION MACHINERY

Symposium

SUN. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258B

CHAIR: G. Gill

Follow the conversation: #RNA

9:45 Chair’s Introduction.


10:15 Regiospecific Function of the C-erinal Domain of RNA Polymerase II in Yeast S.M. Fuchs, M. Babokhov, M. Mosabeb and S.A. Morrill. Tufts Univ. (562.11)


11:25 94.3 Functional Interplay between Epigenetic DNA Modifications and Transcription Machinery D. Wang, UCSD.

11:50 Discussion.

95. MEMBRANE CHANNELS I – MOLECULAR BASIS OF GATING, ACTIVATION AND SELECTIVITY

Symposium

SUN. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258C

CHAIR: E. TAJKHIRSHID

Follow the conversation: #protein

9:45 Chair’s Introduction.

9:50 95.1 Structural Basis for Ion Conductance and Selectivity in Sodium and Calcium Channels W. Catterall. Univ. of Washington.


11:10 Effects of Agonist and Regulator Binding on the Structure and Conformational Flexibility of the Ligand Binding Domains of Ionotropic Glutamate Receptors F. Barkdell-Weil, C. Guzman, Z. Asif, P. Varnes and J.E. Bell. Univ. of Richmond. (574.17)

11:25 95.3 Structural Studies on Glutamate Receptor Gating M.L. Mayer, J. Meyerson, S. Chittori and S. Subramaniam. NICHD, NIH.

11:50 Discussion.

96. DIVERSE CAREER OPPORTUNITIES FOR SCIENTISTS

Symposium

SUN. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 256

CHAIR: M. WALLERT

Follow the conversation: #training

9:45 Chair’s Introduction.


10:30 96.2 One Degree, Many Job Opportunities J.S. Bond. Penn State Col. of Med. and Univ. of North Carolina at Chapel Hill.
10:55  Acquiring Skills beyond the Bench through the Great Diseases – a Teacher-Scientist Partnership  
Sch. of Med. (559.12)

11:10  Fostering Critical Thinking Skills in a Master’s-Level Course via In-Depth Analysis of Primary Literature  
E. Tour, C. Abdullah, J. Parris, R. Lie and A. Guzdar. UCSD.  
(559.20)

11:25  96.3 A Non-linear Career Path  
C.P. Bailey. Mount Mary Univ.

11:50  Discussion.

97. TRAINING THE MIND OF AN INTERDISCIPLINARY SCIENTIST

Symposium  
(Sponsored by: Society for Experimental Biology and Medicine (SEBM))

 Sun. 9:45 am—Boston Convention & Exhibition Center, 
Room 255

Follow the conversation: #training

Speakers:
How People Perceive and Understand Behavior and Intentions of Others  
A.P. Saygin. UCSD

Problem Finding and Understanding for Creativity  
R.L. Price. Univ. of Illinois at Urbana Champaign

Lessons Learned from a 25 Year History of University Wide Interdisciplinary Biomedical Doctoral Programs  
D. Medeiros. Univ. of Missouri-Kansas City

Collaborative Learning and Integrated Mentoring in the Biosciences  

98. ASBMB AWARD FOR EXEMPLARY CONTRIBUTIONS TO EDUCATION LECTURE

Award Lecture  
Sun. 12:15 pm—Boston Convention & Exhibition Center, 
Room 253BC

Undergraduate Student Research Poster Competition Award Winners will be announced during this lecture.

12:15  Award Lecturer Introduction and Award Presentation

12:45  98.1 Don’t Teach Biochemistry, Teach Students!  
J.E. Bell. Univ. of Richmond.

99. WHO SHOULD BE FUNDING BIOMEDICAL RESEARCH?

Public Policy  
(Sponsored by: ASBMB Public Affairs Advisory Committee)

Sun. 12:30 pm—Boston Convention & Exhibition Center, 
Room 253A

Follow the conversation: #scicomm

As federal funding becomes more competitive, more and more investigators are pursuing alternative funding sources for their research. Some of those sources have been long established, like private foundations and disease-specific charities. But emerging opportunities, such as crowd-funding, industrial partnerships and wealthy individuals, are gaining attention. Join the discussion of the benefits and pitfalls of various sources of funding to conduct research.

100. MILDRED COHN AWARD IN BIOLOGICAL CHEMISTRY LECTURE

Award Lecture  
Sun. 2:30 pm—Boston Convention & Exhibition Center, 
Grand Ballroom West

2:30  Award Lecturer Introduction and Award Presentation.

2:35  100.1 Moving through Barriers: Unlocking the Mysteries of How Enzymes Really Work  
J.P. Klinman. Univ. of California, Berkeley.

101. RUTH KIRSCHSTEIN DIVERSITY IN SCIENCE AWARD LECTURE

Award Lecture  
Sun. 3:05 pm—Boston Convention & Exhibition Center, 
Grand Ballroom West

3:05  Award Lecturer Introduction and Award Presentation.

3:10  101.1 Exploring GPCR Biased Signaling from Inside and Outside the Cell  
J. Trejo. UCSD.

102. ASBMB YOUNG INVESTIGATOR AWARD LECTURE

Award Lecture  
Sun. 3:55 pm—Boston Convention & Exhibition Center, 
Room 257AB

Presented in the session, “Glycobiology in Infection and Immunity” See session 106 for details.

4:10  102.1 The Molecular Tool-Kit of Viral Hemorrhagic Fevers  
103. VITAMIN AND AMINO ACID METABOLISM OF PLANTS

Symposium
SUN. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 252AB
CHAIR: M. SUSSMAN

Follow the conversation: #plants

3:55  Chair’s Introduction.
4:00  103.1 B Vitamin Damage and Its Repair or Pre-emption A.D. Hanson. Univ. of Florida.
4:25  Mechanism of Plant Growth Promoting Activity of Burkholderia Species V.R. Thakkar and R.R. Patel. BRD Sch. of Biosci., Sardar Patel Univ. (887.3)
4:40  103.2 Aromatic Amino Acid Network: Biosynthesis, Regulation and Transport N. Dudareva. Purdue Univ.
5:05  Isopentenyl Diphosphate Inhibition of Thiamin Diphosphate Enzymes, Especially Deoxyxylulose 5-Phosphate Synthase T.D. Sharkey, A. Banerjee and L.E. Cheaney. Michigan State Univ. (887.20)
5:35  103.3 A Systems Biology Approach to Detect the Hidden Reactions of Terpenoid Quinone Metabolism G.J. Basset. Univ. of Nebraska-Lincoln.
6:00  Discussion.

104. IMAGING: A PICTURE IS WORTH >1,000 WORDS

Symposium
SUN. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 254AB
COCHAIR: N. FEDARKO

Follow the conversation: #cancer

3:55  Chair’s Introduction.
4:00  104.1 Ras-Induced Macropinocytosis: Metabolic Adaptation to Signaling in the Absence of Adequate Nutrients C.B. Thompson. Mem. Sloan-Kettering Cancer Ctr.
5:05  Monitoring Cellular Adenine Nucleotide Levels and Their Relevance to Cellular Metabolic Functions Using Bioluminescence-Based Strategies S. Goueli, K. Hsiao and S. Mondal. Promega Corp., Madison and Univ. of Wisconsin Med. Sch. (577.6)
5:35  104.3 PET Radiopharmaceuticals for the Diagnosis of Cancer J.S. Lewis. Mem. Sloan-Kettering Cancer Ctr.
6:00  Discussion.

105. DIET, OBESITY, NUTRITION AND GUT MICROBIOME

Symposium
SUN. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 255

3:55  Chair’s Introduction.
4:00  105.1 Obesity, Bariatric Surgery, and the Gut Microbiome Z.E. Ilhan. Arizona State Univ.
4:30  Characterization of an Alternative Starch Utilization System from the Human Gut Bacterium Bacteroides thetaiotaomicron and Its Implications in Human Nutrition M.M. Chaudet and D.R. Rose. Univ. of Waterloo, Canada. (575.4)
5:30  Mucosal IgA Responses to the Gut Microbiota in Healthy versus Malnourished Children A. Kau. Washington Univ. in St. Louis.
6:00  Discussion.

106. GLYCOBIOLOGY IN INFECTION AND IMMUNITY

Symposium
SUN. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 257AB
CHAIR: B. BAKER

Follow the conversation: #immunology

3:55  Chair’s Introduction.
4:00  Award Lecturer Introduction and Award Presentation.
4:35  106.2 Microbial Manipulation of Antibody Effector Functions E. Sundberg. Univ. of Maryland Sch. of Med.
5:15  **106.2** Glycan Targeted Vaccines for the Induction of Immunity
5:40  **106.3** Penetrating the Glycan Shield on HIV-1
P. Kwong. NIAID, NIH.
6:05  Discussion.

### 107. POSTTRANSLATIONAL MODIFICATIONS OF LYSINE

**Symposium**

**Sun. 3:55 pm—Boston Convention & Exhibition Center, Room 258A**

**CHAIR: P. R. Thompson**

Follow the conversation: #PTMs

3:55  Chair’s Introduction.
4:00  **107.1** A Chemical Toolbox for Lysine Deacetylases D. Schwarzer. Univ. of Tübingen.
4:25  Mechanism of Nicotinamide Riboside as an Aid to Weight Loss
4:40  **107.2** Protein Methyltransferase Inhibitors as Cancer Therapeutics
5:05  N-Chlorination, a Reversible Post-translational Modification that Activates Chaperone Function in RidA
5:20  Evaluating the Role of Histone H2A Variants and Epigenetic Modification in the DNA Repair System of Bdelloid Rotifers
M.A. McFadden, J.S. Higgins and A.M. Schurko. Hendrix Col., AK. (877.22)
5:35  **107.3** Targeting Reversible Lysine Modifications
6:00  Discussion.

### 108. ENGAGING STALLED REPLICATION FORKS

**Symposium**

**Sun. 3:55 pm—Boston Convention & Exhibition Center, Room 258B**

**CHAIR: M. G. Fried**

Follow the conversation: #DNA

3:55  Chair’s Introduction.
4:00  **108.1** Mechanisms for Translesion DNA Synthesis
W. Yang, Y. Lee, Y. Gao and M.T. Gregory. NIDDK, NIH.
4:25  Incision-Independent Repair of a Psoralen-Interstrand Crosslink
J. Zhang, M. Budzowska and J. Walter. Harvard Med. Sch. and HHMI. (560.14)
4:40  **108.2** The Rev1-Pol ζ Mutasome
5:05  Biochemical Mechanism for Recruitment of the Checkpoint Activator TOPBP1 to Stalled Replication Forks
M. Michael. Univ. of So. California. (560.12)
5:20  Dampening Checkpoint Signaling via Coordinated Action of DNA Repair Scaffolds and the Pph3 Phosphatase
C.M. Jablonowski, J.R. Cussioli, S.L. Oberly and M.B. Smolka. Cornell Univ. (879.24)
5:35  **108.3** Mutations for Worse or Better: Low Fidelity DNA Synthesis by SOS DNA Polymerase V Is a Tightly-Regulated Double-Edged Sword
6:00  Discussion.

### 109. MEDIATING PROTEIN INTERACTIONS: IS FOLDING REQUIRED?

**Symposium**

**Sun. 3:55 pm—Boston Convention & Exhibition Center, Room 258C**

**CHAIR: E. Rhoades**

Follow the conversation: #protein

3:55  Chair’s Introduction.
4:00  **109.1** Mechanisms of Folding upon Binding
J. Clarke. Univ. of Cambridge.
4:25  Changes in Water Availability or Molecular Crowding Induce Folding in Instrinsically Disordered Stress Proteins from Plants
4:40  **109.2** The Role of Protein Disorder and Self-Association in the Formation of Cellular Bodies
5:05  Specificity of the Yeast Auxilin Homolog Swa2 in [URE3] Prion Propagation Is Solely Determined by the TPR Domain
5:20  Regulation of Ubiquitin Independent Proteasomal Degradation of Intrinsically Disordered Proteins
Y. Shaul. Weizmann Inst. of Sci. (563.13)
5:35  **109.3** Probing Protein Intrinsic Disorder and Allostery Modulation at Single-Molecule Resolution
6:00  Discussion.

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110. INDUSTRY CAREERS

Symposium
Sun. 3:55 pm—Boston Convention & Exhibition Center, Room 256

Chair: S. E. Barbour

Follow the conversation: #training

3:55 Chair’s Introduction.

4:00 110.1 Entrepreneurial Drug Hunter: A Trek for Breakthrough Medicines at the Academic-Industrial Interface

4:25 Design and Implementation of a Professional Master of Science in Biotechnology Innovation and Regulatory Science with Global Impact
K.L. Clase and S.R. Byrn. Purdue Univ. (559.19)

4:40 110.2 Build a Successful Career in Industry by Attaining Multidisciplinary Knowledge and Experience

5:05 110.3 Diversifying Training Options for Undergraduate and Graduate Students to Support Industry Careers

5:20 Discussion.

111. WELCOME RECEPTION SPONSORED BY THE ASBMB MINORITY AFFAIRS COMMITTEE

Special Event
Sun. 7:30 pm—Westin Boston Waterfront, Harbor Ballroom II

A professional networking event featuring ASBMB Underrepresented Graduate Student Travel Award research posters. ASBMB members and biochemistry registrants welcome.

Nutrition

112. ASN SPONSORED SATELLITE PROGRAM: OATS, MORE THAN JUST A WHOLE GRAIN

ASN Satellite
(Sponsored by: PepsiCo, Inc.)
Sun. 6:30 am—Renaissance Boston Waterfront Hotel, Pacific Grand Ballroom E

113. ASN SPONSORED SATELLITE PROGRAM: RUNNING ON EMPTY: IS THERE A METABOLIC OR COGNITIVE BENEFIT TO THE MORNING MEAL?

ASN Satellite
(Sponsored by: The Kellogg Company)
Sun. 6:30 am—Renaissance Boston Waterfront Hotel, Pacific Grand Ballroom ABCD

114. TRANSLATIONAL AND TRANSFORMATIONAL CONCEPTS IN AMINO ACID SENSING

Symposium
(Supported by: Ajinomoto Co., Inc.)
(Sponsored by: Energy and Macronutrient Metabolism RIS and Nutrient-Gene Interaction RIS)
Sun. 8:00 am—Boston Convention & Exhibition Center, Grand Ballroom East

Chair: S.M. Hutson and T.G. Anthony

Biochemical, Molecular and Genetic Mechanisms

8:00 Distributed Nutrient Sensing in the Integrated Control of Energy Balance
G.J. Schwartz. Albert Einstein Col. of Med. of Yeshiva Univ.

8:25 Amino Acid Transporters in Amino Acid Sensing and Nutritional Regulation
Y. Kanai. Osaka Univ. Sch. of Med.

8:50 Amino Acid Control of Cell Signaling
M.S. Kilberg. Univ. of Florida Col. of Med.

9:15 Methionine Mistranslation in Stress Response and Adaptation
T. Pan. Univ. of Chicago.
115. DETERMINANTS OF DISEASE RISK IN THE POSTPRANDIAL PERIOD

Symposium
(Supported by Egg Nutrition Center)
(Sponsored by: Energy and Macronutrient Metabolism RIS)

Sun. 8:00 AM—Boston Convention & Exhibition Center, Room 157ABC
Chair: B.O. Schneman and T.M. Rains

Diet and Non-Communicable Diseases

8:00 Advances in the Understanding of Enterocyte Lipid Handling E.J. Parks, Univ. of Missouri.
8:40 Postprandial Hyperglycemia-mediated Vascular Endothelial Dysfunction R.S. Bruno, The Ohio State Univ.
9:00 Sleep, Free Fatty Acids and Diabetes Risk E. Tasali, The Univ. of Chicago Med.

116. THE eNUTRITION ACADEMY: SUPPORTING A NEW GENERATION OF NUTRITIONAL SCIENTISTS AROUND THE WORLD

Symposium
(Supported by The Nutrition Society UK)
(Sponsored by: Nutrition Education Committee)

Sun. 8:00 AM—Boston Convention & Exhibition Center, Room 151AB
Chair: S.M. Donovan and C.A. Geissler

Education Track

8:00 Overview of Public Health Nutrition in Africa P. Amuna, Univ. of Greenwich/Primary Hlth. Care Corp. Qatar.
8:20 Capacity Development in Africa F.B. Zotor, Univ. of Hlth. and Allied Sci. (UHAS)
8:40 The Development of Inter-institutional eLearning Graduate Degrees K. Kattelmann, South Dakota State Univ.
9:00 The eNutrition Academy – Aims and Objectives C.A. Geissler, King’s Col. London.
9:20 Questions and Open Forum S.M. Donovan and C.A. Geissler

117. ENERGY AND MACRONUTRIENT METABOLISM: ENERGY BALANCE, MACRONUTRIENTS AND WEIGHT MANAGEMENT

Minisymposium
(Sponsored by: Energy & Macronutrient Metabolism RIS)

Sun. 8:00 AM—Boston Convention & Exhibition Center, Room 152
Chair: J. Carbone
Co-Chair: S. Pasiakos

8:00 117.1 Consuming 2 Eggs per Day Results in Reduced Glycemic Load, Lower Intake of Sugar and Increased Satiety Compared to Oatmeal Consumption in a Young Healthy Population D. DiMarco, A. Missimer, M. Vergara-Jimenez, R. Kretzmer, I. Soto and M-L. Fernandez, Univ. of Connecticut and Univ. of Sinaloa.
8:30 117.3 A Protein-Based Breakfast Increases Postprandial Fat Metabolism in Overweight and Obese Children J.L. Baum and M. Gray, Univ. of Arkansas.
8:45 117.4 A Systematic Review of the Literature on Intermittent Fasting for Weight Management C.R. Hankey, D.A. Klukowska and M.E. Lean, Univ. of Glasgow Sch. of Med.
9:30 117.7 Moderately High Protein Diets during Resistance/Aerobic Exercise Training Improve Body Composition via Positive Changes in Adiposity but Not Lean Mass Accretion S.L. Gordon, J.E. Kim, E. Weinheimer-Haus and W.W. Campbell, Purdue Univ.
9:45 117.8 Low-Fat Diets Differing in Protein and Carbohydrate Content on Cardiometabolic Risk Factors in Adults with Type 2 Diabetes N.A. Watson, K.A. Dyer, J.D. Buckley, G.D. Brinkworth, A.M. Coates, G. Parfitt, P.R. Howe, M. Noakes and K.J. Murphy, Univ. of South Australia, Commonwealth Sci. and Industr. Res. Org., Adelaide and Univ. of Newcastle.
118. DIETARY BIOACTIVE COMPONENTS: MECHANISM OF ACTION AND MOLECULAR TARGETS OF DIETARY BIOACTIVE COMPONENTS I

Minisymposium

(Sponsored by: Dietary Bioactive Components RIS)

SUN. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153A

CHAIR: C. Kay

COCHAIR: S. Gebauer

8:00 118.1 The Role of Metallothioneins in the Differential Pro-oxidant Effects of (-)-Epigallocatechin-3-Gallate in Oral Cells L. Tao, M. Sun, W.Y.H. Khoo, J-Y. Park, S-Y. Lee, S.L. Kelleher and J.D. Lambert. Penn State and Penn State Hershey Col. of Med.

8:15 118.2 Activity-Guided Isolation of a Sirtuin2 Inhibiting Compound from Coffee: Structural and Activity Confirmation of Javamide-II (N-Caffeoyltryptophan) and Its Cellular Effects on Histone H3, alpha-Tubulin and p53 Implicated in Human Diseases J. Park. USDA, Beltsville, MD.

8:30 118.3 Cranberry Extract Ameliorates Obesity-Related Liver Inflammation via the Toll-Like Receptor 4 Pathway S.L. Glisan and J.D. Lambert. Penn State.


9:00 118.5 Black Raspberries Prevent Angiotensin II-Induced Senescence in Vascular Smooth Muscle Cells R.G. Ferresin, Y. Zhao and G. Salazar. Florida State Univ.


9:30 118.7 Anthocyanins of Blackcurrant and Black chokeberry Induced the Expression of Low-density Lipoprotein Receptor in Caco-2 and HepG2 Cells by Distinct Mechanisms B. Kim, Y-K. Park, H. Ma, T. Yuan, N. Seeram, S.I. Koo and J-Y. Lee. Univ. of Connecticut and Univ. of Rhode Island.

9:45 118.8 Characterizing Heterogeneous Cellular Responses to Polymethoxylflavones Using Raman Microscopy H. Zhang, L. He and H. Xiao. Univ. of Massachusetts Amherst.

119. NUTRITIONAL EPIDEMIOLOGY: EPIDEMIOLOGICAL RESEARCH ADDRESSING DIET AND HEALTH OUTCOMES

Minisymposium

(Sponsored by: Nutritional Epidemiology RIS)

SUN. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153B

CHAIR: S. Sahni

COCHAIR: N. Parekh


8:15 119.2 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 T. Schap, A. Subar, G. Anic, S. George, S. Krebs-Smith, Y. Park and J. Reedy. NCI, NIH, Rockville and Washington Univ.


9:00 119.5 Overtime Growth and Spatial Distribution of Fast Food Industry in China during 2005-2012 X. Cheng, Y. Wang, H. Xue and W. Qu. Univ. at Buffalo and Fudan Univ., Shanghai.


9:30 119.7 Higher Red Blood Cell n-3 Fatty Acid Composition Prospectively Relates to Lower Depressive Symptomatology S.J. Bigornia, K.L. Tucker, L.M. Falcon and W.S. Harris. Univ. of Massachusetts Lowell and Sanford Sch. of Med. of the Univ. of South Dakota.

120. COMMUNITY AND PUBLIC HEALTH NUTRITION: COMMUNITY AND PUBLIC HEALTH NUTRITION INTERVENTIONS

Minisymposium

(Sponsored by: Community and Public Health Nutrition RIS)

SUN. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153C

CHAIR: V. CARRAWAY-STAGE

COCHAIR: L. JOHNS

8:00 120.1 Food Security among Households with Children in Indiana Improved following a Supplemental Nutrition Assistance Program—Education Intervention R.L. Rivera, M.K. Maulding, A.R. Abbott and H.A. Eicher-Miller. Purdue Univ.

8:15 120.2 Cardiac Kids Club: A Childhood Obesity Prevention Afterschool Intervention for Elementary School Students M. Spence, A. McDonald and C. Perry-Burst. Univ. of Tennessee, Knoxville, Pellissippi State Community Col. and Knox County Schs., TN.


8:45 120.4 Feasibility and Acceptability of Group Cell Phones to Promote Optimal Breastfeeding in a Women’s Microcredit Program in Nigeria V.L. Flax, A.U. Ibrahim, M. Negerie, D. Yakubu, S. Leatherman and M.E. Bentley. Univ. of North Carolina at Chapel Hill and Partners for Develop.


9:15 120.6 Changes in Food Consumption Patterns of Mexican-Heritage Children during a Nutrition Intervention A.L. Aguillera, A. de la Torre and L.L. Kaiser. Univ. of California, Davis.

9:30 120.7 Improving Infant and Young Child Feeding in Ethiopia through Community-Based Grain Banks Using Local Foods M.L. Roche, B. Sako, S.J.M. Osendarp, A.A. Adish and A.L. Tolossa. Micronutrient Initiative, Canada and Micronutrient Initiative, Ethiopia.

9:45 120.8 Food Safety and School Garden Program for Elementary and Middle School Students V.A. Calberry, L.F. Pivarnik and I.E. Lofgren. Univ. of Rhode Island.

121. LACTATION: BIOLOGY OF LACTATION INCLUDING BIOACTIVE COMPONENTS AND OTHER MILK CONSTITUENTS AND THEIR EFFECT ON THE INFANT

Minisymposium

(Sponsored by: Lactation RIS)

SUN. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 154

CHAIR: S. KELLEHER

STUDENT CHAIR: H. HOLSCHE

8:00 121.1 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 D. Lemas, B. Young, A. Tomczik, T. Hernandez, B. DeLaHoussaye, C. Robertson, M. Rudolph, N. Krebs, S. Santorico, L. Barbour, D. Frank and J. Friedman. Univ. of Colorado Anschutz Med. Campus, Aurora and Univ. of Colorado Denver.

8:15 121.2 Infection-Specific Responses of Breastmilk Leukocytes F. Hassiotou, D. Savigni, J. Underhill, L. Moles, P.E. Hartmann and D.T. Geddes. Sch. of Chem. and Biochem., Univ. of Western Australia, Univ. of Basel and Complutense Univ. of Madrid.

8:30 121.3 Human Milk Exosomes Resist Digestion In Vitro and are Internalized by Human Intestinal Cells B. Lönnerdal, X. Du, Y. Liao and J. Li. Univ. of California, Davis.

8:45 121.4 Milk Osteopontin May Promote Brain Development Via Up-Regulating Osteopontin Expression In Vivo R. Jiang, C. Prell and B. Lönnerdal. Univ. of California, Davis.


9:15 121.6 The Role of ZnT2 in the Mammary Gland during Lactation S. Lee, D. Soybel and S.L. Kelleher. Penn State Hershey Col. of Med. and Penn State.

9:30 121.7 Expression of Genes from Breast Milk Fat Globule Reveals Events Related to the Pathophysiology of Lactation Failure in Obese Women M.A. Mohammad, T.A. Mistretta and M.W. Haymond. Baylor Col. of Med.

9:45 121.8 Diet Influences the Oral Microbiota of Infants during the First Six Months of Life H.D. Holscher, R.A. Mathai, J. Kim and K.S. Swanson. Univ. of Illinois, Urbana, Dominican Univ., IL and East Carolina Univ.
122. **VITAMINS AND MINERALS: MICRONUTRIENT BIOAVAILABILITY AND ANTIOXIDANT FUNCTION (INCLUDING SELENIUM)**

Minisymposium

*(Sponsored by: Vitamins and Minerals RIS)*

**SUN. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 156A**

*CHAIR: L. Tussing-Humphreys*

*COCHAIR: C. Karakochuk*

8:00  
**122.1** Iron Bioavailability of Sorghum, Cowpea, Corn and Soybean Fortified Blended Foods  

8:15  
**122.2** Whey-Based Supplement Added to a Plant-Based Diet Increases Total Zinc Absorption, but Not Total Iron in Mexican Children  

8:30  
**122.3** Mild Zinc Deficiency Augments Increased TNF-α Expression but Not Decreased Muscle Protein Synthesis after Acute Sepsis  

8:45  
**122.4** High Dietary Selenium Intake Alters Tissue Lipid and Protein Profiles and Metabolisms of Growing Pigs  
X. Lei, Z. Zhao and M. Barcus. Cornell Univ.

9:00  
**122.5** Selenium Binding Protein 1 Levels Predict Prostate Cancer Recurrence  
A.M. Diamond, E. Ansong, R.J. Deaton and P.H. Gann. Univ. of Illinois at Chicago.

9:15  
**122.6** Defect in Stress Erythropoiesis during Selenium Deficiency  

9:30  
**122.7** Selenium Status Biomarkers and Selenium Requirements in the Turkey *(M. gallopavo)*  

9:45  
**122.8** Dietary Fat Dose-Dependently Increases α-Tocopherol Bioaccessibility  
T.N. Sapper, E. Mah, C. Chitchumroonchokchai, M.L. Failla and R.S. Bruno. The Ohio State Univ.

123. **EXPERIMENTAL ANIMAL NUTRITION: ANIMAL MODELS OF FETAL NUTRITION, PROGRAMMING AND NEONATAL DEVELOPMENT**

Minisymposium

*(Sponsored by: Experimental Animal Nutrition RIS)*

**SUN. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 156B**

*CHAIR: T. Herfel*

*COCHAIR: S. El-Kadi*

8:00  
**123.1** Maternal Metformin Treatment during Obese Pregnancy Reduces Offspring Fatty Liver and Hepatic Inflammation  
H.N.B. Thomas, A. Berlanga, C.D. Byrne and F.R. Cagampang. Univ. of Southampton.

8:15  
**123.2** Maternal High-Fat Diet Programs Sex-Specific Intergenerational Effects in Male and Female F1 Mouse Progeny  

8:30  
**123.3** Neurodevelopment in Piglets Is Influenced by Perinatal Choline Status as Evidenced by Magnetic Resonance Imaging  

8:45  
**123.4** Maternal Choline Consumption during Pregnancy Modulates Cellular and Functional Aspects of Placental Development  

9:00  
**123.5** Sex-Specific Effects of Prenatal and Post-weaning High Fat Diet on Adult Mouse Offspring Skeletal Muscle Contraction  

9:15  
**123.6** Leucine Pulses during Long-term Continuous Feeding Enhance mTORC1 and mTORC2 Activation in Skeletal Muscle of Neonatal Pigs  

9:30  
**123.7** Translation Initiation Signaling in Myotubes from Normal and Low Birth Weight Neonatal Pigs  

9:45  
**123.8** Leucine Supplementation of a Protein and Energy Restricted Diet Enhances mTORC1 Activation but not Protein Synthesis in Muscle of Neonatal Pigs  
124. NUTRITION TRANSLATION: NUTRITION SCIENCE FOR PUBLIC POLICY, PRACTICE AND THE CONSUMER

Minisymposium
(Sponsored by: Nutrition Translation RIS)

**SUN. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 156C**

**CHAIR: B. BRADLEY AND F. COLETTA**

**STUDENT CHAIR: E. GLYNN**

8:00 124.1 A Comparison of the Healthfulness of Prepackaged Children’s Foods from Participants and Non-participants of the Canadian Voluntary Code on Marketing to Children C.W. Murray and M.R. L’Abbé. Univ. of Toronto.


8:30 124.3 Accuracy of Consumers’ Ability in Identifying Whole Grains Foods: Implications for Policy Change M. Chea, J.S. Foster and A.R. Mobley. Univ. of Connecticut.

8:45 124.4 Does Mere Exposure Mediate Sensitivity to Bitter Taste on Consumer Liking and Acceptability of Whole Grain Foods? A. De Leon, M. Giovanni, W. Horn, D. Burnett and N.L. Keim. Univ. of California, Davis, California State Univ. Chico and USDA, Davis.

9:00 124.5 Dietary Fiber and Added Fiber D.T. Gordon. PIC&PC, Puget Island, Cathlamet, WA.


9:30 124.7 Evaluating the Discrimination of Sugar Content Thresholds in the Canadian Nutrient File Classification System J.T. Bernstein and M.R. L’Abbe. Univ. of Toronto.

9:45 124.8 Canned Fruit and Vegetable Intake Is Associated with Greater Total Fruit and Vegetable Consumption, Better Diet Quality, Increased Nutrient and Same Sodium and Added Sugar Intake in Adults: NHANES 2001-2010 M.R. Freedman and V. Fulgoni. San Jose State Univ. and Nutr. Impact, Battle Creek, MI.

125. THE PRESIDENTIAL SYMPOSIUM: NUTRITION AND DEVELOPMENTAL ORIGINS OF HEALTH AND DISEASE

Special Session
(Supported by Mead Johnson Pediatric Nutrition Institute)

**SUN. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM EAST**

**CHAIR: S.N. MEYDANI**

**Pediatric Nutrition and Early Development**


12:00 Paternal Nutrition and Transgenerational Health Outcomes L.O. Bygren. Univ. of Umea.

125A NATIONAL OSTEOPOROSIS FOUNDATION/AMERICAN SOCIETY FOR NUTRITION DRAFT STATEMENT ON PEAK BONE MASS DEVELOPMENT AND LIFESTYLE FACTORS

Symposium

**SUN. 12:45 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 151AB**

**CHAIR: T.C. WALLACE**


1:00 Exercise and Physical Activity R. Lewis. Univ. of Georgia.


2:00 Research Gaps and Implementation Strategy C.M. Weaver. Purdue Univ.

126. HUMAN VARIABILITY AND PHYSIOLOGICAL EXTREMES: BLESSING OR CURSE?

Symposium

(Supported by PepsiCo, Inc.)

(Sponsored by: Nutritional Sciences Council)

**SUN. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM EAST**

**CHAIR: S.H. ADAMS AND D.B. ALLISON**

**Human Nutrition and Metabolism**


3:30 Blood Lipidomics: Sub-groups and Responses to Nutrient Interventions J.W. Newman. USDA, Davis.

4:00 Precision Medicine: Lessons from Membrane Transporters in Metabolic Disease K. Giacomini. UCSF.

127. DO WE NEED PRECONCEPTION NUTRITION INTERVENTIONS TO IMPROVE BIRTH OUTCOMES BEYOND THE PREVENTION OF NEURAL TUBE DEFECTS? CURRENT KNOWLEDGE AND FUTURE DIRECTIONS
Symposium
(Supported by Micronutrient Initiative)
(Sponsored by: Global Nutrition Council)
Sun. 3:00 PM—Boston Convention & Exhibition Center, Room 157ABC
CHAIR: U. Ramakrishnan and J.C. King
Global and Public Health Nutrition
3:00 Why Should Preconception Nutrition Interventions Improve Birth Outcomes? Insights from Recent Advances in Reproductive Biology. J.C. King. CHORI – Univ. of California at Berkeley and Davis.
3:30 Do Weekly Preconceptional Micronutrient Supplements Improve Birth Outcomes? P.H. Nguyen. Thai Nguyen Univ. of Med. and Pharmacy (TUMP)
4:00 Role of Food Based Approaches to Improve Preconception Nutrition and Birth Outcomes C. Fall. Univ. of Southampton.

128. INTERNATIONAL FORUM – KOREA
International Forum
(Sponsored by: The Korean Nutrition Society)
Sun. 3:00 PM—Boston Convention & Exhibition Center, Room 151AB
CHAIR: K.J. Yeum and N.S. Joo
3:00 Vitamin D – Skeletal and Non-skeletal Actions N-S. Joo. Ajou Univ. Sch. of Med.
3:20 Update on Vitamin D and the Role in Skeletal Muscle L. Ceglia. USDA at Tufts Univ.
4:00 Impact of Vitamin D and Calcium Insufficiencies on Bone Health in Korea K-J. Yeum, Konkuk Univ.

129. ENERGY AND MACRONUTRIENT METABOLISM: PROTEIN AND AMINO ACID METABOLISM
Minisymposium
(Sponsored by: Energy & Macronutrient Metabolism RIS)
Sun. 3:00 PM—Boston Convention & Exhibition Center, Room 152
CHAIR: J. Marini
COCHAIR: S. El-Kadi
3:30 129.3 Leucine Guides Meal Distribution of Dietary Protein for Muscle Protein Synthesis and Mass D.K. Layman and L.E. Norton. Univ. of Illinois at Urbana-Champaign.
4:15 129.6 Determination of the Tolerable Upper Intake Level of Leucine in Healthy Elderly (70-75y) B.F. Rasmussen, A. Turki, K. Madden and R. Elango. Univ. of British Columbia.
4:30 129.7 A Diet High in Protein Reduces Weight Gain, Food Intake and Liver Weight in Obese Zucker Rats W.W. French, S.A. Shouse, X. Gu, S-O. Lee and J.I. Baum. Univ. of Arkansas.
4:45 129.8 Dietary Arginine Requirements are Dependent on the Rate of Citrulline Production in Mice J.C. Marini and I.C. Didelija. USDA, Baylor Col. of Med.
130. NUTRITION SUNDAY
NUTRITION SUNDAY
NUTRITION SUNDAY

130. DIETARY BIOACTIVE COMPONENTS: MECHANISMS OF ACTION AND MOLECULAR TARGETS OF DIETARY BIOACTIVE COMPONENTS II

Minisymposium
(Sponsored by: Dietary Bioactive Components RIS)
Sun. 3:00 pm—Boston Convention & Exhibition Center, Room 153A
Chair: J. Whelan
CoChair: D. Donohoe


3:45 130.4 Reduction of Nitrosative Stress by Vitamin C: A New Approach for Mitigation of Doxorubicin-Induced Cardiomyopathy. G. Akolkar, A. Bagchi, S. Mandal, D. Jassal and P. Singal. Univ. of Manitoba.

4:00 130.5 Local Vitamin D Metabolism Is Differentially Regulated by MKP-1 in Osteoclasts Stimulated with RANKL versus LPS. M.S. Valerio and K.L. Kirkwood. Med. Univ. of South Carolina.


4:45 130.8 Polyherbal Supplements Can Modify Energetics and Lipid Metabolism in Cancer Cells by Activating AMPK Signaling. J. Whelan, Y. Zhao and D. Donohoe. Univ. of Tennessee, Knoxville.

131. NUTRITIONAL EPIDEMIOLOGY: INNOVATION AND VALIDATION OF DIETARY ASSESSMENT TOOLS AND THEIR APPLICATIONS

Minisymposium
(Sponsored by: Nutritional Epidemiology RIS)
Sun. 3:00 pm—Boston Convention & Exhibition Center, Room 153B
Chair: C.J. Boushey
CoChair: C. Zizza


132. COMMUNITY AND PUBLIC HEALTH NUTRITION: FOOD ENVIRONMENT

Minisymposium

(Sponsored by: Community and Public Health Nutrition RIS)

Sun. 3:00 PM—Boston Convention & Exhibition Center, Room 153C

CHAIR: S. Colby
COCHAIR: N. Fitzgerald

3:00 132.1 Validation of Instruments to Assess Home Food Environment of Pre-adolescents: A Pilot Study M.J. Nepper, M. Ludemann and W. Chai. Univ. of Nebraska-Lincoln.


3:30 132.3 Customer Utilization of Small Stores in Rural Maryland and Association with Diet and Psychosocial Variables M. Shapiro, C. Welsh, D. Dennis, E. Campbell and J. Gittelsohn. Johns Hopkins Bloomberg Sch. of Publ. Hlth.


4:15 132.6 Associations between Vegetable-and-Fruit Consumption and Food Deserts: Urban Adults 40+ Years, NHANES 2003-2010 J.J. Gahche and N. Sahyoun. Univ. of Maryland College Park.


133. LACTATION: LACTATION AND MATERNAL AND INFANT HEALTH

Minisymposium

(Sponsored by: Lactation RIS)

Sun. 3:00 PM—Boston Convention & Exhibition Center, Room 154

CHAIR: C. Lovelady
COCHAIR: E. Shearer

3:00 133.1 My People are Dying of Ignorance: Changes in Exclusive Breastfeeding Knowledge, Benefits, Barriers, and Misconceptions in Family Members Involved in a Breastfeeding Promotion Campaign K. Reinsma, N. Bolima, F. Fonteh and S. Montgomery. Liberty Univ., VA, Hlth. and Develop. Consult. Svcs., Bamenda, Cameroon, Univ. of Dschang, Cameroon and Loma Linda Univ.


4:00 133.5 Effects and Kinetics of Maternal Supplementation on Vitamin Concentrations in Human Milk S. Shahab-Ferdows, D. Hampel, M. Islam and L.H. Allen. USDA, Davis, Univ. of California, Davis and ICDDR,B, Dhaka.

4:15 133.6 The Relationship of Breast Milk Intake as Assessed with Deuterium Dilution on Growth and Body Composition of Infants in Jamaica S.N. Whyte, T. Royal-Thomas, A.V. Badaloo and M.E. Reid. Univ. of the West Indies, Jamaica.

4:30 133.7 Feeding of Infant Formula at Birth Links with Feeding of Infant Formula and Discontinuation of Breastfeeding in Vietnam T.T. Nguyen, E.A. Frongillo and N. Hajeebhoy. FHI 360, Viet Nam and Univ. of South Carolina.

## 134. VITAMINS AND MINERALS: B VITAMINS AND ONE-Carbon Metabolism

**Minisymposium**

(Sponsored by: Vitamins and Minerals RIS)

**SUN. 3:00 pm—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 156A**

**CHAIR: D. Rai**

**COCHAIR: N. Gletsu-Miller and P. Manna**

### 3:00 134.1 Vision Issues and Space Flight: Evaluation of One-Carbon Metabolism Polymorphisms

### 3:15 134.2 The Effect of Early Life Methyl Donor Supplementation on Obesity Development
S.E. McKee and T.M. Reyes. Univ. of Pennsylvania.

### 3:30 134.3 Oral S-Adenosylmethionine Administration Increases Whole Brain Concentrations of Dopamine and Norepinephrine in Rats

### 3:45 134.4 Effect of High Protein Consumption on Markers of B6 Status in a Rodent Model of Moderate Pyridoxine Deficiency
S. Raposo-Blouw, S. Mayengbam and J.D. House. Univ. of Manitoba.

### 4:00 134.5 Unmetabolized Folic Acid by Sources of Folic Acid Intake among U.S. Adults in the National Health and Nutrition Examination Survey 2007-2008

### 4:15 134.6 Effect of Vitamin B6-Antagonist from Flaxseed on Amino Acid Metabolism in Moderately Vitamin B6-Deficient Rats
S. Mayengbam, S. Raposo and J.D. House. Univ. of Manitoba.

### 4:30 134.7 Association between Transcobalamin II C776G Polymorphism and Neuropathy Is Modified by Folate Intake in Vitamin B-12 Sufficient Elders

### 4:45 134.8 Vitamin B12 Status in a Cohort of Canadian Pregnant Women and Newborn Infants
136. EXPERIMENTAL ANIMAL NUTRITION: COMPARATIVE ANIMAL NUTRITION AND PHYSIOLOGY

Minisymposium

(Sponsored by: Experimental Animal Nutrition RIS)

SUN. 3:00 PM—Boston Convention & Exhibition Center, Room 156C
CHAIR: K. SHOVELLOR
COCHAIR: K. AJOYON


4:15 136.6 Effect of Mouse Strain on Dietary CLA and Coconut Oil-Induced Lipolysis K.M. Barnes, Q. Chen and V. Dartigue. West Virginia Univ.


137. ASMB LECTURE

Lecture

(Sponsored by: ASIP and the American Society for Matrix Biology)

SUN. 8:30 AM—Boston Convention & Exhibition Center, Room 161

Cell and Tissue Injury

Injury/Connective Tissue/Fibrosis


Pathology

138. HCS SYMPOSIUM: ADVANCED IMAGING TECHNIQUES AND SYSTEMS: SUPER RESOLUTION MICROSCOPY

Symposium

(Sponsored by: The Histochemical Society and ASIP Immunohistochemistry and Microscopy Scientific Interest Group)

SUN. 8:30 AM—Boston Convention & Exhibition Center, Room 160C

Imaging, Immunohistochemistry and Microscopy

8:30 From Localization Microscopy to Structured Illumination Microscopy A. McEvoy. GE Healthcare.


139. JOURNAL OF HISTOCHEMISTRY & CYTOCHEMISTRY LECTURE

Lecture

(Sponsored by: The Histochemical Society and ASIP Immunohistochemistry and Microscopy Scientific Interest Group)

Sun. 10:30 am—Boston Convention & Exhibition Center, Room 160C

Chair: J.R. Couchman

Imaging, Immunohistochemistry and Microscopy

10:30 Computer Vision of Cell Dynamics G. Danuser. Univ. of Texas Southwestern Med. Ctr.

140. BLOOD VESSEL CLUB™: MACROPHAGES IN THE VESSEL WALL

Symposium

(Sponsored by: ASIP Vascular and Mucosal Pathobiology (VAMP) Scientific Interest Group)

Sun. 8:30 am—Boston Convention & Exhibition Center, Room 160A/B

Chair: J.W. Homeister and J.R. Stone

Vascular Biology

Epithelial Pathobiology

Transporters/Channels/Barriers


10:15 CCR7-Dependent Reverse Transmigration of Myeloid Cells From the Intima Protects the Artery from Pathogens M.I. Cybulsky. Univ. of Toronto.


141. LIVER PATHOBIOLOGY WORKSHOP:
CELLULAR AND MOLECULAR MECHANISMS OF LIVER INJURY: IMPLICATIONS IN DISEASE PATHOGENESIS

Workshop

(Sponsored by: ASIP Liver Pathobiology Scientific Interest Group)

Sun. 8:30 am—Boston Convention & Exhibition Center, Room 162A

Chair: K. Nejak-Bowen and B.L. Copple

Liver Pathobiology

Injury/Connective Tissue/Fibrosis

8:30 Stellate Cell-Kupffer Cell Communication in Hepatic Inflammation and Injury C.R. Gandhi. Univ. of Cincinnati.


10:00 Regulation of Hepatic Inflammation During Cholestasis B.L. Copple. Michigan State Univ.


11:00 Beta-catenin in Cholestatic Liver Disease K. Nejak-Bowen. Univ. of Pittsburgh.

142. MUCOSAL INFLAMMATION AND TISSUE REPAIR

Minisymposium

Sun. 8:30 am—Boston Convention & Exhibition Center, Room 162B

Chair: S. Keely and J. Brazil

Epithelial Pathobiology

Inflammation/Immunity

Microbiome

8:30 142.1 Pulmonary Retention of PMN Attracts Primed Intestinal Lymphocytes in a Mouse Model of Inflammatory Bowel Disease S. Mateer, E. Marks, S. Maltby, B. Goggins, J. Horvat, P. Hansbro and S. Keely. Sch. of Biomed. Sci. and Pharm., Univ. of Newcastle, Australia.

8:45 142.2 CD36, Fibroblasts and Intestinal Inflammation T.A. Reaves, A. Nillas and M. Anderson-Thomas. Med. Univ. of South Carolina.
10:45 142.6 NADPH Oxidase 1-Mediated Reactive Oxygen Species Generation Stimulate Gut Homeostasis and Restitution T.M. Darby and R.M. Jones. Emory Univ.

10:00 142.7 Targeting of PMN Expressed Lewis-X Blocks PMN Transepithelial Migration and Increases Phagocytosis and Surface Mobilization of Granule Contents J.C. Brazil, R. Leoni, M. Quiros, R. Jones, A. Nusrat and A. Neish. Emory Univ., Northwestern Univ. and Univ. of Michigan.

10:15 142.8 TNF Modulates the Gut Microbiota and Drives Inflammation A.J. Kozik, Y.L. Jones-Hall and C.H. Nakatsu. Purdue Univ.

10:30 142.9 Withdrawn.

10:45 142.10 WNT1-Inducible Protein 1 Functions as a Pro-repair Molecule in the Intestine M. Quiros, H. Nishio, P. Neumann, G. Leoni, G. Bernal, M. Feng, A. Keshavarzian, E. Mutlu, C. Parkos and A. Nusrat. Emory Univ., Univ. of Muenster, Rush Univ. and Univ. of Michigan.

11:00 142.11 Signaling through the Aryl Hydrocarbon Receptor Induces Expression of the IL-10 Receptor on Intestinal Epithelia J.M. Lanis, S.P. Colgan and D.J. Kominsky. Univ. of Ottawa Hosp. Res. Inst.


143. EXTRACELLULAR MATRIX IN PATHOBIOLOGY

Minisymposium
(Sponsored by: ASIP and the American Society for Matrix Biology)

Sun. 8:30 am—Boston Convention & Exhibition Center, Room 161

CHAIR: C.C. Yates and S.S. Apte

Injury/Connective Tissue/Fibrosis

Obesity


145. ENVIRONMENTAL AND TOXICOLOGIC PATHOLOGY SYMPOSIUM: AIR POLLUTION AND HEALTH EFFECTS: COGNITION, NEUROPATHOLOGY, CARDIOVASCULAR, AND METABOLIC DISEASE – WHAT YOU OUGHT TO KNOW BY NOW!

Symposium

(Sponsored by: ASIP Environmental and Toxicologic Pathology Scientific Interest Group and the Society of Toxicologic Pathology)

Sun. 2:00 pm—Boston Convention & Exhibition Center, Room 160C

CHAIRED: L.O. Calderon-Garciduenas and E. Galbreath

Environmental Pathology

2:00 Overview of Air Pollution and Detrimental Effects in Children L.O. Calderon-Garciduenas, Univ. of Montana.
2:40 Developmental Cognitive Neuroscience, Air Pollution and Social Inequality A. D’Angiulli, Carleton Univ.
3:20 Microglia as Central Nervous System Sentinels & the Detection of Air Pollution M.L. Block, Virginia Commonwealth Univ.
4:00 Inhaled Ozone and Particulate Matter and the Metabolic System Response: Diabetes and Obesity J.R. Harkema, Michigan State Univ.
4:30 Round Table Discussion.

146. SIGNALING THROUGH THE MATRIX IN INFLAMMATION, AUTOPHAGY AND ANGIogenesis

Symposium

(Supported by an unrestricted educational grant from Matrix Biology published by Elsevier)

(Sponsored by: ASIP Inflammation/Immunopathology Scientific Interest Group)

Sun. 2:00 pm—Boston Convention & Exhibition Center, Room 160A/B

CHAIRED: R.V. Iozzo and L. Schaefer

Inflammation

Pulmonary Pathobiology

Regenerative Medicine

2:00 Inflammasome V.M. Dixit, Genentech.
2:45 Autophagy and Ubiquitin Networks I. Dikic, Goethe Univ.
3:30 Hylauron Interactions with TLR4 Regulate Lung Epithelial Stem Cell Renewal and the Severity of Pulmonary Fibrosis P.W. Noble, Cedars-Sinai Med. Ctr.

147. CANCER PATHOGENESIS AND PROGRESSION

Minisymposium

Sun. 2:00 pm—Boston Convention & Exhibition Center, Room 161

CHAIRED: E. Whitley and E. Holthoff

Cell and Tissue Injury

Cancer Biology

Obesity

2:00 Introductory Remarks.
4:35 147.10 Mutations of Nrf2 Are an Early and Frequent Event in the Development of Rat Hepatocellular Carcinoma A. Columbano, S. Giordano, A. Perra, M.A. Kowalik, G.M. Ledda-Columbano, A. Petrelli, S. Menegon, L. Quagliata, L. Terracciano and P. Zavattari. Univ. of Cagliari, Univ. of Turin and Univ. of Basel.
148. CELL DEATH: PATHWAYS AND MECHANISMS
Minisymposium
Sun. 2:00 pm—Boston Convention & Exhibition Center, Room 162A
Chaired: W-X. Ding and K. Hamilton
Cell and Tissue Injury
Epithelial Pathobiology
Inflammation/Immunity
2:00 148.1 Autophagy Triggered by p14.3.3z Induces Akt Full Activation in Intestinal Epithelial Cells
2:15 148.2 High MUC2 Production in Goblet Cells Induces ER Stress and Exhibit Increase Susceptibility to Apoptosis
A.A. Tawiah, F. Moreau and K. Chadee. Univ. of Calgary, Canada.
2:30 148.3 A Potential Role for Regulatory T Cells in Apoptotic Cell Clearance by Macrophages in a Murine Model of Acute Lung Injury
2:45 148.4 PGC1α Rescue Retinal Pigment Epithelial Cells from Oxidative Damage: Implication for Age-Related Macular Degeneration
A. Khadka, J. Iacovelli and M. Saint-Macular Degeneration
Columbia Univ.
3:00 148.5 Staphylococcus aureus Activation of NLRP3 Inflammasome and Necroptosis through MLKL Exacerbates Pneumonia
3:15 148.6 A High Throughput Image-Based Screening Reveals Novel Autophagy Inducers for Treating Drug-Induced Liver Injury
Y. Li, S. McGreal, J. Zhao, R. Huang, M. Xia and W-X. Ding. Univ. of Kansas Med. Ctr. and NCATS, NIH.
3:30 148.7 mRNA-Binding Protein IMP1 Is a Novel Regulator of Autophagy following Intestinal Irradiation Injury
3:45 148.8 Muscle-Specific Ubiquitin Ligase MuRF1 Regulates Myocardial Autophagic Flux In Vivo
T.L. Parry, M.T. Quintana, J.A. Hill and M.S. Willis. Univ. of North Carolina at Chapel Hill and Univ. of Texas Southwestern Med. Ctr.
4:00 148.9 Sumoylation Regulates Cytochrome P450 2E1 (CYP2E1) Expression in Alcoholic Liver Disease
M.L. Tomasi, M. Ryoo and B. Gao. Cedars Sinai Med. Ctr. and NIAAA, NIH.
4:15 148.10 Mechanism of Liver Injury Caused by Autophagy Deficiency
B. Khambu, H. Zhang, Y. Li, X. Chen and X-M. Yin. Indiana Univ.
149. NEUROPATHOLOGY
Minisymposium
Sun. 2:00 pm—Boston Convention & Exhibition Center, Room 162B
Chaired: W.G. Tourtellotte and C. Kolacik
Neuropathology
Neurobiology
2:00 149.1 Expression of Carbonic Anhydrase Genes, CA3 and CA12. Transformed with ENO1, Relate to Copy Numbers of EGFR or RNF139 and XIAP, and Gender in Glioblastomas Using PCR Assays
2:20 149.2 AT101 Down-regulates CXLC12 mRNA and Secreted Protein in Malignant Peripheral Nerve Sheath Tumor cells
C.D. Graham, N. Kaza, B. Klocke and K. Roth. Univ. of Alabama at Birmingham.
2:40 149.3 The Pathogenesis of Familial Dysautonomia Is Explained by Abnormal Epl1-dependent Retrograde Nerve Growth Factor Signaling
3:00 149.4 Subarachnoid Hemorrhage Triggers Arrest of Cerebral Spinal Fluid Circulation
3:20 149.5 MR Microscopy for 3D Identification of Cortical Tubers, White Matter "Microtubers" and Radial Migration Lines in Ex Vivo Pediatric TSC with Epilepsy
3:40 149.6 Differential Analysis of Prenatal Cocaine Exposure on Maternal and Pup Related Developmental Variables
4:00 149.7 Depressive Symptoms in Rats with Myocardial Infarction Associated with Local Brain Expression of Neutrophil Gelatinase-Associated Lipocalin
150. ASIP ROUS-WHIPPLE AWARD LECTURE
Award Lecture
Sun. 5:00 pm—Boston Convention & Exhibition Center, Room 160A/B
W.G. Tourtellotte. The Univ. of Michigan.
5:00 Leukocyte-Epithelial Interactions: A Double-Edged Sword
C.A. Parkos. The Univ. of Michigan.
151. THE HISTOCHEMICAL SOCIETY (HCS) MEMBER AWARDS PRESENTATION, BUSINESS MEETING AND RECEPTION
Business Meeting
Sun. 6:30 pm—Renaissance Boston Waterfront Hotel, Atlantic 3
152. **ASPET PRESIDENTIAL SYMPOSIUM: NAVIGATING THE FUTURE OF BIOMEDICAL RESEARCH**

**Symposium**

*(Sponsored by: All Divisions)*

**SUN. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 107AB**

**CHAIR:** A.E. Fleckenstein

9:30 Stabilizing a Productive but Structurally Unstable Research System **M.S. Teitelbaum.** Labor and Worklife Prog. at Harvard Law Sch.

10:00 Training Future Biomedical Researchers: Challenges and Opportunities **N.L. Desmond.** NIMH, NIH.

10:30 Assuring a Bright Future for Biomedical Research **S. Silberberg.** NINDS, NIH.

11:00 Navigating the Future of Drug Development: Calm Seas or Stormy Weather? **P. Skolnick.** NIDA, NIH.

11:30 New Directions in Supporting Science **M.E. Rogers.** NIGMS, NIH.

153. **BILE ACIDS AND LIVER DISEASE IN PREGNANT WOMEN AND NEONATES**

**Symposium**

*(Sponsored by: The Divisions for Toxicology; Translational and Clinical Pharmacology; Drug Metabolism; and Molecular Pharmacology)*

**SUN. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 106**

**CHAIR:** L.M. Aleksunes and G.L. Guo

**Injury/Connective Tissue/Fibrosis**

9:30 Introduction.


10:10 Maternal Enterohemopatic Bile Acid Signaling: Priming for Cholestatic Disease **L.M. Aleksunes.** Rutgers Univ.

10:40 Perinatal Pharmacology of the FXR Nuclear Receptor **W. Xie.** Univ. of Pittsburgh.

11:10 FXR Signaling in Total Parenteral Nutrition-Associated Liver Disease **G.L. Guo.** Rutgers Univ.

11:40 Pregnancy-Related Hormones Modulate Protein Expression of Hepatic DMEs and Transporters in HepaRG Cells **M. Farooq.** Sch. of Pharm., Univ. of Washington. *(939.11)*

154. **EMERGING REGENERATIVE THERAPIES IN PULMONARY DISEASE**

**Symposium**

*(Sponsored by: The Divisions for Translational and Clinical Pharmacology; Toxicology; Molecular Pharmacology; and Cardiovascular Pharmacology)*

**SUN. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 109A**

**CHAIR:** Y. Liu and J. Rehman

**Regenerative Medicine (Stem Cells, Tissue Regeneration, Biomaterials)**

9:30 The Role of Endogenous Regenerative Epithelial Cells in Alveolar Repair **Y. Liu.** Univ. of Illinois at Chicago.


10:20 Regenerating the Vasculature in Lung Disease **J. Rehman.** Univ. of Illinois at Chicago.

10:45 Mesenchymal Stromal Cells: Biology and Therapeutic Potential for ARDS **M. Matthay.** UCSF Sch. of Med.

11:10 Translating Regenerative Therapies: Opportunities and Challenges **Panel Discussion.**

155. **EMERGING ROLES OF TRACE AMINE ASSOCIATED RECEPTOR 1 (TAAR1) IN DRUG ABUSE AND MENTAL DISORDERS**

**Symposium**

*(Sponsored by: The Divisions for Behavioral Pharmacology; Molecular Pharmacology; Neuropharmacology; Drug Discovery and Development; and Translational and Clinical Pharmacology)*

**SUN. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 108**

**CHAIR:** J. Li and G.M. Miller

**Neurobiology**

**Inflammation/Immunity**

9:30 A Trace Amine-Associated Receptor Mechanism of Action Distinguishes Methamphetamine from Cocaine **D. Grandy.** Oregon Hlth. & Sci. Univ.

10:00 Trace Amine Associated Receptor 1 is Implicated in the Central and Immunological Effects of Drugs of Abuse **G.M. Miller.** Harvard Med. Sch., New England Primate Res. Ctr.

10:30 Frontostratial Dysfunction in Mice Lacking TAAR1 **S. Espinoza.** Italian Inst. of Technol.

11:00 Selective TAAR1 Agonists as Potential Therapeutic Drugs for Psychiatric and Metabolic Disorders **M.C. Hoener.** F. Hoffmann-La Roche Ltd.

11:30 The TAAR1 Agonist RO5263397 Attenuates the Abuse-Related Effects of Cocaine in Rats **J-X. Li.** Univ. at Buffalo, SUNY.
156. ION CHANNEL DRUG DISCOVERY-ADVANCEMENTS AND CURRENT CHALLENGES

Symposium
(Sponsored by: The Divisions for Drug Discovery and Development; Cardiovascular Pharmacology; Translational and Clinical Pharmacology; and Molecular Pharmacology)
SUN. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 107C
CHAIR: S.V. Kharade and M.F. Jarvis

Transmitters/Channels/Barriers

9:30 Introduction.
10:10 Ion Channel Screening Technologies O.B. McManus. Essen BioScience, Inc.
11:55 Concluding Remarks.

157. THE ROLE OF PROTEIN-PROTEIN AND PROTEIN-MEMBRANE INTERACTIONS ON P450 FUNCTION

Symposium
(Sponsored by: The Divisions for Drug Metabolism and Molecular Pharmacology)
SUN. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 109B
CHAIR: W.L. Backes and J.P. Jones

9:40 Positioning of Microsomal CYPs and Drugs in Lipid Bilayers M. Otyepka. Palacký Univ. Olomouc.
10:10 The Role of the Endoplasmic Reticulum in Modulating P450 Function J.R. Reed. LSU Hlth. Sci. Ctr.
10:40 Human Cytochrome P450 Interactions with Catalytic Protein Partners E.E. Scott. Univ. of Kansas.
11:10 Role of NADPH-Cytochrome P450 Reductase and Cytochrome b5 as Electron Donors to Cytochrome P450 C. R. Wolf. Univ. of Dundee.

158. JULIUS AXELROD AWARD IN PHARMACOLOGY LECTURE

Lecture
SUN. 2:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 107AB

The Julius Axelrod Award is presented annually for significant contributions to understanding the biochemical mechanisms underlying the pharmacological actions of drugs and for contributions to mentoring other pharmacologists. The Award was established in 1991 to honor the memory of the eminent American pharmacologist who shaped the fields of neuroscience, drug metabolism, and biochemistry and who served as a mentor for numerous eminent pharmacologists around the world.

2:00 Introduction D.R. Sibley. NINDS, NIH.
2:05 Arresting Developments in Receptor Signaling J.L. Benovic. Thomas Jefferson Univ.

159. JULIUS AXELROD SYMPOSIUM: THE INS AND OUTS OF G PROTEIN-COUPLED RECEPTOR SIGNALING

Symposium
SUN. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 107AB
CHAIR: J.L. Benovic

3:00 Introduction J.L. Benovic. Thomas Jefferson Univ.
4:20 Regulation of GPCR Trafficking and Signaling by Ubiquitin A. Marchese. Loyola Univ. Chicago.
4:55 Spatial and Temporal Specificity in Cellular GPCR Signaling M. von Zastrow. UCSF.

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Sunday – Tuesday
9:00 AM – 4:00 PM

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160. ACTIVE LEARNING: WHAT’S UP WITH THAT FLIPPING CLASSROOM

Division Symposium

(Sponsored by: The Divisions for Pharmacology; Education; Translational and Clinical Pharmacology; Cardiovascular Pharmacology; Molecular Pharmacology; Behavioral Pharmacology; and Neuropharmacology)

Sun. 3:00 pm—Westin Boston Waterfront, Grand Ballroom D

Chair: J.L. Szarek

Education

Career Development

3:00 Doing is Better: The Concept of Active Learning and the Flipped Classroom W.B. Jeffries. Univ of Vermont Col. of Med.
4:15 Facilitated Small Group Activities.
4:30 Taking it Back Home: Limitations, Myths and Misunderstandings about the Active Learning and the Flipped Classroom Panel Discussion.

161. ELUCIDATING THE MOLECULAR UNDERPINNINGS OF BEHAVIOR USING PHARMACOLOGICAL KNOCK-IN MOUSE MODELS

Symposium

(Sponsored by: The Divisions for Neuropharmacology; Behavioral Pharmacology; Molecular Pharmacology; Translational and Clinical Pharmacology; and Drug Discovery and Development)

Sun. 3:00 pm—Boston Convention & Exhibition Center, Room 108

Chair: R.D. Blakely

Neurobiology

Transporters/Channels/ Barriers

3:00 Introduction R.D. Blakely. Vanderbilt Univ. Sch. of Med.
4:05 The Highs and Lows of Cocaine: Insights into Cocaine Actions in Reward Pathways Using a Knock-in Dopamine Transporter Mouse Model H.H. Gu. Ohio State Univ.
4:35 Cocaine Around the Clock: SERT Met172 Mice Elucidate the Serotonergic Basis of Cocaine Actions on Circadian Physiology and Behavior R. Prosser. Univ. of Tennessee.
5:05 Serotonin Transporter-Independent Actions of the Antidepressant Vortioxetine as Revealed Using the SERT M172 Mouse A.G. Nackenoff. Vanderbilt Univ. (932.5)

162. INTERINDIVIDUAL VARIABILITY IN CYP-MEDIATED DRUG METABOLISM

Symposium

(Sponsored by: The Divisions for Drug Metabolism; Toxicology; Drug Discovery and Development; Molecular Pharmacology; and Translational and Clinical Pharmacology)

Sun. 3:00 pm—Boston Convention & Exhibition Center, Room 109B

Chair: H. Jeong and T.S. Tracy

3:00 Overview T.S. Tracy. Univ. of Kentucky.
4:20 Interindividual Variability in CYP2D6-Mediated Drug Metabolism H.Y. Jeong. Univ. of Illinois at Chicago.

163. NANOTOXICOLOGY: SMALL PARTICLES, BIG CONCERN

Symposium

(Sponsored by: The Divisions for Toxicology; Drug Metabolism; Cardiovascular Pharmacology; and Translational and Clinical Pharmacology)

Sun. 3:00 pm—Boston Convention & Exhibition Center, Room 106

Chair: J.S. Fedan and D.W. Porter

3:00 Introduction J.S. Fedan. NIOSH, CDC.
3:35 Nanoparticles: Structure, Biophysics, Chemistry and Reactions in Biological Tissues A. Holian. Univ. of Montana.
4:05 Multi-wall Carbon Nanotubes and Carbon Nanofibers: Toxicological Characterization in the Lungs D.W. Porter. NIOSH, CDC.
5:05 Evaluating the Safety Implications and Dermal Hazards Associated with Nanomaterials N.A. Monteiro-Riviere. Kansas State Univ.
164. VASCULAR STIFFNESS, A NOVEL THERAPEUTIC APPROACH FOR HYPERTENSION
Symposium
(Sponsored by: The Divisions for Cardiovascular Pharmacology; Drug Discovery and Development; Molecular Pharmacology; and Translational and Clinical Pharmacology)
Sun. 3:00 pm—Boston Convention & Exhibition Center, Room 109A
CHAIR: S.F. VATNER


4:15 Subcellular Targets for the Treatment of Aging-Induced Increases in Vascular Stiffness K. Morgan. Sargent Col., Boston Univ.

4:40 NIH Vascular Biology and Hypertension Branch Interest in Vascular Stiffness Y.S. OH. NHLBI, NIH.

4:55 Future Directions and Controversies in the Field of Vascular Stiffness Panel Discussion.

165. PRESIDENT’S SYMPOSIUM SERIES
PHYSIOLOGY: ANSWERS TO BIG QUESTIONS
THE FUTURE OF DIABETES RESEARCH
Symposium
Sun. 3:15 pm—Boston Convention & Exhibition Center, Room 210BC
CHAIR: J.E. HALL

Translational Physiology
3:15 Micro RNAs and Insulin Production A. Shaley. Univ. of Alabama at Birmingham.

3:45 Omic Approaches to Determining the Mechanisms Underlying Insulin Resistance and the Risk for Type 2 Diabetes B.B. KAHN. Harvard Med. Sch. and Beth Israel Deaconess Med. Ctr.

4:15 The CNS and Glucose Regulation M.W. SCHWARTZ. Univ. of Washington.

4:45 Bariatric Surgery and Diabetes R. SEELEY. Univ. of Michigan.

166. CARDIOPULMONARY CONSEQUENCES OF PERINATAL EXPOSURES
Symposium
(Sponsored by: Cardiovascular Section)
Sun. 8:00 am—Boston Convention & Exhibition Center, Room 208
CHAIR: L.K. ROGERS AND M. VELTEN

8:00 Introduction to Perinatal Exposures and Consequences L.K. ROGERS. The Res. Inst. at Nationwide Children’s Hosp., The Ohio State Univ.

8:10 Maternal Obesity and Cardiovascular Disease in the Offspring: Epidemiological Evidence R. REYNOLDS. Univ. of Edinburgh.

8:35 Cardiac and Pulmonary Consequences of Maternal Exposure to Air Pollution L.E. WOLD. The Ohio State Univ.


9:00 Maternal Arsenic Exposure and Cardio-Metabolic Disease in the Offspring J.C. STATES. Univ. of Louisville.


9:50 Conclusions.

167. CARDIOVASCULAR RESPONSES TO TRAUMA
Featured Topic
(Sponsored by: Cardiovascular Section)
Sun. 8:00 am—Boston Convention & Exhibition Center, Room 205B
CHAIR: R.L. HESTER

8:00 Cerebral Blood Flow Responses Following Hemorrhage C. RICKARDS. Univ. of North Texas Hlth. Ctr.

8:30 Orthopedic Trauma and Acute Lung Injury L. XIANG. Univ. of Mississippi Med. Ctr.


168. CEREBROVASCULAR ABNORMALITIES IN HYPERTENSIVE DISEASE

Featured Topic
(Sponsored by: Cardiovascular Section)

SUN. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205C

CHAIR: A. DORRANCE AND J. P. WARRINGTON

8:00 Protecting the Cerebrovasculature During Hypertension
F. Faraci. Univ. of Iowa Carver Col. of Med.

8:30 Post-stroke Dementia
G. Rosenberg. Univ. of New Mexico Hlth. Sci. Ctr.

9:00 Increased Cerebral Endothelial Transcytosis and Blood-Brain Barrier Permeability in “Slow Pressor” Angiotensin-II Hypertension
C. Iadecola, G. Faraco, D.A. Lane and J. Anrather. Weill Cornell Med. Col. (646.5)

9:15 Cerebrovascular Abnormalities Supporting the Selfish Brain Hypothesis of Human Hypertension

9:30 Activation of the Central Renin-Angiotensin System Causes Selective Cerebrovascular Dysfunction
T.M. De Silva, C.M. Lynch, J.L. Grobe and F.M. Faraci. Univ. of Iowa and Iowa City VA Hlth. Care Syst. (646.4)

9:45 Placental Ischemia Impairs Cerebral Blood Flow Autoregulation and Increases Blood-Brain Barrier Permeability in Pregnant Rats
J.P. Warrington, F. Fan, S.R. Murphy, R.J. Roman, H.A. Drummond, J.P. Granger and M.J. Ryan. Univ of Mississippi Med Ctr. (646.7)

169. INNOVATIONS IN CLASSROOM TEACHING

Featured Topic
(Sponsored by: Teaching of Physiology Section)

SUN. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 211

CHAIR: C.J. MILLER AND L. GOLDEN

Education

8:30 Using Role-Playing Simulations to Teach Endocrine and Respiratory Physiology in Large Classes
K. Hull. Bishop’s Univ., Canada. (541.2)

8:50 Rapid Prototyping of a Skeletal Muscle – an Engineering Application in an Anatomy and Physiology Course
N. Stecher and S. Chomyszak. Wentworth Inst. of Technol., Boston. (541.3)

9:10 Steps for Building a Learning Community in a Medical Physiology Course

9:30 “Dialogical Story-Telling” Approach to Enhance Analytical Thinking and Student Engagement during Lecture-Based Classes

9:50 Open Discussion.

170. ION CHANNELS IN HEALTH AND DISEASE

Symposium
(Sponsored by: Cardiovascular Section)

SUN. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210A

CHAIR: J.H. JAGGAR AND M. NAVEDO

Transporters/Channels/ Barriers

Cell Signaling

8:00 Vascular Control By Ion Channel Trafficking

8:30 Compartmentalized Kinase Signaling Controls Hyperglycemia Stimulation of Vascular L-Type Calcium Channels
M. Navedo. Univ. of California, Davis.

9:00 Ca2+- Selective Orai Channels and Vascular Smooth Muscle Dysfunction
M. Trebak. SUNY Col. of Nanoscale Sci. and Engin., Albany.

9:30 Channels Underlying Hyperolarization-mediated Ca2+ Influx in Endothelial Cells

171. MOLECULAR OXYGEN: AT THE CROSSROADS OF INFLAMMATION AND METABOLISM

Symposium
(Sponsored by: Hypoxia Group)

SUN. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 209

CHAIR: V.H. HAASE

Oxidative Stress

8:00 Inflammatory Hypoxia: Mechanisms and Therapeutic Opportunities
E. Campbell. Univ. of Colorado Denver, Aurora.

8:30 Oxygen Sensing Pathway in T Cells Function and Neuro-Inflammation
A. Goldrath. UCSD.

9:00 Oxygen Sensors and Bacterial Killing
S. Walmsley. Univ. of Edinburgh.

9:30 Oxygen Sensors in the Regulation of Metabolism and Radiation-Induced Injury
A. Giaccia. Stanford Univ.
SUNDAY PHYSIOLOGY

172. **NCAR TRAINEE FEATURED TOPIC**

**Featured Topic**

(Sponsored by: Neural Control and Autonomic Regulation)

Sun. 8:00 am—Boston Convention & Exhibition Center, Room 206A

**Chaired:** H. Xia and A. Schiller

8:00 **NCAR New Investigator Award Lecture** Mechanisms of Cardiac Sympathetic Activation during Heart Failure R. Ramchandra. Univ. of Auckland.


8:45 **NCAR Postdoc and Early Career Award** PSD95 Coupling of NMDA Receptor Activation and Nitric Oxide Activity in the Hypothalamic PVN M.E. Bardgett, M. Andrade, A.S. Calderon and G.M. Toney. Univ. of Texas Hlth. Sci. Ctr. at San Antonio. (652.5)

9:00 **NCAR Postdoc and Early Career Award** Maternal Obesity and the Developmental Programming of Hypertension: The Role of Leptin in the Central Nervous System J. Lim, S.L. Burke and G.A. Head. Baker IDI Heart & Diabetes Inst., Melbourne and Monash Univ. Australia. (652.7)

9:15 **NCAR Postdoc and Early Career Award** P2X3 Receptor-Mediated Chemoreceptor Hypersensitivity in Young Spontaneous Hypertensive Rats D.J.A. Moraes, B.H. Machado, A.P. Ford and J.F.R. Paton. Sch. of Med. of Ribeirão Preto, Univ. of São Paulo, Univ. of Bristol and Afferent Pharmaceut. Inc., San Mateo. (652.4)


9:45 **Data Sciences International Outstanding Graduate Student Award** Restoration of Oxytocin Neuron Activity Pretsents Hypertension Caused by Chronic Intermittent Hypoxia/Hypercapnia H. Jameson. George Washington Univ.

173. **NEW INSIGHTS INTO THE PHYSIOLOGY AND PATHOPHYSIOLOGY OF DIVING AND HYPERBARIC ENVIRONMENTS**

**Featured Topic**

(Supported by ONR Undersea Medicine Program)

(Sponsored by: Environmental and Exercise Physiology Section)

Sun. 8:00 am—Boston Convention & Exhibition Center, Room 206B

**Chaired:** J. Florian

8:00 Decompression Stress During Field Dives Z. Dujic. Univ. of Split Sch. of Med., Croatia.

8:30 ROS Production from Endothelial Cells during In Vitro Simulated Dives: Effects of Hydrostatic and Gas Pressures M. Theron, Q. Wang, K. Lambrechts, A. Mazur, P. Buzzacott and F. Guerrero. Univ. of Western Brittany, Brest. (678.11)

8:45 Inhaled CO₂ and CO₂ Retention during Heavy Exercise Underwater B.E. Shykoff and D.E. Warkander. Navy Exptl. Diving Unit, Panama City, FL. (678.4)

9:00 Diving-Related Microparticle and Other Inflammatory Responses in Humans and Mice Are Inhibited by Ascorbic Acid S.R. Thom, O. Barak, M. Yang, J. Bhullar, V.M. Bhopale, D. Madden and Z. Dujic. Univ. of Maryland Sch. of Med. and Univ. of Split Sch. of Med., Croatia. (678.10)


174. **REVOLUTIONARY SYSTEMS — MEDICINE APPROACHES TO UNDERSTAND DISEASE AND DRUG RESPONSE PHYSIOLOGY**

**Symposium**

(Sponsored by: Physiological Genomics Group)

Sun. 8:00 am—Boston Convention & Exhibition Center, Room 207

**Chaired:** B. Blackman

8:00 Systematic Drug Repositioning Through Transcriptomics, Genetics, and Phenotypic Data P. Agarwal. GlaxoSmithKline.


9:00 Protein Network Activation Mapping of Cellular Signaling for Personalized Therapy Applications C. Petricoin. George Mason Univ.

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175. THE HEART OF THE MATTER: MENOPAUSE, SEX STEROIDS, AND CARDIOVASCULAR DISEASE

Featured Topic
(Sponsored by: Water and Electrolyte Homeostasis Section)

Sun. 8:00 am—Boston Convention & Exhibition Center, Room 212

Chaired: J. Reckelhoff and M. Wenner


9:00 Coronary Ischemia Reperfusion Increases Degranulation of Cardiac Mast Cells Similarly in Male and Female Rats 8 Weeks after Ischemia K. Scrogin, S. Tolia and A. Samarel. Loyola Univ. Chicago, Stritch Sch. of Med. (966.3)

9:15 G Protein-Coupled Estrogen Receptor Activation Attenuates Rat Aortic Smooth Muscle Cell Proliferation S.N. Kashyap and S.H. Lindsey. Tulane Univ. (966.4)


176. TRANSLATIONAL PHYSIOLOGY: FOCUS ON OBESITY, HYPERTENSION, AND DIABETES

Featured Topic
(Sponsored by: Translational Physiology Group)

Sun. 8:00 am—Boston Convention & Exhibition Center, Room 210BC

Chaired: B. Andre sen

Translational Physiology

Theme I: Translational Insights into the Pathophysiology and Treatment of Obesity

8:00 Resveratrol Alleviates Lipid-Induced Insulin Resistance in Lean, but Not Severely Obese, Myotubes K. Turner, S. Park, T. Beasley, D. Zheng and J. Houmard. East Carolina Univ. (997.9)


8:12 Oxidized Low-Density Lipoprotein Decreases Endothelial Progenitor Cell Populations in Bone Marrow and Peripheral Circulation Independent of ROS Production D.Z. Liu, Y. Cui, J.Z. Liu, C.A. Narasimhulu, G. He, P.J. Cowan, S. Parthasarathy and H. Zhu. The Ohio State Univ. Wexner Med. Ctr. and Univ. of Central Florida Col. of Med. (1046.2)


8:30 Roundtable Questions/Discussion.

Theme II: Translational Insights into the Role of Reactive Oxygen Species in Diabetes

8:40 A Translational Kinetic Analysis of Rodent and Human Hearts Shows Species-Specific Differences and Increases in Monoamine Oxidase Activity with Obesity/Diabetes M. Nelson, L. Katunga, E.J. Anderson and A.P. Kypson. East Carolina Univ. (977.7)

8:52 Plasma from Type 2 Diabetes Patients Increase Monocyte-Derived Superoxide Production via ER Stress-NADPH Oxidase Pathway S.H. Deo, J. Padilla and P.J. Fadel. Univ. of Missouri-Columbia. (805.6)


9:04 Nox1 Deletion Rescues Microvascular Dysfunction in Obese db/db Mice J.A. Thompson, J.D. Mintz, D.J. Fulton and D.W. Stepp. Georgia Regents Univ. (794.3)

9:10 Roundtable Questions/Discussion.

Theme III: Translational Insights into Inflammation in the Pathogenesis of Hypertension


9:38 Angiotensin II-Dependent increase in the Bone Marrow Sympathetic Drive Initiates the Inflammatory and Endothelial Progenitor Cell Imbalance and Precedes Blood Pressure Increase N. Ahmari, M.M. Santisteban, D.M. Baeyens, M.K. Raizada and J. Zubcevic. Univ. of Florida. (1059.1)


9:50 Roundtable Questions/Discussion.

177. ANGIOTENSIN TYPE 2 RECEPTORS IN THE BRAIN: A FUNCTIONAL COMING-OF-AGE IN CARDIOVASCULAR CONTROL

Symposium

(Sponsored by: Neural Control and Autonomic Regulation)

SUN. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205C

CHAIR: C. Sumners and E. Bruce

10:30 The Angiotensin AT2-Receptor: from a Receptor of Academic Interest to a Novel Drug Target in Cardiovascular Medicine U.M. Steckelings. Univ. of Southern Denmark.

11:00 A New Look at Angiotensin Type 2 Receptor Localization in the Brain A. de Kloet. Univ. of Florida.

11:30 Angiotensin Type 2 Receptors and Sympathetic Outflow L. Gao. Univ. of Nebraska Med. Ctr.

12:00 Increased Expression of Angiotensin Type 2 Receptors within the NTS: Effects on Cardiovascular Control During Hypertension D.S.A. Colombari. São Paulo State Univ.

178. CLAUDE BERNARD DISTINGUISHED LECTURESHIP OF THE APS TEACHING OF PHYSIOLOGY SECTION

Lecture

SUN. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210A

Adventures in Education A. Macknight. ADInstruments.

179. FRONTIERS IN CELL ENGINEERING

Symposium

(Sponsored by: Biomedical Engineering Society)

SUN. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 209

CHAIR: S. Li


11:00 Mechanotransduction at the Cell-Matrix Interface C. Chen. Boston Univ.

11:30 Engineering the Chemistry and Microarchitecture of Hydrogels for Tissue Regeneration A. Kgademhosseini. Harvard Univ.

12:00 Patches for Pediatric Vascular Tissue Engineering J. Wong. Boston Univ.
180. IMMUNE CELLS, THE KIDNEY AND HYPERTENSION

Featured Topic

(Sponsored by: Renal Section)

Sun. 10:30 am—Boston Convention & Exhibition Center, Room 211

Chaired: J. Sullivan and D. Bell

10:30 Renal Section Young Investigator Award Lecture

Sex Determines the Renal T Cell Profile in Hypertension

J. Sullivan. Georgia Regents Univ.

11:00 N-Acetyl-Seryl-Aspartyl-Lysyl-Proline (Ac-SDKP) Delays the Development of Hypertension and Renal Damage in Systemic Lupus Erythematosus


11:15 5/6 Nephrectomy Induces Changes in Immune and Inflammatory Gene Expression in the Left Ventricle


11:30 Time Course of Immune Cell Infiltration and Cytokine Production in the Kidneys of Dahl Salt-Sensitive Rats


11:45 Placental Ischemia-Induced T,17 Cells Mediate the Pathophysiology Associated with Preeclampsia


12:00 Activated JAK-STAT Pathway by IL-6 Mediates Macrophage-Induced Angiotensigen Augmentation in Renal Proximal Tubular Cells


12:15 Female Sex Hormones Protect against Salt-Induced Increases in Immune System Activation in Dahl Salt-Sensitive Rats

C. Ebeledike, E. Ralph, J. Musall and J. Sullivan. Georgia Regents Univ. (667.7)

181. MECHANOCHEMICAL BACKGROUND IN THE INTACT LUNG AND THE ROLE OF CONTEXTUAL CELL BIOLOGY FOR THE STUDY OF LUNG INJURY AND REPAIR

Symposium

(Sponsored by: Respiration Section)

Sun. 10:30 am—Boston Convention & Exhibition Center, Room 212

Chaired: W.M. Kuebler and C. Waters

10:30 Contextual Cell Biology: Introductory Remarks


10:42 Multistability in Endothelial Cell Biology: Robustness, Memory, and Plasticity


11:09 Matrix Stiffness and Tissue Fibrosis


11:36 Cellular and Tissue Mechanics in Acute Lung Injury

E. Roan. Univ. of Tennessee, Memphis.

12:03 Mechanical Stretch in Control of Lung Vascular Barrier and Inflammation

A. Birukova. Univ. of Chicago.

182. MORPHOGEN SIGNALING PATHWAYS IN TISSUE PATTERNING AND DISEASE PROCESSES

Symposium

(Sponsored by: Cell and Molecular Physiology Section and AJP:Cell)

Sun. 10:30 am—Boston Convention & Exhibition Center, Room 206B

Chaired: J.C. Adams and J.X. Yuan

Cell Signaling

10:30 Morphogen Interpretation: Insights from Zebrafish

A.F. Schier. Harvard Univ.

11:00 Good Proteins Gone Bad in Cerebral Small Vessel Disease


11:30 Construction of a Vertebrate Embryo from Two Morphogen Gradients

C. Thisse. Univ. of Virginia Sch. of Med.

12:00 Wnt Proteins, Extracellular Travel, and Exosomes

M. Boutros. German Cancer Res. Ctr., Heidelberg.

183. NEW INSIGHTS INTO VASCULAR FUNCTION FROM IN VIVO VASCULAR IMAGING

Symposium

(Sponsored by: Cardiovascular Section)

Sun. 10:30 am—Boston Convention & Exhibition Center, Room 206A

Chaired: W.G. Wier and J. Zhang

10:30 Optogenetic and Biosensor Mice: New Tools for Vascular Biology

M. Kotlikoff. Cornell Univ.

11:00 Ca²⁺ Dynamics of Contractile Pericytes

A. Gonzales. Univ. of Maryland Baltimore.

11:30 Ca²⁺ in Arteries and Arterioles of Conscious Mice: Neurogenic Components

J. Zhang. Univ. of Maryland Baltimore.

12:00 Correlative Imaging of Cgmp Signals and Basascular (Patho-)Physiology in Mice

R. Feil. Univ. of Tübingen, Germany.

Visit the Exhibits

Sunday – Tuesday

9:00 AM – 4:00 PM
184. OMICS OF BRAIN INJURY

Symposium

(Sponsored by: American Federation for Medical Research)

SUN. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 207

CHAIR: E.H. Lo


11:00 Epigenetic Mediators of Neuroprotection in Ischemic Tolerance A. Zhou. Morehouse Sch. of Med.


12:00 Pharmacogenetics of Neural Injury Recovery S. Cramer. Univ. of California, Irvine.

185. SPINAL PLASTICITY

Featured Topic

(Sponsored by: Central Nervous System Section)

SUN. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 208

CHAIR: E. Dale

Neurobiology


11:00 Repetitive Acute Intermittent Hypoxia As a Plasticity-Promoting Primer of Motor Recovery in Persons With Spinal Cord Injury R. Trumbower. Emory Univ. Sch. of Med.


11:45 Adaptive Plasticity in the Spinal Control of Left-Right Coordination during Locomotion A. Frigon, C. Dambreville, Y. Thibaudier, M-F. Hurteau, V. Kuczynski and E. Rhodes. Univ. of Sherbrooke, Quebec. (656.9)

12:00 Evaluation of the Nrf2-mediated anti-oxidative and anti-inflammatory responses in phrenic motoneurons following C2 hemisection in adult rat T.B. Deramaudt, S. Vinit, L. Eththiadi, E. Keomani, M. Petijean and M. Bonay. Univ. of Versailles. (656.3)

12:15 Differential Roles of Mammalian Target of Rapamycin in Phrenic Long-Term Facilitation B. Dougherty, D. Fields and G. Mitchell. Univ. of Wisconsin-Madison. (656.8)

186. TARGETING GUT MICROBIOME IN HUMAN DISEASES AND AS NOVEL THERAPEUTICS

Symposium

(Sponsored by: Physiologists in Industry Committee)

SUN. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205B

CHAIR: C.P. Moreno Quinn and S. Intapad

Microbiome

Translational Physiology

10:30 Diet and the Intestinal Microbiome: Associations, Functions, and Implications for Health and Disease G.D. Wu. Perelman Sch. of Med., Univ. of Pennsylvania.

11:00 Role of the Microbiome in Energy Regulation and Insulin Resistance M. Nieuwdorp. Univ. of Amsterdam.

11:30 Control of Enteric Pathogen Colonization By Immunity and the Microbiota G. Nuez. Univ. of Michigan.


187. THE HOST-MICROBE INTERFACE AND CONTROL OF BARRIER FUNCTION: THE PATH FROM PATHOLOGY TO THERAPY

Symposium

SUN. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210BC

CHAIR: B.A. McCormick

Microbiome

Regulation of Epithelial Function


11:00 Communication Between Tight Junction Proteins and Immune Cells During Enteric Disease K. Edelblum. Univ. of Chicago.

11:30 Role of Endothelial Cells in Dengue Virus Infections E. Mackow. Stony Brook Univ.

12:00 Mechanisms By Which Bacteria Penetrate the Blood-Brain Barrier K. Doran. San Diego State Univ.

188. HUGH DAVSON DISTINGUISHED LECTURESHIP OF THE APS CELL AND MOLECULAR PHYSIOLOGY SECTION

Lecture

SUN. 2:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205C

Transporters/Channels/ Barriers

189. BAROREFLEX AND CHEMOREFLEX
CONTROLS OF THE HUMAN
CEREBRAL CIRCULATION

Featured Topic
(Sponsored by: Neural Control and Autonomic Regulation)

SUN. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 209

CHAIR: C. RICKARDS

3:15 Baroreflex, Autoregulation, and Brain Perfusion
Stability: Implications for the Bench and the Bedside
Y-C. Tzeng. Univ. of Otago, New Zealand.

3:45 Impact of Mild Orthostatic Stress on Aortic-Cerebral
Pulsatile Flow Transmission: Insight from the
Frequency Domain J. Sugawara, T. Tomoto, T. Imai
Univ. of Tsukuba and Toyo Univ., Japan. (833.2)

4:00 Reduced Cerebrovascular Response to CO 2
Rebreathing in Spinal Cord Injury J.W.W. Hamner,
and Harvard Med. Sch. (833.4)

4:15 Acute Natural Cocoa Consumption Improves Cerebral
Vasodilatory Capacity in Obese Individuals C. Hurr,
M.L. Harrison and R.M. Brothers. Univ. of Texas at
Austin. (833.5)

4:30 Inter-individual Relationships between Sympathetic
Arterial Baroreflex Function and Cerebral Perfusion
Control in Healthy Males T.G. Witter, C. Taylor,
T. O'Donnell, J. Kusel, P. Allan, M. Berry, B. Walker
and Y-C. Tzeng. Univ. of Otago and Univ. of Western
Sydney. (833.6)

4:45 The Relationship between Cerebral Blood Flow and
Carbon Dioxide J. Duffin. Univ. of Toronto.

190. CONTROL OF ELECTROLYTE BALANCE BY
NOVEL PATHWAYS IN INTERCALATED CELLS

Symposium
(Sponsored by: Renal Section)

SUN. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 211

CHAIR: S.C. SANSOM AND P.R. GRIMM

Regulation of Epithelial Function

Cell Signaling

3:15 Paracrine Regulation of Na Transport By Intercalated
Cells J. Peti-Peterdi. Univ. of Southern California.

3:40 Beta-Intercalated Cells: Animal Cells Energized
By a Proton Pump D. Eliadari. PARCC-INSERM
U970, Paris.

4:05 Regulation of ENaC by Pendrin S. Wall. Emory Univ.
Sch. of Med.

4:30 Role of Intercalated Cell Bk Channels in Aldosterone-
Dependent K Secretion R.J. Cornelius. Univ. of
Nebraska Med. Ctr.

4:55 Ammonia and Ammonium Transport By Rh Glycoproteins
N. Nahkoul. Tulane Univ.

191. ERNEST H. STARLING DISTINGUISHED
LECTURESHIP OF THE APS WATER AND
ELECTROLYTE HOMEOSTASIS SECTION

Lecture

SUN. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 210A

Sex and Hypertension J. Reckelhoff. Univ. of Mississippi
Med. Ctr.

192. GLIOTRANSMISSION AND BEHAVIOR

Symposium
(Sponsored by: Central Nervous System Section)

SUN. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 206B

CHAIR: V. PARPURA

3:15 Exocytotic Release of Glutamate from Astroglia V.
Parpura. Univ. of Alabama at Birmingham.

3:45 Astrocytic Vesicle Dynamics and Regulated
Exocytosis in Health and Disease R. Zorec. Univ. of
Ljubljana, Slovenia.

4:15 Astrocytic Control of Sleep and Cognition P.G. Haydon.
Tufts Univ., Boston.

4:45 Stars of the Gut: Interactions between Enteric Glia and

193. MICROCIRCULATORY SOCIETY LANDIS
AWARD LECTURE

Lecture
(Sponsored by: Microcirculatory Society)

SUN. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 205B

Targeting Tumor Microvasculature and Microenvironment

194. PHYSIOLOGIC EFFECTS OF SEX
CHROMOSOME COMPLEMENTATION AND
CHROMOSOME Y GENETIC VARIANTS

Featured Topic
(Sponsored by: Physiological Genomics Group)

SUN. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 207

CHAIR: C.F. DESCHEPPER

3:15 Chromosome Y Variants: Regulatory Effects via
Chromatin Modifications and Circadian Regulation
C.F. Deschepper. IRCM, Montreal.

3:45 Effect of Chromosome Y Variants on Immune Responses
and Autoimmune Disease Susceptibility C. Teuscher.
Univ. of Vermont.
4:00 Gene Duplication and Sequence Variants of the *Rattus norvegicus* Y-Chromosome Can Alter Kidney Function

4:15 Development of a Novel *Gper-1* Knockout Rat Model Using a Modified CRISPR/Cas9 Technology
H. Waghulde, S. Miller, W. Filipaik, B. Mell, T. Saunders and B. Joe. Univ. of Toledo, Washington Univ. and
Univ. of Michigan. (814.3)

4:30 Sensitization of Angiotensin II-Elicited Hypertension in Offspring of Hypertensive Pregnant Rats: Evidence of Sex Differences
B. Xue, F. Guo, T.G. Beltz, R.L. Thunhorst, M. Hay and A.K. Johnson. Univ. of Iowa and Univ. of Arizona. (813.1)

4:45 6β-Hydroxytestosterone, a Cytochrome P4501B1-Derived Metabolite of Testosterone Plays an Important Role in Renal Dysfunction Associated with Angiotensin II-Induced Hypertension in Male Mice

5:00 Circadian Regulation of lncRNAs Connects Per1, Endothelin-1, and GR K. Solocinski, S.J. Barilovits,
A.K. Welch, C.S. Wingo, B.D. Cain and M.L. Gumz. Univ. of Florida and NF/SG Veterans Hlth. Syst. (814.10)

195. RESPIRATORY RELATED DISORDERS IN AGING AND NEURODEGENERATION

Featured Topic
(Sponsored by: Respiration Section)
SUN. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 212
CHAIR: S.M. GREISING AND G.C. SIECK


3:45 Novel Strategies to Improve Respiratory Function in ALS N.L. Nichols. Univ. of Missouri-Columbia.


5:00 Relationship of Age to Respiratory Muscle Strength and Mortality in Mechanically Ventilated MICU Patients HL113494, HL112085 G.S. Supinski and L.A.P. Callahan. Univ. of Kentucky. (660.1)

196. THE ROLE OF STORE-OPERATED CALCIUM ENTRY IN CARDIOVASCULAR PHYSIOLOGY AND DISEASE

Symposium
(Sponsored by: Cardiovascular Section)
SUN. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 208
CHAIR: A-M. LOMPRÉ AND H.E. COLLINS

Transporters/Channels/ Barriers

Cell Signaling

3:15 Role of STIM1 in Regulation of Cardiomyocyte Function J.C. Chatham. Univ. of Alabama at Birmingham.


4:15 Pathophysiological Role of STIM1 in Endothelial Dysfunction A. Makino. Univ. of Arizona.

4:45 STIM/Orai Ca2+ Signaling: a New Mechanism Regulating Cardiac Hypertrophy J-S. Hulot. Icahn Sch. of Med. at Mount Sinai.

197. THE YIN/YANG OF ESTROGEN SIGNALING IN THE CONTROL OF ENERGY HOMEOSTASIS

Symposium
(Sponsored by: Endocrinology and Metabolism Section)
SUN. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 206A
CHAIR: M.J. KELLY


3:45 Differential Effects of a Membrane Estrogen Receptor Agonist in POMC versus NPY/AgRP Neurons O.K. Ronneklev. Oregon Hlth. & Sci. Univ.

4:15 Organizational and Activational Effects of Estrogen in Energy Hoemostasis T.A. Roepke. Rutgers Univ.

198. **VASCULAR ENDOTHELIAL CELL INSULIN RESISTANCE: A NEW TARGET FOR REDUCING VASCULAR RISK IN DIABETES?**

**Featured Topic**

(Sponsored by: Cardiovascular Section)

**Sun. 3:15 PM—Boston Convention & Exhibition Center, Room 205C**

**Chair:** G. Pierce

3:15 Targeting AMP Kinase as a Novel Therapy for Insulin Resistance and Endothelial Dysfunction: Basic Science


3:45 Endothelial ARF6 Deletion Impairs Insulin-Induced Dilation of Adipose Arteries and Systemic Glucose Tolerance


4:00 PTP1B Deletion Enhances Endothelial Cyclooxygenase 2 Expression and Protects Mice from Type 1 Diabetes-Induced Endothelial Dysfunction

J.B. Norman, D.J. Herren, R. Anderson, A-C. Huby and E.J. Belin de Chantemele. Georgia Regents Univ. (802.2)

4:15 Therapeutic Strategies for Impaired Vascular Endothelial Cell Insulin Signaling in Human Type 2 Diabetes: Clinical/Translational Science

N. Hamburg. Boston Univ.

4:45 Enhanced p47phox NADPH Sub-unit Expression Impairs Conductance and Resistance Vascular Function in Obese Mice


5:00 Hyperglycemia-Induced Alterations of the Vascular Endothelium in Type 2 Diabetes Mellitus


199. **APS UNDERGRADUATE POSTER SESSION AND BRUCE AWARDS**

**Poster Discussion**

Sun. 4:00 PM—Boston Convention & Exhibition Center – East Registration, Exhibit Level

200. **WEH NEW INVESTIGATOR AWARD LECTURE**

**Lecture**

(Sponsored by: Water and Electrolyte Homeostasis Section)

Sun. 4:15 PM—Boston Convention & Exhibition Center, Room 210A

Divergent Mechanisms of Cardiovascular and Metabolic Control By the Brain Renin-Angiotensin System

J.L. Grobe. Univ. of Iowa.

201. **HENRY PICKERING BOWDITCH AWARD LECTURE**

**Lecture**

Sun. 5:45 PM—Boston Convention & Exhibition Center, Room 210BC

Role of Immune Mechanisms in the Pathophysiology of Hypertension in Preeclampsia

B.B. LaMarca. Univ. of Mississippi Med. Ctr.
MONDAY, MARCH 30
Across Societies – Experimental Biology

203. CAREER DEVELOPMENT WORKSHOPS

Workshop
MON. 9:00 AM—BOSTON CONVENTION & EXHIBITION CENTER —
EXHIB HALL B

Career Development
The following workshops will be held in the EB2015/FASEB Career Center. There is no fee or pre-registration associated with the workshops — just walk in and sit down!

Critiquing of CV/Resumes is by appointment and starts at 9:00 AM on Sunday and continues until 3:00 PM on Wednesday. Sign up on-site in the EB2015/FASEB Career Center, Hall B.

9:00 NIH K Awards H. Khachaturian, NIH
9:00 I Said What?!?!? J. Blumenthal. Montgomery Col., Rockville, MD.
10:30 Developing Your Core Message/"Elevator Pitch" J. Lombardo. Med. Col. of Wisconsin and Marquette Univ.
10:30 Identifying Your Options using ScienceCareers.org... A. Green. Univ. of California, Berkeley.
11:00 Negotiation Strategies for Scientists D. Behrens. Univ. of California, Berkeley.
1:00 Building Your Skills, Networking & Informational Interviews A. Green. Univ. of California, Berkeley.
1:00 Ten Ways to Get Lucky in the Job Search J. Lombardo and P. Clifford. Med. Col. of Wisconsin, Marquette Univ. and Univ. of Illinois at Chicago.
2:15 Translating Your Credentials on Paper A. Green. Univ. of California, Berkeley.
2:30 Job Hunting in Biotech Part 2: Interviewing for Scientist Positions B. Lindstaedt. UCSF.
2:30 Job Talk/Chalk Talk: Making the Grade D. Behrens. Univ. of California, Berkeley.
3:00 Handshakes, Eye Contact, Small Talk: How to Successfully Network at a Conference N. Saul. UCSF.
3:30 NIH F Awards. H. Khachaturian, NIH
4:00 Attitudes & Behaviors: How are you Perceived? J. Blumenthal. Montgomery Col., Rockville, MD.
4:00 Job Hunting in Biotech Part 3: Compensation Negotiation for Scientist Positions B. Lindstaedt. UCSF.

Anatomy

204. THE ANATOMY OF MEMORY AND NEURODEGENERATIVE DISEASE: PRIONS, A NOBEL IDEA

Plenary
MON. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 104AB
CHAIR: P. TRAINOR

Neurobiology
Part of the Neurobiology Mini-meeting

8:30 204.1 Persistence of Memory and Prion Mechanisms: A Perspective E. Kandel. Columbia Univ., HHMI.
9:15 204.2 Prions Causing Alzheimer’s and Parkinson’s – Quest for Effective Therapeutics S. Prusiner. UCSF.

205. ANATOMY EDUCATION PLATFORM 1

Platform
MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 102AB
CHAIR: H. BILLINGS & A. EDMONDS

Education & Teaching

Education
Non-traditional Teaching and Pedagogy

11:00 205.3 Implementing a Cooperative Learning Model in a Cadaver Anatomy Laboratory W. Saltarelli, Y-k. Lee and C. Roseth. Central Michigan Univ. and Michigan State Univ.
206. GENETIC FACTORS IN ABNORMAL BRAIN DEVELOPMENT

Mini-Meeting

MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104AB

CHAIR: P. Trainor and B. Allman

Neurobiology

Part of the Neurobiology Mini-meeting

206.1 Therapeutic Strategies for Restoring Neural Circuit Function in Rett Syndrome D.M. Katz. Case Western Reserve Univ. Sch. of Med.

206.2 Mechanisms and Adult Treatments for Cognitive Deficits Associated with Neurodevelopmental Disorders A.J. Silva. UCLA.

206.3 Genetic Factors Regulating Human Cerebral Cortex Development C. Walsh. Harvard Med. Sch.

208. CRANIOFACIAL TISSUES: DEVELOPMENT, REPAIR AND REGENERATION

Symposium

MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 105

CHAIR: X. Liu and V. Varanasi

Joint Session with the Society for Craniofacial Genetics and Developmental Biology


11:00 208.2 Convergence and Extrusion Driven by Non-muscle Myosin II Are Required for Normal Fusion of the Mammalian Secondary Palate J. Bush and S. Kim. UCSF.

11:30 208.3 A Genetic Model to Understand Integration during Skull Development and Etiology of Craniofacial Disorders M. Harris and K. Henke. Harvard Med. Sch.

209. DIDACTIC METHODS IN THE ANATOMICAL SCIENCES: HOW DOES TECHNOLOGY HELP OR HINDER?

Hybrid Symposium

MON. 2:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 102AB

CHAIR: M. Hortisch

Education & Teaching

Education

2:30 209.1 Facebook in Anatomy Education: Why and How? A.A. Jaffar. Univ. of Sharjah, UAR.


4:00 209.6 Shaping Neuroanatomy Education in Medicine: Implementing an iPad Friendly E-Booklet to Support Practical Based Learning C. Smith, L. Sliper, T. Cecot and S. Border. Univ. of Sussex Brighton and Sussex Med. Sch. and Univ. of Southampton.

210. SPINAL CORD INJURY AND REPAIR STRATEGIES

Mini-Meeting
MON. 2:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104AB
CHAIR: B. ALLMAN

Neurobiology
Part of the Neurobiology Mini-meeting

2:30 210.1 Degeneration and Repair after Spinal Cord Injury in the Non-human Primate J. Bresnahan, UCSF.
3:00 210.2 Degeneration, Repair, and Plasticity after SCI: A Central Role for Cytokines M. Beattie, A. Ferguson and J. Bresnahan. UCSF.

211. EVOLUTION, DEVELOPMENT AND RELATIONSHIPS BETWEEN HEART AND HEAD MUSCLES: SURPRISING IMPLICATIONS FOR VERTEBRATE ORIGINS AND MEDICINE

Symposium
MON. 2:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104C
CHAIR: R. DIOGO

Cardiovascular

3:00 211.2 Cardiac and Craniofacial Development and Regeneration E. Tzahor. Weizmann Inst. of Sci.
3:30 211.3 Connecting Heart and Head Muscle Development in a DiGeorge Syndrome Mouse Model R. Kelly. Aix-Marseilles Univ.
4:00 211.4 Regulation of Cardiopharyngeal Fate Specification in a Simple Chordate L. Christiaen, F. Razy-Krajka, W. Wang, N. Kaplan and K. Lam. NYU.

212. UNDERSTANDING THE ZYGOMA: A KEY MORPHOFUNCTIONAL PARTITION IN THE CRANIOFACIAL SKELETON

Symposium
MON. 2:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 105
CHAIR: Q. WANG

3:00 212.2 Zygomatic Arch Development in Mammals: Phenotypic Plasticity and Osteoblast Behavior M. Ravosa. Univ. of Notre Dame.
3:30 212.3 Developmental and Evolutionary Significance of the Zygomatic Bone J. Richtsmeier. Penn State.

213. AAA EDUCATIONAL RESEARCH PLATFORM AWARD SESSION

Award Competition
MON. 5:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 102AB

Education & Teaching

Education

Students/Postdoc finalists present oral presentations to compete for Education Platform Award

5:00 The Influence of Spatial Ability on High and Low Order Anatomy Examination Questions T.S. Phelps, N. Nguyen, A.C. Edmondson and C.M. Martin. Med. Col. of Georgia at Georgia Regents Univ. and OrthoHlth., Columbus. (689.3)
5:15 Quantification of Pattern Recognition Skills Acquisition in Histology Using an Eye-Tracking Device: First-Step toward Evidence-Based Histology Education J.E. Kahl, P.M. Carry and L.M.J. Lee. Univ. of Colorado Sch. of Med. and Colorado Sch. of Publ. Hlth., Univ. of Colorado. (689.4)

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### 214. NEUROBIOLOGY AWARD HYBRID SYMPOSIUM

**Hybrid Symposium**

MON. 5:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104AB

**Neurobiology**

C.J. Herrick Award Lecture in Neuroanatomy featuring 2015 Young Investigator Award Recipient, Feng Zhang

<table>
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<th>Time</th>
<th>Session</th>
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<th>Authors</th>
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<td>5:00</td>
<td>214.1</td>
<td>Development and Applications of CRISPR-Cas9 for Genome Manipulations</td>
<td>F. Zhang</td>
<td>MIT.</td>
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<td>5:30</td>
<td>214.2</td>
<td>Cell-Type Specific Hippocampal Circuit Mapping by Genetically Modified Rabies Virus</td>
<td>X. Xu. Univ. of California, Irvine.</td>
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<td>6:00</td>
<td>214.4</td>
<td>Effects of Developmental Hyperserotonemia in the Rat Dentate Nucleus Neuronal Morphology</td>
<td>L. Hough and S. Segal. Missouri State Univ. and St. Louis Univ.</td>
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### 215. CARDIOVASCULAR DEVELOPMENT AND DISEASE

**Symposium**

MON. 5:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104C

**CHAIR: L.B. Ruest**

**Cardiovascular Developmental Biology**

5:00 215.1 BMP Signaling and Congenital Heart Defects  
S. Conway. Indiana Univ. Sch. of Med.

5:30 215.2 BMPER-Mediated BMP Signaling Promotes Cardiac Development  
L. Dyer, Y. Wu, A. Saha, C. Cyr, M. Moser, X. Pi and C. Patterson. Univ. of North Carolina at Chapel Hill, Middle Georgia State Col., Hart Ctr., Freiburg Univ., Germany and Baylor Col. of Med.

6:00 215.3 Genetic Pathways in Congenital Heart Development  

### 216. MORPHOLOGICAL SCIENCES AWARD HYBRID SYMPOSIUM

**Hybrid Symposium**

MON. 5:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 105

**Morphological Sciences Award Lecture featuring 2015 Young Investigator Award Recipient, Richard Daneman**

5:00 216.1 Regulation of the Blood-Brain Barrier in Health and Disease  
R. Daneman. UCSD.

5:30 216.3 Quantifying the Connectivity of the Language-Specific Cerebrocebellar Network  
I. George, D. Beversdorf and K. Aldridge. Univ. of Missouri-Columbia.

5:50 216.4 How and Why Embryonic Tissue Layers Move during Early Morphogenesis in Avian Embryos  

6:10 216.5 Understanding the Mechanisms Driving Ectopic Bone Formation in a Zebrafish FOP Model  
Biochemistry and Molecular Biology

217. ASBMB PLENARY LECTURE AND ASBMB-MERCK AWARD LECTURE

Plenary
(Supported by Merck & Co., Inc.)
MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM WEST
8:00 Plenary and Award Lecture Introduction and Award Presentation.
8:05 217.1 Enemy Within – Immune and Autoimmune Responses to Cytosolic DNA and RNA Z.J. Chen. Univ. of Texas Southwestern Med. Ctr. and HHMI.

218. BERT AND NATALIE VALLEE AWARD IN BIOMEDICAL SCIENCE LECTURE

Award Lecture
MON. 8:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM WEST
8:45 Award lecturer introduction and award presentation.

219. ALICE AND C. C. WANG AWARD IN MOLECULAR PARASITOLOGY SYMPOSIUM

Award
MON. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 253A
9:45 Award Presentation.
9:55 Session Introduction.
11:10 219.3 Understanding the Signaling Architecture of Calcium-Dependent Protein Kinases in Apicomplexan Parasites S. Lourido and L.D. Tilley. Whitehead Inst., Cambridge, MA.
11:30 219.4 New Approaches to Finding Next-Generation Treatments for Malaria E. Winzeler. UCSD.

220. APPLYING PROTEOMICS AND METABOLOMICS TO UNDERSTAND PLANT FUNCTION

Symposium
MON. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 252AB
CHAIRING: G. Basnet

Follow the conversation: #plants
9:45 Chair’s Introduction.
10:30 220.2 Comparative Proteomics of Seed Maturation in Oilsseeds J.J. Thelen, S. Stevenson, R. Wilson, M. Salie and S.P. Rao. Univ. of Missouri-Columbia.
11:25 220.4 CarbonQuest: Unfolding the Map of Seed Metabolism A.P. Alonso, J-C. Cocuron, M. Koubaa, Z. Ross and R. Kimmelfield. The Ohio State Univ.

221. RNA: BEYOND MESSAGES AND TRANSLATION (MICRO AND LONG NONCODING RNA)

Symposium
MON. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 254AB
CHAIRING: C. M. Croce

Follow the conversation: #cancer
9:45 Chair’s Introduction.
9:50 221.1 Targeting the Untargetable! C.M. Croce and A. Lugana. The Ohio State Univ.
10:15 A MicroRNA Signature of Response to Erlotinib Is Impacted by the EMT-Inducing Cytokine TGFβ1 M.J. Krentz, R. Astley and E.P. Black. Univ. of Kentucky. (578.3)
10:30 221.2 Role of Exosomal MicroRNAs in Cancer Cell Cross-Talk within the Tumor Microenvironment M. Fabbri, P. Wise, M. Muradha, P. Neviani and K. Challagundla. Children’s Hosp. Los Angeles, Univ. of So. California.
222. MICROBIOME, METABOLIC SYNDROME, DIABETES AND CVD

Symposium
MON. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 255

9:45 Chair’s Introduction.

9:50 222.1 Early Life Microbiome, Obesity and Diabetes
M.J. Blaser. NYU Langone Med. Ctr.
10:20 Radical Chemistry in the Human Gut: Discovery of Choline Trimethylamine-Lyase
S. Bodea and E.P. Balskus. Harvard Univ. (575.15)
10:35 222.2 Diet, the Gut Microbiome and Cardio-metabolic Risk
J. Lovegrove. Univ. of Reading, U.K.
11:05 Preterm Infant Gut Microbiome and Weight at 36 Weeks Corrected Gestational Age
11:20 222.3 Microbiome/Metabolic Syndrome/Diabetes and CVD
11:50 Discussion.

223. ANTIGEN PRESENTATION AND RECOGNITION IN CELLULAR IMMUNITY

Symposium
MON. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 257AB

CHAIR: E. SUNDBERG

Follow the conversation: #immunology

9:45 Chair’s Introduction.

9:50 223.1 T Cell Receptor Recognition and the Composite Peptide/MHC Surface
B. Baker. Univ. of Notre Dame.
10:30 223.2 The Molecular Signals that Regulate Gamma Delta T Cells
E. Adams. Univ. of Chicago.
10:55 A Novel Mouse Model to Study Chronic-Progressive Multiple Sclerosis
F. Gomez-Rivera, I. Raphael and T.G. Forsthuber. Univ. of Puerto Rico at Ponce and Univ. of Texas at San Antonio. (888.20)
11:10 Conserved Residues in TCR CDR Loops and Their Role in Influencing Antigen Recognition
S.J. Blevins and B.M. Baker. Univ. of Notre Dame. (571.32)
11:25 223.3 Engineering T Cell Receptors for Optimal Affinities and Desired Specificities
D.M. Kranz, D.T. Harris, J.D. Stone, S.N. Smith and A.S. Chervin. Univ. of Illinois, Urbana.
11:50 Discussion.

224. POSTTRANSLATIONAL MODIFICATIONS OF ARGININE: METHYLATION, CITRULLINATION, PHOSPHORYLATION

Symposium
MON. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258A

CHAIR: P. COLE

Follow the conversation: #PTMs

9:45 Chair’s Introduction.

9:50 224.1 Picking the PADlock: Chemical Probes to Study the Protein Arginine Deiminases
P.R. Thompson. UMass Med. Sch.
10:15 Targeting Citrullination in the Injured Retina
J.W. Wizeman, A.P. Nicholas and R. Mohan. Univ. of Connecticut Hlth. Ctr. and Univ. of Alabama at Birmingham. (717.15)
10:30 224.2 Positive Feedback Regulation in Histone Demethylases
D.G. Fujimori. UCSF.
10:55 Redox Control of Protein Arginine Methyltransferase 1 Activity
J. Hevel, Y. Morales, D.V. Nitzel, O.M. Price and S. Gui. Utah State Univ. (717.18)
11:10 Protein Arginine Methylation of Tubulin Beta Decreases Binding of Taxol in Neuro2a Cells
S.C. Piller, N.K. Jwad, L. Hejazi, R. Gamsjaeger and N.J. Sucher. Univ. of Western Sydney and Roxbury Community Col., MA. (717.16)
11:25 224.3 Structure and Function of the Protein Arginine Kinase
11:50 Discussion.

225. SUPER-RESOLUTION REPLICATION STUDIES

Symposium
MON. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258B

CHAIR: M. F. GOODMAN

Follow the conversation: #DNA

9:45 Chair’s Introduction.

9:50 Stochastic Activation of a DNA Damage Response Causes Cell-to-Cell Variation in Mutation Rates
S. Uphoff. Univ. of Oxford.
226. REGULATING FUNCTIONAL INTERACTIONS BY DYSFUNCTIONAL PROTEINS

Symposium

Mon. 9:45 am—Boston Convention & Exhibition Center, Room 258C

CHAIR: C. Camacho

Follow the conversation: #protein

9:45 Chair’s Introduction.

10:15 Structure and Assembly of Functional Amyloids S. Perrett, Chinese Acad. of Sci., Beijing. (563.9)

10:30 226.2 Determining a Functional Mechanism for a Dysfunctional Protein E. Rhodees, G. Cobb, A. Melo, J. Coraor, S. Elbaum-Garfinkle and X-H. Li. Yale Univ.

10:55 Transient Expression of Intrinsically Disordered Proteins Fuels the Emergence of Adaptive Protein-Based Heritable Traits D. Jarosz, Stanford Univ. Sch. of Med. (882.15)


11:25 226.3 The Aggregation Mechanism of Amyloidogenic Proteins Involved in Neurodegenerative Disorders C. Stultz, MIT.

11:50 Discussion.

227. HELPING POSTDOCTORAL FELLOWS AND GRADUATE STUDENTS DEVELOP PROFESSIONALLY

Symposium

Mon. 9:45 am—Boston Convention & Exhibition Center, Room 256

CHAIR: B. Coughlin

Follow the conversation: #training

9:45 Chair’s Introduction.
9:50 227.1 You Need a Game Plan P.S. Clifford. Univ. of Illinois at Chicago.


10:55 Teen Meetings Outside the Box: Building Science Communication Skills through a Network of Graduate Level Trainees, Science Teachers, and High School Teens T.M. Evans, N. Blake, L.M. McManus and M.J. Lichtenstein. Univ. of Texas Hlth. Sci. Ctr. at San Antonio. (559.9)

11:10 K-12 STEM Outreach: Ushering in the Next Generation of Scientists K.X. Mulligan. Vanderbilt Univ. (559.7)

11:25 227.3 Building Better Career Development Programs K. Micoli. NYU Sch. of Med.

11:50 Discussion.

228. IMPROV FOR STEM PROFESSIONALS: CREATING ENGAGING CONVERSATIONS

Workshop

(Sponsored by: ASBMB Public Outreach Committee)

Mon. 12:30 pm—Boston Convention & Exhibition Center, Room 253B

CHAIR: R. Holmes

Follow the conversation: #scicomm

Join us for this unique session that’s guaranteed to get you up and out of your seat! Core to science communication is the ability to be attentive to an audience, to let the audience’s physical and audible responses inform how the talk is given. Yet the skills that make this possible (deep listening, flexibility, and spontaneous responses) are learned through practice that is rarely part of our scientific training. More than knowing what to do, scientists need opportunities to experience and practice what to do. Light refreshments provided.
BIOCHEMISTRY MONDAY

229. BIOINFORMATICS AND MODELING TOOLS FOR DISCOVERING FUNCTIONS OF UNKNOWN ENZYMES

Workshop
(Sponsored by: Enzyme Function Initiative)
Mon. 12:30 pm—Boston Convention & Exhibition Center, Room 251

The Enzyme Function Initiative (EFI; enzymefunction.org) is devising an integrated sequence/structure based strategy for predicting and assigning functions to “unknown” enzymes discovered in genome projects, a major challenge in genomic biology.

This workshop will feature background information, tutorials, and example uses for several publicly available tools developed by the EFI. This workshop will be of greatest interest to enzymologists, microbiologists, evolutionary biologists, bioinformaticians, and computational chemists.

Lunch hosted on a first come, first served basis.

230. DISEASE-ON-A-CHIP: NEW FRONTIERS IN BIOMEDICAL RESEARCH

Workshop
(Sponsored by: Physicians Committee for Responsible Medicine)
Mon. 12:30 pm—Boston Convention & Exhibition Center, Room 255

Learn about advanced technologies in pathobiological research which can be used to generate data from human cells and tissues. Light refreshments provided.

Presenters:
- In Vitro Technologies in Hypothesis-Driven Nasic Research, with Specific Examples from Various Fields such as Obesity, Diabetes, Cardiovascular Disease, etc. C. Chandrasekera. Physicians Cmte. for Reponsible Med.
- Demonstration of the Quasi-Vivo In Vitro Cell Culture Systems and Application of the Systems for Disease Modeling M. Wilkinson. Kirkstall Ltd, UK

231. ASBMB ACCREDITATION WORKSHOP

Workshop
Mon. 12:30 pm—Boston Convention & Exhibition Center, Room 256

Learn the characteristics of an ASBMB-accredited program, the benefits for students, faculty and your institution, and get your questions answered to help you achieve accreditation.

232. WILLIAM C. ROSE AWARD LECTURE

Award Lecture
Mon. 2:30 pm—Boston Convention & Exhibition Center, Grand Ballroom West

2:30 Award Lecturer Introduction and Award Presentation.

233. AVANTI AWARD IN LIPIDS LECTURE

Award Lecture
(Supported by Avanti Polar Lipids, Inc.)
Mon. 3:05 pm—Boston Convention & Exhibition Center, Grand Ballroom West

3:05 Award Lecturer Introduction and Award Presentation.
3:10 233.1 The Lipin Protein Family, Cellular Lipid Storage, and Disease K. Reue. David Geffen Sch. of Med., UCLA.

234. LIPIDS MEET CHEMISTRY

Symposium
Mon. 3:55 pm—Boston Convention & Exhibition Center, Room 252AB

Chaired: C. Schultz

Follow the conversation: #lipids

3:55 Chair’s Introduction.
4:00 234.1 Chemical Approaches to the Identification and Characterization of Protein-Membrane Binding Interactions Using Synthetic Lipid Probes M. Best, M.M. Rowland, T. Ricks, S. Alam, S. Eni Eni and S. Mattern-Schain. Univ. of Tennessee, Knoxville.
4:25 Targeting Plasmodium falciparum Phosphethanolamine Methyltransferase for Malaria Therapy C. Ben Mamoun and V. Kumar. Yale Univ. (885.25)
5:05 Specific Transient Interactions between a Bacillus Virulence Factor and Phosphatidycholine in Membranes A. Gershenson, B. Yang, T. He, H.M. Khan, C. Graufell, N. Reuter and M.F. Roberts. Univ. of Massachusetts Amherst, Boston Col. and Univ. of Bergen. (568.9)
5:35 234.3 Compartmentalized PI3K/Akt/mTOR Signaling in Living Cells J. Zhang. Johns Hopkins Univ. Sch. of Med.
6:00 Discussion.
235. MICROBE HOST INTERACTION
Symposium
MON. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 254AB
CHAIR: G. DANTAS
Follow the conversation: #microbiome

3:55 Chair’s Introduction.
4:00 235.1 Microbiome Resilience during Inflammation
A. Goodman. Yale Univ.
4:45 235.2 Circadian Regulation of Intestinal Host-Microbe Interactions L. Hooper, X. Yu, K. Ruhn, J. Stubblefield, C. Green, M. Kashiwada, P. Rothman and J. Takahashi. Univ. of Texas Southwestern Med. Ctr. and Univ. of Iowa.
5:15 A Potential Role of H. pylori PP lyase in the Transformation of Gastric Epithelial Cell and the Development of Gastric Cancer J. Liu. West Virginia Univ. (575.22)
5:30 235.3 Sphingolipids of Commensals Modulate Host Immunity through Regulation of iNKT Cells D. Kasper. Harvard Med. Sch.
6:00 Discussion.

236. EFFECTS OF ENZYMATIC MODIFICATION OF EXTRACELLULAR MATRIX PROTEINS
Symposium
MON. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 257AB
Follow the conversation: #ECM

3:55 Chair’s Introduction.
4:00 236.1 Wnt Modification by Tiki Proteins X. He. Boston Children’s Hosp. and Harvard Med. Sch.
5:05 Three-Dimensional Collagen IV and Hormone Prolactin Regulate Breast Cancer Cell Invasion: Role of PAK1 and Matrix Metalloproteinases M. Diakonova, P. Oladimeji and L. Rider. Univ. of Toledo. (719.1)
5:35 236.3 MMPs as Regulators of Tumor Microenvironment Z. Werb. UCSF.
6:00 Discussion.

237. DISCOVERING NEW ENZYMES
Symposium
MON. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258A
CHAIR: H. LIN
Follow the conversation: #enzyme

3:55 Chair’s Introduction.
4:00 237.1 Specificity and Promiscuity in Enzyme Superfamilies K. Allen and D. Dunaway-Mariano. Boston Univ. and Univ. of New Mexico.
4:40 237.2 Pseudoenzymes as Activators of Enzyme Function: The Prozyme Paradigm in Trypanosomatid Polyamine Metabolism M.A. Phillips. Univ. of Texas Southwestern Med Ctr.
5:35 237.3 The Discovery of New Enzymes in the Human Gut Microbiome F.M. Raushel and M.E. Hobbs. Texas A&M Univ.
6:00 Discussion.

238. MAKING MATURE RNA
Symposium
MON. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258B
CHAIR: J. T. LIS
Follow the conversation: #RNA

3:55 Chair’s Introduction.
4:00 238.1 Coupling of Transcription with mRNA Processing in Time and Space D. Bentley, N. Fong, H. Kim, Y. Zhou and F. Xiang-dong. Univ. of Colorado Sch. of Med. and UCSD.
5:05 Insights into Spliceosomal Activation from Conformational Dynamics of the U4/U6 di-snRNA A.A. Hoskins, M. Rodgers and D. Brow. Univ. of Wisconsin-Madison. (711.3)
5:20 TGF-beta Regulates Alternative Splicing of CD44 by Inducing Smad3 Binding to CD44 pre-mRNA Y.E. Zhang, V. Tripathi, K.M. Sixt and M. Heller. NCI, NIH. (562.15)
5:35 238.3 Role of microRNAs in Vascular Development A. Hata, X. Jiang, D. Hart and G. Lagna. UCSF.
6:00 Discussion.

239. MEMBRANE CHANNELS II – NEW CHANNELS AND NOVEL FUNCTIONS

Symposium

MON. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258C

CHAIR: M. L. MAYER

Follow the conversation: #protein

3:55 Chair’s Introduction.
4:00 239.1 Structure, Function, and Inhibitors of the Acid-Gated Helicobacter pylori Urea Channel, an Essential Component for Acid Survival and Chronic Infection H. Luecke. Univ. of California, Irvine.
4:40 239.2 TRPV Channel Structures in Health and Disease R. Gaudet. Harvard Univ.
5:20 Intracellular Zinc Dyshomeostasis Caused by a Disrupted TRPML1-TMEM163 Protein Interaction J. Silva and M.P. Cuajungco. California State Univ. Fullerton. (566.5)
5:35 239.3 Weird Ion...Weird Ion Channels Mediating Resistance to Fluoride Toxicity C. Miller and D.L. Turman. Brandeis Univ.
6:00 Discussion.

240. CHANGES IN MEDICAL EDUCATION

Symposium

MON. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 256

CHAIR: C. P. BAILEY

Follow the conversation: #training

3:55 Chair’s Introduction.
4:25 Eureka! Energizing the Next Generation of Clinical Researchers K.E. Sawarynski, D. Baxa and M. Dereski, Oakland Univ. William Beaumont Sch. of Med. (559.5)
4:40 240.2 Testing Competencies with the New MCAT® Exam M. Kroopnick, Assn. of Amer. Med. Cols.
5:05 A Web Repository of Research Literature Assessment Questions to Promote Student Learning and Acquisition of Scientific Reasoning and Inquiry Skills Necessary for Both the MCAT2015 and ASBMB Certification H. Jakubowski. Col. of St. Benedict, St. John’s Univ., MN. (559.6)
5:20 Transforming Undergraduate Education in the Molecular Life Sciences – A Special Summer Symposium Q.C. Vega and M. Huff. Montclair State Univ., NJ and Bellarmine Univ., KY. (559.38)
5:35 240.3 MCAT 2015 and the Academy: Undergraduate, Graduate and Health Professional Ramifications C. Brenner. Univ. of Iowa.
6:00 Discussion.

241. CELEBRATE WITH THE JBC

Special Event

MON. 6:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, EAST, LEVEL 2, OUTSIDE ASBMB SESSION ROOMS

The JBC is hosting a celebration of Biochemistry and Molecular Biology scientists and their research. Following the afternoon sessions, join us for networking, refreshments and an opportunity to meet the JBC Associate Editors and learn what’s happening at the journal. No matter what your research area, with 23 JBC Affinity Groups every BMB researcher will find a home at the JBC. All ASBMB members and biochemistry attendees welcome.

242. IMPROVSCIENCE PRESENTS Live: THE LIVING IMPROV EXPERIMENT

Special Event

(Sponsored by: ASBMB Public Outreach Committee)

MON. 6:30 PM—NED DEVINE’S, 1 FANEUIL HALL MARKETPLACE, BOSTON, 02109

What does improv offer science? Come find out by taking part in “Live: A Living Improv Experiment,” a public event sponsored by the ASBMB Public Outreach Committee.

Scientists and STEM professionals are beginning to experiment with theater-based improvisational methods to improve communication in their outreach, research and management practices. At this unique interactive event, improvscience founder Dr. Raquell Holmes will lead participants through an exploration of this approach. Through a combination of dialogue, interaction and performance, scientists and non-scientists alike will take part in informative, experiential activities that will allow them to decide for themselves just how effective improv can be for communicating.

At Live, the living improvisational experiment in scientific culture takes center stage. Join us!
243. ASN SPONSORED SATELLITE PROGRAM: A HEALTHY APPROACH TO DIETARY FAT CONSUMPTION: UNDERSTANDING THE SCIENCE AND TAKING ACTION TO CLEAR UP CONSUMER CONFUSION
ASN Satellite
(Sponsored by: The Hass Avocado Board)
MON. 6:30 AM—RENAISSANCE BOSTON WATERFRONT HOTEL, PACIFIC GRAND BALLROOM D

244. ASN SPONSORED SATELLITE PROGRAM: BREAKFAST BIOACTIVES
ASN Satellite
(Sponsored by: PepsiCo, Inc.)
MON. 6:30 AM—RENAISSANCE BOSTON WATERFRONT HOTEL, PACIFIC GRAND BALLROOM E

245. DIETARY FIBER, GUT MICROBIOTA AND KIDNEY FUNCTION
Symposium
(Supported by Ingredion, Inc.)
MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM EAST
CHAIR: C.J. KETCHUM AND C.L. PELKMAN

Human Nutrition and Metabolism
8:00 Associations and Mechanisms: Dietary Fiber and Renal Health R.J. Martin, Univ. of California, Davis and Western Human Nutr. Res.
8:20 Role of Gut Microbiota in Chronic Kidney Disease N.D. Vaziri, Univ. of California, Irvine.
8:45 Kidney Function and Vitamin D Homeostasis in An Animal Model of Diabetes: Response to Resistant Starch M. Rowling, Iowa State Univ.
9:10 Nutritional Approaches to Control Toxic Uremic Solutes and Risk of End-stage Renal Disease T.W. Meyer, Stanford Univ.

246. INTEGRATED NUTRITION AND EARLY CHILD DEVELOPMENT INTERVENTIONS
Symposium
(Supported by Mathile Institute for the Advancement of Human Nutrition and Mead Johnson Pediatric Nutrition Institute)
(Sponsored by: Global Nutrition Council)
MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 157ABC
CHAIR: K.M. HURLEY AND S. FERNANDEZ-RAO

Pediatric Nutrition and Early Development
8:00 Integrating Nutrition and Early Child Development Interventions: The Scientific Basis and Theoretical Framework M.M. Black, Univ. of Maryland Sch. of Med.
8:50 Findings and Lessons Learned from Integrated Nutrition and Early Child Development Interventions A.K. Yousafzai, Aga Khan Univ.

247. BEING “SOCIAL”: HOW SCIENTISTS CAN FIND THEIR WAY IN A 24-HOUR DIGITAL WORLD
Symposium
(Sponsored by: Public Information Committee and Young Professional Interest Group)
MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 151AB
CHAIR: M.A. JOHNSON AND V. VIEIRA-POTTER

Education Track
8:00 Using Digital Strategies for Health Communication L. Gualtieri, Tufts Univ. Sch. of Med.
8:30 Why and When Would Scientists Want to Be Social? G.D. Miller, Dairy Management, Inc.
8:45 Is There a Role for Social Media in Careers for New Faculty/Young Professionals? M. Nestle, New York Univ.
248. ENERGY AND MACRONUTRIENT METABOLISM: LIPID AND FATTY ACID METABOLISM AND TRANSPORT

Minisymposium
(Sponsored by: Energy & Macronutrient Metabolism RIS)

MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 152

CHAIRMED: C. LAMMI-KEEFE
COCHAIRMED: J. M. ELLIS


8:30 248.3 Inter-relation between the In Vivo Metabolism of Apolipoprotein B100-Containing Lipoproteins and LDL Particle Size and LDL Particle Number M. Leclerc, E.M. Ooi, P. Couture, C. Richard, S. Desroches, J. Marin, A.J. Tremblay and B. Lamarche. Laval Univ., Canada and Univ. of Western Australia.


9:00 248.5 Correspondence between Effects of Dietary Cholesterol versus Plant Sterols on Plasma Cholesterol Responsiveness and Cholesterol Trafficking in Healthy Humans P.A.S. Alphonse, V.R. Ramprasath and P.J.H. Jones. Univ. of Manitoba.


249. DIETARY BIOACTIVE COMPONENTS: BIOAVAILABILITY, METABOLISM, AND BIOMARKERS OF DIETARY BIOACTIVE COMPONENTS

Minisymposium
(Sponsored by: Dietary Bioactive Components RIS)

MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 153A

CHAIRMED: C. KHOO

COCHAIRMED: H. XIAO


8:30 249.3 A 1H NMR-Based Approach to Investigate Metabolomic Differences in the Plasma and Urine of Young Women after Cranberry Juice or Apple Juice H. Liu, F. Tayyari, C. Khoo and L. Gu. Univ. of Florida, Univ. of Florida Col. of Med. and Ocean Spray Cranberries Inc.

8:45 249.4 Differentiated Caco-2 Cell Monolayers Exhibit Differential Adaptation to Chronic Exposure of Green Tea and Grape Seed Extracts Rich in Flavan-3-ols B.W. Redan and M.G. Ferruzzi. Purdue Univ.

9:00 249.5 Nanoemulsion-Based Delivery Systems for Nutraceuticals: Influence of Carrier Oil Type on Bioavailability of Pterostilbene Y. Sun, Z. Xia, J. Zheng, P. Qiu, L. Zhang, D.J. McClements and H. Xiao. Univ. of Massachusetts Amherst and Ocean Univ. of China, Qingdao.

9:15 249.6 Controlling the Gastrointestinal Fate of Nutraceutical-Enriched Lipid Nanoparticles: From Mixed Micelles to Chylomicrons M. Yao, D.J. McClements, F. Zhao, R.W. Craig and H. Xiao. Univ. of Massachusetts Amherst and Umass Med. Sch.

9:30 249.7 Bioavailability of Iron from Plant and Animal Ferritins C. Lyu, B. Lönnerdal and G. Zhao. China Agr. and Univ. of California, Davis.

9:45 249.8 Biomarkers of Fruit and Vegetable Intake in Men and Women C. Couillard, M-C. Vohl, P. Couture, S. Lemieux and B. Lamarche. Univ. Laval, Quebec.
250. NUTRITIONAL EPIDEMIOLOGY: RESEARCH WITH DIETARY SUPPLEMENTS AND BIOACTIVE COMPONENTS

Minisymposium
(Sponsored by: Nutritional Epidemiology RIS)
MON. 8:00 AM — BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153B
CHAIR: N. Ahluwalia
COCHAIR: R. Bailey


9:30 250.7 Flavonoid Intakes Are Predictive of Dietary Quality and Most Components of the Healthy Eating Index 2010 R.S. Sebastian, C. Wilkinson Enns, J.D. Goldman and A.J. Moshfegh. USDA, Beltsville, MD.

9:45 Conclusion.

251. COMMUNITY AND PUBLIC HEALTH NUTRITION: HEALTH DISPARITIES AND PROMOTING HEALTH IN DIVERSE POPULATIONS

Minisymposium
(Sponsored by: Community and Public Health Nutrition RIS)
MON. 8:00 AM — BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153C
CHAIR: O. Chen
COCHAIR: L. Au

8:00 251.1 Examining the Influence of Cultural Immersion on Willingness to Try Fruits and Vegetables among Children in Guam: The Traditions study T.F. Aflague, R.T. Leon Guerrero and C.J. Boushey. Univ. of Hawaii, Univ. of Guam and Univ. of Hawaii Cancer Ctr.

8:15 251.2 Ultra-Processed and Ready-to-Eat Food and Beverage Purchases Differ by Race, Education, and Income in a Longitudinal U.S. Study J. Poti, M. Mendez, S.W. Ng and B. Popkin. Univ. of North Carolina at Chapel Hill.

8:30 251.3 Corner Store Owners’ Perspectives on Increasing Access to Healthy Foods C. Ackerman, A. Rosales, E. Santiago, R. Fink and N. Fitzgerald. Rutgers Univ.

8:45 251.4 Eating Fried Foods: Negotiating Health, Taste and Tradition in the Spanish Caribbean M. Fuster. NYU.

9:00 251.5 Acculturation, Dietary Behaviors, and Body Mass Index among Vietnamese American Adults C. Lam and S. Jasti. Queens Col., CUNY.

9:15 251.6 Understanding the Co-existence Food Insecurity and Excess Weight in Costa Rican Women T. Martinez-Jaikel and E.A. Frongillo. Univ. of South Carolina and Univ. of Costa Rica Sch. of Nutr.


9:45 251.8 Exploring Fruit and Vegetable Intake of American Indian Children Using a Mixed Methods Approach R.C. Sinley and J.A. Albrecht. Univ. of Nebraska-Lincoln.
**252. NUTRITIONAL IMMUNOLOGY: NUTRITION, IMMUNITY AND INFECTION**

Minisymposium

*(Sponsored by: Nutritional Immunology RIS)*

**MON 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 154**

**CHAIRING:** L. COLEMAN  
**COCHAIRING:** E. A. KARLSSON

8:00 **252.1** Human Milk Oligosaccharides and Galactosyloligosaccharides Attenuate Inflammation in Human Intestine  
D.S. Newburg, J.S. Ko, S. Leone and N.N. Nanthakumar.  

8:15 **252.2** Dietary Supplementation with Naringenin Attenuates Experimental Autoimmune Encephalomyelitis in Mice  
J. Wang, X. Niu, S.N. Meydani and D. Wu.  
USDA at Tufts Univ.

8:30 **252.3** *Citrobacter rodentium* Infection Alters Murine Colonic microRNA Signature  
Univ. of Toronto.

9:00 **252.5** Vitamin D Status and Respiratory Tract Infections: A Systematic Review and Meta-Analysis of Observational Evidence  
Univ. of Toronto, The Hosp. for Sick Children and St. Michael’s Hosp., Toronto.

**253. VITAMINS AND MINERALS: WATER AND FAT SOLUBLE VITAMINS AND CHRONIC DISEASE**

Minisymposium

*(Sponsored by: Vitamins and Minerals RIS)*

**MON 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 156A**

**CHAIRING:** S. JAIN  
**COCHAIRING:** M. TRABER

8:00 **253.1** Vitamin D 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  
P. Manna and S.K. Jain.  

8:15 **253.2** Vitamin D Status Predicts Rates of Cognitive Decline in a Multi-ethnic Cohort of Older Adults  
J.W. Miller, D.J. Harvey, R. Green, B.R. Reed, J.M. Olichney, D. Mungas and C.S. DeCarli.  
Rutgers Univ. and Univ. of California Davis, Sacramento.

8:30 **253.3** Vitamin K Status Associated with MRI Measures of Memory-Related Brain Activity: A Pilot Study  
Inst. of Geriat., Univ. of Montreal and Sacred Heart Hosp. of Montreal.

8:45 **253.4** Investigation of the 3-Epimer of 25-Hydroxyvitamin D3 in Urban Schoolchildren  

9:00 **253.5** Assessing Vitamin D3 Stability in Dietary Supplements  
S. Su and T.C. Chen.  
Boston Univ. Sch. of Med.

9:15 **253.6** Vitamin D Supplementation and Quality of Life following Diagnosis in Stage II Colorectal Cancer Survivors  
C.M. Lewis, P. Xun and K. He.  
Indiana Univ.

9:30 **253.7** An Integrated Predictive Model of Population Serum 25(OH)D for Application in Strategy Development for Vitamin D Deficiency Prevention  
K.D. Cashman, T. Singh and M. Kiely.  
University Col. Cork.

9:45 **253.8** Vitamin D Inhibits ROS, ICAM-1, and Monocyte Adhesion in High Glucose and Acetoacetate Treated Endothelial Cells by Upregulating GSH  
P. Kanikarla Marie and S. Jain.  
254. OBESITY: CHRONIC DISEASES

Minisymposium

(Sponsored by: Obesity RIS)

MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 156B

CHAIR: F. GREENWAY

8:00 254.1 Effect of 1 Year of Alternate Day Fasting versus Daily Calorie Restriction on Type 2 Diabetes Risk C.M. Kroeger, J.F. Trapanowski, A. Barnosky, M.C. Klempel and K.A. Varady. Univ. of Illinois at Chicago.

8:15 254.2 Alternate-Day Fasting and Daily Calorie Restriction Similarly Affect Visceral Adiposity and Circulating Inflammatory Cytokine Concentrations J.F. Trepanowski, C. Kroeger, A. Barnosky, K. Hoddy and K. Varady. Univ. of Illinois at Chicago.

8:30 254.3 Whole Wheat-supplemented Diet Prevents Risk Biomarkers of Cardiovascular Diseases in Obese Diabetic Mice I.P. Mohanty, J. Yuan, G. Noratto, O. Balembo and C.F. Morris. Washington State Univ., Univ. of Idaho and USDA, Pullman, WA.


9:30 254.7 The Metabolic Response to a Standardized High Fat, High Calorie Meal in Healthy Obese Individuals Is Similar to that of Healthy Lean Individuals D.M. Mutch, K.P. Lam, P. Britz-Mckibbin and F. Badoud. Univ. of Guelph and McMaster Univ., Canada.


255. LOW-CALORIE SWEETENERS AND HEALTH: WHAT DOES THE SCIENCE TELL US?

Symposium

(Supported by: International Life Sciences Institute, North America and PepsiCo, Inc.)

(Sponsored by: International Life Sciences Institute, North America and Nutrition Translation RIS)

MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM EAST

CHAIR: D. GREENBERG AND J.D. FERNSTROM

Diet and Non-Communicable Diseases


11:00 What the Science Says Regarding Low-calorie Sweeteners and Body Weight J. Zuehlke. ILSI North America.


12:00 Scientific Agreement: The Steps Needed to Get There J.D. Fernstrom. Univ. of Pittsburgh Sch. of Med.

256. RESEARCH REPORTING IN THE 21ST CENTURY: HOW HAS IT CHANGED AND WHAT ARE THE IMPLICATIONS FOR YOUR CAREER?

Symposium

(Sponsored by: Nutrition Education Committee)

MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 157ABC

CHAIR: N.K. FUKAGAWA, B. Hennig and D.M. Bier

Education Track

10:30 Objectives of the Session N.K. Fukagawa. Univ. of Vermont.


12:15 Panel Discussion with Speakers and Editors of Peer-reviewed Journals N.K. Fukagawa. Univ. of Vermont.
257. INTERNATIONAL FORUM – BRAZIL

International Forum
(Sponsored by: International College for the Advancement of Nutrology (ICAN))
MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER – ROOM 151AB
CHAIRIED: S. GIORELLI

10:30 ICAN’s President: Welcome and Opening of Symposium P.C. GIORELLI. Assoc. Brasileira de Nutrol.
10:55 Brazilian Superfoods M. GARCEZ DUARTE.
11:15 Diabetes and Obesity M. CARRERA.
11:35 Obesity and Insulin Resistance in Children and Adolescents C.A. NOGUEIRA-DE-ALMEIDA. Univ. de Ribeirão Preto.
11:55 Panel Discussion.
12:15 Break.
2:30 Whey Protein in Medical Practice G. GIORELLI. Assoc. Brasileira de Nutrol.
3:30 Dyslipidemia and Obesity V. SUEN. Univ. do Estado de São Paulo-Ribeirão Preto.
3:50 Updates in the Management of Lactose Intolerance E.D. MELLO.
4:30 Calorie Restriction: Results from CALERIE a 2 Year Randomized Controlled Trial S.K. DAS. Tufts Univ.
4:50 Discussion.

258. ENERGY AND MACRONUTRIENT METABOLISM: OBESITY AND THE METABOLIC SYNDROME

Minisymposium
(Sponsored by: Energy & Macronutrient Metabolism RIS)
MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER – ROOM 152
CHAIRIED: R. GRANT
COCHAIRDED: B. PICCOLO

10:45 258.2 Early Childhood Malnutrition Increases Metabolic Syndrome in Adulthood L. FISCHER and J. GALLER. Harvard Med. Sch.
11:30 269.5 Soy Flour Muffins Do Not Improve Risk Factors for Cardiovascular Disease in Adults with Hypercholesterolemia

11:45 259.6 Acute Peanut Consumption Benefits Postprandial Endothelial Function in Overweight Healthy Males
X. Liu, A.M. Hill, S.G. West, R.M. Gabauer, C.E. McCrea, J.A. Fleming and P.M. Kris-Etherton. Penn State and Univ. of South Australia.

12:00 259.7 The Effects of Orange Polyphenols on Vascular and Cognitive Function

12:15 259.8 The Effect of Vitamin D Supplementation on Glucose Homeostasis among African Americans and Hispanics with Type 2 Diabetes

260. NUTRITIONAL EPIDEMIOLOGY: NUTRITION AND CHRONIC DISEASE EPIDEMIOLOGY

Minisymposium
(Sponsored by: Nutritional Epidemiology RIS)
MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153B
CHAIR: N. OLBERDING
COCHAIR: A. MILLER

10:45 260.2 Quantity and Variety in Fruit and Vegetable Intake and Cardiovascular Disease Risk: The Women's Health Initiative

11:00 260.3 Relations to Cognitive Change with Age of Micronutrients Found in Green Leafy Vegetables

11:15 260.4 Low Vitamin D Status Increases the Risk of Periodontal Disease in Puerto Rican Adults

11:30 260.5 Association between Dietary Inflammatory Potential and Breast Cancer Incidence and Mortality: Results from the Women's Health Initiative

11:45 260.6 Dietary Patterns and Risk of Age-Related Macular Degeneration after More Than Two Decades of Follow-Up

12:00 260.7 The Association between Insomnia Symptoms and Diet Quality and Energy Intake

12:15 260.8 Low Sodium Intake Is Associated with Higher HDL Cholesterol in Premenopausal Filipino Women
N. Lee and P. Duazo. Univ. of San Carlos, Philippines.

261. COMMUNITY AND PUBLIC HEALTH NUTRITION: FOOD SECURITY AND ITS CONNECTIONS TO NUTRITION AND HEALTH

Minisymposium
(Sponsored by: Community and Public Health Nutrition RIS)
MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153C
CHAIR: L. CORDEIRO
COCHAIR: L. SIBEKO

10:30 261.1 Household Food Insecurity and Asthma in the 3rd Grade of the Early Childhood Longitudinal Study-
Kindergarten Cohort
L.D. Mangini, Y.Q. Dong, M.D. Hayward and M.R. Forman. Univ. of Texas at Austin.

10:45 261.2 Natural Resources and Food Security: Fish-for-
Sex Relationships around Lake Victoria, Kenya

11:00 261.3 Health Care Costs Associated with Household
Food Insecurity in Ontario, Canada
V. Tarasuk, C. Gundersen, J. Cheng, C. De Oliveira and N. Dachner. Univ. of Toronto, Univ. of Illinois, Urbana and Ctr. for Addiction and Ment. Hlth., Toronto.

11:15 261.4 Low and Very Low Food Security Are Associated with Differences in Emotional and Behavioral Problems among Children and Adolescents in the U.S.

11:30 261.5 Remembering Childhood Food Insecurity: Measurement Challenges and Influences on Current Practices

11:45 261.6 Shelter Expenditures Increase Vulnerability to Household Food Insecurity
A-A. Fafard and V. Tarasuk. Univ. of Toronto.

12:00 261.7 An Evaluation of the Meal Patterns among a Sample of Adult Emergency Food Pantry Users in Central Northwestern Indiana

12:15 261.8 Social Support Modifies Bidirectional Links between Food Insecurity and Prenatal Depressive Symptoms while Domestic Violence Alters the Unidirectional Impact of Food Insecurity on Prenatal Depressive Symptoms
262. MEDICAL NUTRITION COUNCIL: NUTRITION AND THE MICROBIOME

Minisymposium

(Sponsored by: Medical Nutrition Council)

Mon. 10:30 am—Boston Convention & Exhibition Center, Room 154

Chair: K. Tappenden


11:15 262.4 Effect of Iron Supplementation with or without Vitamin E on Gut Microbiome in Iron Deficient Infants and Toddlers M. Tang, D.N. Frank, D. Ir and N.F. Krebs. Univ. of Colorado Denver, Aurora.

11:30 262.5 Artificial Sweetener Consumption and Microbiome Profiles in 31 Adults Living in the United States C.L. Frankenfeld, E. Lamb, M. Sikaroodi, S. Shoemaker and P.M. Gillevet. George Mason Univ.

11:45 262.6 Perinatal bisphenol-A exposure causes colonic and liver inflammation in rabbit pups and alters gut bacterial and metabolite profiles L. Reddivari, W.T. Walters, J. Palmer, V.D.N. Rao, R. Knight and J. Vanamala. Penn State, Univ. of Colorado Boulder and Colorado State Univ.

12:00 262.7 Goji Berry Improves Colitis in IL10-/- Mice through Modulating Gut Microbiota Y. Kang, M. Du, G. Yang and M. Zhu. Washington State Univ.

12:15 Conclusion.

263. VITAMINS AND MINERALS: MICRONUTRIENT INTERVENTIONS

Minisymposium

(Sponsored by: Vitamins and Minerals RIS)

Mon. 10:30 am—Boston Convention & Exhibition Center, Room 156A

Chair: A. Gridier

Student Chair: S. Scott


11:00 263.3 Selective Delivery of Copper Enhances Cytotoxicity of Millimolar Concentrations of Ascorbate towards Cancer Cells A.J. Michaels, D. Yu and B. Frei. Oregon State Univ.


11:45 263.6 Serum Micronutrient Status during Pulmonary Exacerbation and following Recovery in Adults with Cystic Fibrosis M.J. Lee, E.M. Smith, T.R. Ziegler, J.A. Alvarez and V. Tangpricha. Emory Univ.

12:00 263.7 TNFα Post-translationally Targets ZnT2 to lysosomes to Activate Lysosomal-Mediated Cell Death and Mammary Gland Involution S.R. Hennigar and S.L. Kelleher. Penn State and Penn State Hershey Col. of Med.

12:15 263.8 Novel Ferroxidases in Mammalian Intestinal Epithelial Cells C. Doguer, J-H. Ha, S. Gulec, S. Flores, X. Wang and Y. Han. Univ. of Florida and Izmir Inst. of Technol., Turkey.

264. NUTRITION EDUCATION: NUTRITION EDUCATION AND BEHAVIOR CHANGE

Minisymposium

(Sponsored by: Nutrition Education and Behavior Science RIS)

Mon. 10:30 am—Boston Convention & Exhibition Center, Room 156B

Chair: H. MuzaFFar

Co-Chair: G. Tuuri

10:30 264.1 Change in Knowledge of and Adherence to Dietary Sodium Restrictions in Heart Failure Patients after Education by a Registered Dietitian C. Tan, S. Holland, C. Tangney, M. Betz, M. Mozer, K. Sarcinella and H. Rasmussen. Rush Univ.


11:00 264.3 A Randomized Controlled Trial Evaluating Online to In-Person Education to Improve Breakfast Behaviors, Beliefs and Knowledge in WIC Participants L.E. Au, S. Whaley, N.J. Rosen, M. Meza and L.D. Ritchie. Univ. of California, Berkeley, Publ. Hlth. Fnkn. Enterprises, Irwindale, CA and Univ. of California, Oakland.

265. EXPERIMENTAL ANIMAL NUTRITION: ANIMAL MODELS OF NUTRITION AND INTESTINAL DISEASE

Minisymposium
(Sponsored by: Experimental Animal Nutrition RIS)
MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 156C
CHAIR: E. GILBERT
COCHAIR: K. BARNES


11:00 265.3 Combined Glucagon-Like Peptide-2 and Epidermal Growth Factor Therapy Maximally Stimulates Adaptation in Neonatal Intestinal Failure without Ileum D. Lim, C. Lévesque, P. Wales, D. Vine, P. Brubaker, P. Nation, P. Wizzard, D. Sigalet, J. Li, D. Bigam and J. Turner. Univ. of Alberta, South Dakota State Univ., Univ. of Toronto, Univ. of Calgary, AB and Univ. of Guelph, ON, Canada.


12:00 265.7 Metabolomic and Clinical Disturbances in Canine Inflammatory Bowel Disease M.I. Jackson and D.E. Jewell. Hill's Pet Nutr., Topeka.


266. DIETARY BIOACTIVE COMPONENTS RIS: THE ROLE OF DIETARY BIOACTIVE COMPONENTS IN BONE HEALTH AND DEVELOPMENT

RIS Forum
(Sponsored by: Dietary Bioactive Components RIS)
MON. 12:45 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM TBD
CHAIR: T. WALLACE

267. GILBERT A. LEVEILLE AWARD LECTURE

Award Lecture
(Supported by American Society for Nutrition (ASN) and the Institute of Food Technologists (IFT))
MON. 1:45 PM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM EAST

1:45 Introduction.
2:00 Lecturer: T.P. Labuza. Univ. of Minnesota.

268. GUT MICROBES AND THE BRAIN: WHAT IS THE EFFECT ON HUMAN BEHAVIOR?

Symposium
(Supported by Danone Nutricia Research and Yakult Honsha, Ltd.)
MON. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM EAST
CHAIR: E. MAYER AND W.A. WALKER

Human Nutrition and Metabolism

3:50 Gut Microbiome Influences on Brain and Behavior in Rodents P. Bercik. McMaster Univ.
4:15 Gut Microbiome Influences on Human Brain, Behavior and Disease – Facts and Fancy E. Mayer. UCLA.
269. APPROACHES TO ACCOUNT FOR THE EFFECTS OF INFLAMMATION ON NUTRIENT BIKOMARKERS RESULTS FROM THE BIOMARKERS REFLECTING INFLAMMATION AND NUTRITION DETERMINANTS OF ANEMIA (BRINDA) PROJECT

Symposium

(Sponsored by: Global Nutrition Council and Nutritional Epidemiology RIS)

MON. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 157aBC

CHAIR: R. FLORES-AVALA AND D.J. RAVENT

Global and Public Health Nutrition

3:00 Overview of BRINDA Project P.S. Suchdev. Emory Univ., Ctrs. for Dis. Control and Prevent.
3:20 Approaches to Address the Influence of Inflammation on Iron Biomarkers S. Namaste, NICHD, NIH.
3:45 Risk Factors for Anemia in Different Settings: Implications for Programs G.J. Aaron. The Global Alliance for Improved Nutr. (GAIN)
4:10 Research, Policy and Programmatic Implications of BRINDA Findings K.H. Brown. Univ. of California, Davis.
4:25 Discussion.

270. ENERGY AND MACRONUTRIENT METABOLISM: PROTEIN INTAKE AND HEALTH IMPLICATIONS

Minisymposium

(Sponsored by: Energy & Macronutrient Metabolism RIS)

MON. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 152

CHAIR: J. BAUM

COCHAIR: A. THALACKER-MERCER

3:00 270.1 Breakfasts Higher in Protein Increase Postprandial Energy Metabolism in Overweight, Breakfast Skipping Women A.C. Dunn, B.L. Neumann, D. Johnson, J.D. Adams and J.J. Baum. Univ. of Arkansas.
3:30 270.3 The Effects of Consuming Eggs on the Physical Development of Students Participating in a School Feeding Program in Uganda: A Pilot Study J.I. Baum and J.D. Miller. Univ. of Arkansas.
3:45 270.4 Higher Protein Intake during a Mixed Meal Ingestion Increases Net Protein Accretion through a Reduction in Protein Breakdown I-Y. Kim, S.E. Schutzler, J.M. Spore, R.H. Williams, A.A. Ferrando and R.R. Wolfe. Univ. of Arkansas for Med. Sci.

4:00 270.5 Dietary Protein Quantity and Source Impact Weight and Body Composition of Older Adults: Analysis of NHANES 2001-2006 Data W.W. Campbell, J.E. Kim, N. Chen and V.L. Fulgoni III. Purdue Univ. and Nutr. Impact LLC, Battle Creek.
4:15 270.6 Effect of a High Protein, High Egg Diet on Muscle Composition, Metabolic Health and Systemic Inflammation in Overweight and Obese, Older Adults C.S. Wright, J. Zhou, R.D. Sayer, J-E. Kim and W.W. Campbell. Purdue Univ.
4:30 270.7 Higher Total Protein Intake and Change in Total Protein Intake Impact Body Composition Changes in Adults Who Performed Exercise Training for 36 Weeks J.E. Kim, T.B. Conley, E.M. Weinheimer-Haus and W.W. Campbell. Purdue Univ.
4:45 270.8 The Acute Effects of Protein Quantity and Distribution on Appetite Control, Satiety, and Food Intake in Overweight Young Women H.J. Leidy, C.A. Roenfeldt, A.Y. Alwattar and R.S. Shafer. Univ. of Missouri-Columbia.

271. DIETARY BIOACTIVE COMPONENTS: EFFECTS OF DIETARY BIOACTIVE COMPONENTS IN ANIMAL MODELS OF CHRONIC DISEASE RISK

Minisymposium

(Sponsored by: Dietary Bioactive Components RIS)

MON. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153a

CHAIR: T. JAULI

COCHAIR: D. SYMONS

3:00 271.1 GojiBerry Attenuates Dextran Sulfate Sodium-Induced Colitis Y. Kang, Y. Xue, M. Du and M. Zhu. Sch. of Food Sci., Washington State Univ. and Sch. of Food Sci., Univ. of Idaho.

4:00 271.5 Co-administration of a Grape Seed Procyanidin Extract and the Bile Acid Sequestrant, Cholestyramine, Results in Beneficial Metabolic Alterations, Including Decreased Triglyceride Levels R. Heidker, G. Caiozzi and M-L. Ricketts. Univ. of Nevada, Reno.
4:30  271.7  Dietary Cocoa Improves Hepatic Mitochondrial Function in Obese Mice  M. Sun, L. Tao, Y. Gu and J.D. Lambert. Penn State.
4:45  271.8  The In Vivo Effect of Oil Palm Phenolics in Atherogenic Diet-Induced Rat Model of Alzheimer’s Disease  Y. Wu, V. Srirajavatsavai, K. Monplaisir, R. Sambanthamurthi and S. Gupta. Wayne State Univ. and Malaysian Palm Oil Board, Selangor.

272.  NUTRITIONAL EPIDEMIOLOGY: ADVANCING NUTRITIONAL EPIDEMIOLOGY WITH PUBLIC USE AND COMMERCIAL DATA SETS

Minisymposium
(Sponsored by: Nutritional Epidemiology RIS)
MON. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153B
CHAIR: P. M. GUENTHER
COCHAIR: C. A. ZIZZA

3:00  272.1  Examining the Impact of Walmart’s Healthier Foods Initiative on the Nutrient Profile of U.S. Packaged Food Purchases  L.P. Smith, S.W. Ng and B. Popkin. Univ. of North Carolina at Chapel Hill.
4:00  272.5  Nutrient Intakes and Eating Patterns of U.S. Adults by Race/Ethnicity  D.G. Rhodes, J.C. Clemens and A.J. Moshfegh. USDA, Beltsville.

273.  COMMUNITY AND PUBLIC HEALTH NUTRITION: POLICY AND SYSTEMS APPROACHES IN COMMUNITY AND PUBLIC HEALTH NUTRITION

Minisymposium
(Sponsored by: Community and Public Health Nutrition RIS)
MON. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153C
CHAIR: J. NELSON-PETERMAN
COCHAIR: M. SPENCE

3:00  273.1  Comparability of Nutrition Study Volunteers to Participants of the Behavioral Risk Factor Surveillance System  M. Faherty, K. Dupiton, W. Flanagan and E. Saltzman. USDA at Tufts Univ.
274. MEDICAL NUTRITION: INTERVENTIONS FOR THE TREATMENT AND PREVENTION OF NUTRITION-RELATED DISEASES

Minisymposium

(Sponsored by: Medical Nutrition Council)

MON. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 154

CHAIR: S. RAATZ

3:00 274.1 Improvement of Metabolic Parameters in Mice Supplemented with Vitamin D throughout Life C.R. Villa, J. Chen, B. Wen, A. Taibi, W.E. Ward and E.M. Comelli. Univ. of Toronto and Brock Univ., Canada.

3:15 274.2 Intake of 2 Eggs or Oatmeal for Breakfast Does Not Increase Biomarkers for Heart Disease while Eggs Improve Liver Enzymes and Raise HDL Cholesterol in Young Healthy Individuals A. Missimer, D. DiMarco, M. Vergara-Jimenez, G. Murillo, B. Creighton, C.J. Andersen and M.L. Fernandez. Univ. of Connecticut and Univ. of Sinaloa.

3:30 274.3 Dietary Protein Source Impacts Bone, Acid Load and Calcium Excretion in Murine and Human Phenylketonuria B.M. Stroup, E.A. Sawin, S.G. Muralti and D.M. Ney. Univ. of Wisconsin-Madison.

3:45 274.4 Resistant Starch Alters Gut Microbiota and Reduces Uremic Retention Solutes in Rats with Adenine-Induced Chronic Kidney Disease D. Kieffer, B. Piccolo, S. Liu, W. Lau, M. Khazaell, S. Nazertehrani, N. Vaziri, R. Martin and S. Adams. USDA, Univ. of California, Davis and Univ. of California, Irvine.


275. NUTRIENT-GENE INTERACTIONS: GENOMICS, PROTEOMICS, AND METABOLOMICS

Minisymposium

(Sponsored by: Nutrient-Gene Interactions RIS)

MON. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 156A

CHAIR: J. ZEMPLENI

COCHAIR: S. ROSS


4:00 275.5 Diet-Induced Weight Loss Changes in Gene Regulatory Networks in the Rectum: Network Analysis as a Compliment to Traditional Gene Expression Analysis A.J. Vargas, J. Quackenbush and K. Glass. Harvard Sch. of Publ. Hlth., NCI, NIH and Brigham and Women’s Hosp.


276. OBESITY: CHILDHOOD OBESITY MANAGEMENT

Minisymposium
(Sponsored by: Obesity RIS)
MON. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 156B
CHAIR: M. COPE


3:45 276.4 Adiposity, Aerobic and Anaerobic Fitness in Middle School Aged Children D.C. Nieman, D.A. Dew and P.G. Krasen. Appalachian State Univ., Kannapolis, NC.

4:00 276.5 Relationship between Health Status, Quality of Life, Sleep, and Academic Success in Undergraduates K.M. Shaffer, A.M. Kuhlman, R.J. Leone, R.M. Tucker, A.L. Morgan and M-J. Ludy. Bowling Green State Univ.

4:15 276.6 Effect of Prebiotic Fiber-Induced Changes in Gut Microbiota on Adiposity in Obese and Overweight Children A.C. Nicolucci, M.P. Hume and R.A. Reimer. Univ. of Calgary, Canada.

4:30 276.7 Apple Consumption Protects Sprague Dawley Rats against High Fat Diet-Induced Metabolic Disorders Associated with Obesity J. Yuan, B. Chew and G. Noratto. Washington State Univ. and Texas A&M Univ.


277. KELLOGG INTERNATIONAL PRIZE IN NUTRITION LECTURE

Award Lecture
(Supported by Kellogg)
(Sponsored by: Global Nutrition Council)
MON. 6:30 PM—RENAISSANCE BOSTON WATERFRONT HOTEL, PACIFIC GRAND BALLROOM ABCD

Global and Public Health Nutrition
The Kellogg International Prize in Nutrition Lecture is held during the Global Nutrition Council’s Business Meeting. Please see http://scientificsessions.nutrition.org/ for more details.

6:30 Introduction.
7:00 Lecturer: G.H. Pelto. Cornell Univ.

278. ACVP SYMPOSIUM: INTESTINAL MICROBIOME: LESSONS FROM COMPARATIVE MEDICINE

Symposium
(Sponsored by: American College of Veterinary Pathologists and ASIP Veterinary Pathology Scientific Interest Group)
MON. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 160C
CHAIR: M.M. SCHUTTEN AND R. SULLIVAN

Veterinary Pathology
Microbiome


9:15 Microbiome and Metabolome Changes in Dogs with IBD J.S. Suchodolski. Texas A&M Univ.


10:45 Predicting and Manipulating Cardiac Drug Inactivation by the Human Gut Microbes E. Balskus. Harvard Univ.


279. MOLECULAR AND CELLULAR BASIS OF DISEASE: NEUROPATHOLOGY AS A PARADIGM FOR DISEASE PROCESSES: ADVANCES IN THE UNDERSTANDING OF NEURAL DEVELOPMENT AND DISEASE: CELLS AND CIRCUITS

Symposium
(Sponsored by: ASIP Neuropathology Scientific Interest Group)
MON. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 160A/B
CHAIR: J.J. OTERO AND A.F. BUCKLEY

Neuropathology
Neurobiology

8:30 Dopaminergic Neurons and Brain Reward Pathways: From Neureogenesis to Circuit Dysfunction E.J. Huang. UCSF.

9:15 Daam2-PIP5K is a Novel Regulatory Pathway for Wnt Signaling and Therapeutic Target for Remyelination in the CNS B. Deneen. Baylor Col. of Med.

10:00 Reprogramming Neuronal Diversity in the Central Nervous System P. Arlotta. Harvard Univ.

280. PROGRAMMED NON-APOPTOTIC CELL DEATH IN TISSUE INJURY

Symposium
(Sponsored by: ASIP Cell Injury Scientific Interest Group)
MON. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 161
CHAIR: W-X. DING AND W-X. ZONG

Cell and Tissue Injury
Liver Pathobiology
Injury/Connective Tissue/Fibrosis

8:30 Programmed Necrosis in Virus-Induced Inflammation F. Chan. Univ. of Massachusetts Med. Sch.
9:00 Role of Rip3 in Acetaminophen-Induced Necrosis and Liver Injury H. Jaeschke. Univ. of Arkansas for Med. Sci.
9:30 Small Molecule Inhibitors to Suppress Rip1-Mediated Necroptosis A. Degterev. Tufts Univ.
10:00 Programmed Necrosis in Cancer Therapy W-X. Zong. Stony Brook Univ.
10:30 Caspase 1 Activation and Inflammasome in Hypoxia and Hemorrhagic Shock M.J. Scott. Univ. of Pittsburgh.
11:00 Blocking Caspase Activation Switched TNFα-induced Apoptosis to Programmed Necrosis in Hepatocytes W-X. Ding. Univ. of Kansas Med. Ctr.

281. WORKSHOP: LESSONS FROM TCGA

Workshop
(Sponsored by: ASIP Neoplasia/Growth Regulation Scientific Interest Group)
MON. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 162A
CHAIR: T.J. GIORDANO AND M. MEYERSON

Neoplasia
Cancer Biology
Neurobiology

9:15 Lessons From TCGA: Endocrine Tumors T.J. Giordano. Univ. of Michigan.
10:00 Genome Alterations and Targeted Therapies in Lung Cancer M.L. Meyerson. Dana-Farber Cancer Inst.

282. INTERCELLULAR JUNCTIONS AND REGULATION OF TISSUE BARRIERS

Minisymposium
MON. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 162B
CHAIR: W. MACNAUGHTON AND V. SPINDLER

Epithelial Pathobiology
Microbiome
Transporters/Channels/Barriers

8:45 282.2 The Ability of Serine Proteases to Induce an Increase in Barrier Function Is Dependent on the Tight Junction Protein Occludin N.J. Ronaghan, J. Shang, V. Iablokov and W.K. MacNaughton. Univ. of Calgary, Canada.
9:00 282.3 p38MAPK Signaling but not Direct Inhibition of Desmoglein Binding Is Crucial for Loss of Cell Cohesion in Pemphigus Vulgaris F. Vielmuth, J. Waschke and V. Spindler. Ludwig Maximilians Univ. Munich.

10:00 282.7 F-Actin Binding Protein, Anillin, Regulates Integrity of Intercellular Junctions in Human Epithelial Cells D. Wang, G.K. Chadha, A. Feygin and A. Ivanov. Virginia Commonwealth Univ.
10:30 282.9 CLMP Expression Is Increased in the Intestinal Epithelium under Inflammatory Conditions and Regulates Intercellular Adhesion, Proliferation and Migration A-C. Luissint, L. Xiaoming, A. Bennett, H. Nishio, R. Hilgarth, I. McCall, A. Nusrat and C.A. Parkos. Emory Univ. and Univ. of Michigan.
283. MOLECULAR AND CELLULAR BASIS OF DISEASE: NEUROPATHOLOGY AS A PARADIGM FOR DISEASE PROCESSES: PRESIDENT’S SYMPOSIUM: ADVANCES IN INVESTIGATIVE NEUROPATHOLOGY

Symposium
(Sponsored by: ASIP Neuropathology Scientific Interest Group)

MON. 2:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 160A/B

CHAIR: K.A. ROTH

Neuropathology

Cancer Biology

Neurobiology

2:00 To Eat or Not to Eat? Fine-tuning Mitochondrial Homeostasis in Parkinson’s Disease C.T. Chu. Univ. of Pittsburgh.


284. BREAST AND PROSTATE CANCER

Minisymposium

MON. 2:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 160C

CHAIR: A. KAJDACSY-BALLA AND S. CATALANO

Neoplasia

Cancer Biology

2:00 Introductory Remarks.

2:05 284.1 Discrete Functions of GSK3α and GSK3β Isoforms in Prostate Tumor Growth and Micrometastasis F. Gao, A. Al-Azayzih and S.P.R. Shenoy. Col. of Pharm., Univ. of Georgia.


3:05 284.5 Leptin as a Mediator of Tumor-Stromal Interactions Promotes Breast Cancer Stem Cell Activity S. Catalano, C. Giordano, S. Panza, F.C. Chemi, I. Barone, D. Bonofilio, A. Cordella, A. Hashim, B. Simoes, R. Clarke, A. Weisz and S. Ando. Univ. of Calabria, Fndn. IRCCS, Naples, Univ. of Salerno, Italy and Univ. of Manchester.


285. INFLAMMATION, RESOLUTION OF INFLAMMATION AND LEUKOCYTE TRAFFICKING

Minisymposium

MON. 2:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 161

CHAIR: M.B. FURIE AND C. LEFORT

Inflammation

Cardiac Pathobiology

2:00 285.1 Withdrawn.


2:45 285.4 RvD1 Activates Resolution of Inflammation following Myocardial Infarction Leading to Improved Ventricular Function V. Kain, K.A. Ingle, S.D. Prabhu, C.N. Serhan, M. Joshi and G.V. Halade. Univ. of California at Berkeley, Harvard Med. Sch. and Midwestern Univ., IL.


4:30  285.11 Neutrophil-Derived Microvesicles Migrate into Cell-Impenetrable Cartilage to Protect the Joint during Inflammatory Arthritis  S.E. Headland, L.V. Norling, A. Kim, H.R. Jones, L.Y. Jan and M. Perretti. Queen Mary Univ. of London and UCSF.

286. ASIP MEMBERSHIP BUSINESS MEETING AND AWARDS PRESENTATION

Business Meeting

Mon. 5:00 pm—Boston Convention & Exhibition Center, Room 160A/B

CHAIR: K.A. ROTH

287. ASIP AWARDS RECEPTION

Special Event

Mon. 6:00 pm—Boston Convention & Exhibition Center – Southeast Lobby C

Pharmacology

288. JOHN J. ABEL AWARD IN PHARMACOLOGY LECTURE

Lecture

Mon. 8:30 am—Boston Convention & Exhibition Center, Room 107AB

The John J. Abel Award in Pharmacology, named after the founder of ASPET, was established in 1946 to stimulate fundamental research in pharmacology and experimental therapeutics by young investigators.

8:30  Introduction  A.E. Fleckenstein. Univ. of Utah.

8:35  Creating the Facebook for Molecular Analysis  P.C. Dorrestein. UCSD Skaggs Sch. of Pharm. and Pharmaceut. Sci.

289. MEMBRANE TRANSPORTERS AT THE INTERFACE OF DRUG INTERACTIONS, BIOMARKER MONITORING, AND TOXICITY

Symposium

(Sponsored by: The Divisions for Toxicology; Drug Metabolism; Molecular Pharmacology; Cardiovascular Pharmacology; Translational and Clinical Pharmacology; and Drug Discovery and Development)

Mon. 9:30 am—Boston Convention & Exhibition Center, Room 109A

CHAIR: L.M. Aleksunes and Y. Lai

Transporters/Channels/Barriers


10:00  Endogenous Probes for Evaluation of Drug-Drug Interactions Involving Renal Transporters  H. Kusuhara. Univ. of Tokyo.

10:40  Alterations in Transporter Expression and Function in In Vitro and In Vivo Models of Kidney Disease  M. Joy. Univ. of Colorado.


11:40  Pharmacological Activation of Fxr Attenuates Pregnancy-Induced Repression of Hepatic and Ileal Bile Acid Transporters in Mice  J.E. Moscovitz. Rutgers Univ. Ernest Mario Sch. of Pharm. (937.2)

290. MONOAMINES AND NEUROTROPHINS IN INFLAMMATORY BOWEL DISEASE/IRRITABLE BOWEL SYNDROME

Symposium

(Sponsored by: The Divisions for Translational and Clinical Pharmacology; Toxicology; and Molecular Pharmacology)

Mon. 9:30 am—Boston Convention & Exhibition Center, Room 109B

CHAIR: H.I. Akbarali and S. Szabo

Inflammation/Immunity

9:30  Serotonin Signaling in the Gastrointestinal Tract  G. Mawe. Univ. of Vermont.

10:05  Neurotrophin Signaling in the Gastrointestinal Tract  J.R. Grider. Virginia Commonwealth Univ.

10:40  The Unexpected Role of Central & Peripheral Dopamine in the Pathogenesis of Gastrointestinal Ulceration  S. Szabo. Univ. of California, Irvine, VA Med. Ctr.

291. NEW THERAPIES FOR AN OLD PROBLEM: THE NINDS-SPONSORED ANTICONVULSANT SCREENING PROGRAM

Symposium

(Sponsored by: The Divisions for Drug Discovery and Development; Neuropharmacology; Translational and Clinical Pharmacology; and Molecular Pharmacology)

MON. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 107C

CHAIR: J.H. KEHNE AND K.S. WILCOX

Neurobiology

9:30 The NINDS Anticonvulsant Screening Program – Background and Overview. J.H. Kehne. NINDS, NIH.
10:00 Implementation of Novel Models to Address the Unmet Medical Needs in Epilepsy Treatment. K.S. Wilcox. Univ. of Utah.
10:30 Preclinical Evaluation of Cannabidiol in the Anticonvulsant Screening Program as a Potential Treatment for Epilepsy. C. Jacobson. Epilepsy Fndn.
11:00 Development of Extended Neuroamides and the Role of the NINDS Anticonvulsant Screening Program. H.L. Kohn. Univ. of North Carolina.
11:30 A Medicinal Chemical Approach to Design of A1 Adenosine Receptor Agonists for Seizure Treatment. K.A. Jacobson. NIDDK, NIH.

292. PHARMACOLOGY OF NEURONAL REGENERATION AND REPAIR

Symposium

(Sponsored by: The Divisions for Neuropharmacology; Molecular Pharmacology; Translational and Clinical Pharmacology; and Drug Discovery and Development)

MON. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 106

CHAIR: J.S. MARCHANT AND B. GRILL

Neurobiology

Regenerative Medicine (Stem Cells, Tissue Regeneration, Biomaterials)

10:30 Imaging-Based Chemical Screening Reveals Activity-Dependent Neural Differentiation of Pluripotent Stem Cells. S. Guo. UCSF.
11:00 Pharmacological Biasing of Stem Cell Differentiation in Vivo: A Worm’s Eye View. J.S. Marchant. Univ. of Minnesota.


293. PROTEIN TRAFFICKING AND DRUG DEVELOPMENT

Symposium

(Sponsored by: The Divisions for Molecular Pharmacology; Translational and Clinical Pharmacology; Drug Discovery and Development; Toxicology; and Neuropharmacology)

MON. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 108

CHAIR: P.M. CONN

Neurobiology

9:30 Introduction.
294. PSYCHOMOTOR STIMULANT ADDICTION: LESSONS FROM METHAMPHETAMINE

Symposium

(Sponsored by: The Divisions for Behavioral Pharmacology and Neuropharmacology)

MON. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 107AB

CHAIR: R.I. DESAI AND M.A. NADER

Transports/Channels/ Barriers

11:00 The Behavioral and Neuropharmacological Effects of Methamphetamine and Cocaine Self-Administration. M.A. Nader. Wake Forest Sch. of Med.
295. DRUG METABOLISM EARLY CAREER ACHIEVEMENT AWARD LECTURE

Lecture

(Sponsored by: The Division for Drug Metabolism)

MON. 2:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 109A

The ASPET Division for Drug Metabolism Early Career Achievement Award has been established to recognize excellent original research by early career investigators in the area of drug metabolism and disposition.

2:00 Introduction.
2:05 Drug Metabolism Considerations in HIV Treatment and Prevention N.N. Bumpus. Johns Hopkins Univ. Sch. of Med.

296. DIVISION FOR DRUG METABOLISM JAMES GILLETTE AWARD AND PLATFORM SESSION: BIOTRANSFORMATION AND DRUG TRANSPORT

Division Oral Session

(Sponsored by: The Division for Drug Metabolism)

MON. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 109A

Chair: E.E. Scott and L.C. Wienkers

3:00 Very High Accuracy Prediction of UDP-Glucuronosyltransferase Sites of Metabolism S.J. Swamidass. Washington Univ. in Saint Louis. (622.1)
3:15 Protein-Protein Interactions between Organic Anion Transporting Polypeptide 1B3 and Organic Cation Transporter 1 J. Shoop. Univ. of Kansas Med. Ctr. (939.6)
3:30 Pharmacogenetic Analysis of Nucleotide Kinases that Metabolize the Antiviral Drug Tenofovir J.M. Lade. Johns Hopkins Univ. (940.4)
3:45 Genistein Reduces Glyburide Efflux by the Human Placental BCRP Transporter: Transcriptional Regulation and Direct Inhibition K.M. Bircsak. Rutgers Univ., Piscataway. (939.7)
4:00 Identification of MicroRNAs Involved in the Regulation of Human UGT1A, UGT2B7 and UGT2B15 Gene Expression I. Papageorgiou. Washington State Univ. Col. of Vet. Med. (622.2)
4:15 Identifying the Structure-Function Activity of Human Cytosolic Sulfotransferase 1C4 A.L. Guidry. Univ. of Alabama at Birmingham. (622.6)
5:00 Generation and Characterization of a Novel CYP2A13-Transgenic Mouse Model K. Jia.

297. ASPET JOURNAL SYMPOSIUM: REPRODUCIBILITY IN THE PHARMACOLOGICAL SCIENCES: MOVING THE DISCUSSION FORWARD

Symposium

(Sponsored by: The Board of Publications Trustees and all Divisions)

MON. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 107AB

Chair: D.R. Abernethy

3:00 The Necessity of Publishing Replication and Failure to Replicate Studies: Criteria and Venues D.R. Abernethy. FDA.
5:20 Question & Answer Period.

298. DRUG DISCOVERY AND DEVELOPMENT DIVISION SYMPOSIUM: DRUG DEVELOPMENT IN ACADEMIC CENTERS

Division Symposium

(Sponsored by: The Division for Drug Discovery and Development)

MON. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 107C

Chair: R.J. Leadley and R.W. Caldwell

3:00 Anatomy of the 5-HT2C Receptor: Probing for Therapeutic Gain in Addictive Disorders K.A. Cunningham. Univ. of Texas Med. Branch.
3:30 Development of “Multifunctional” Compounds for the Treatment of Neuropsychiatric Disorders A.V. Terry, Jr. Georgia Regents Univ.
4:00 Developing Novel Therapeutics for Parkinson’s Disease C.K. Jones. Vanderbilt Univ. Med. Ctr.
4:30 Selective Antagonism of mGlu5 Alters Sleep-Wake and Spectral EEG and Ameliorates Behavioral Abnormalities in a Rodent Model of Traumatic Stress M. Nedelcovych. Vanderbilt Univ. (615.8)
4:45 Ligand-Based Pharmacophore Modeling of 5-HT2A Receptor Biased Agonism K.S. Murnane. Mercer Univ., GA. (768.12)
5:00 Allosteric Ligands of Metabotropic Glutamate Receptor 5 Have Biased Agonism and Cooperativity K.J. Gregory. Monash Inst. of Pharmaceut. Sci., Australia. (772.17)
5:15 Wrap-Up.
299. NEW ROLES OF MITOCHONDRIA IN VASCULAR FUNCTION

Symposium
(Sponsored by: The Divisions for Cardiovascular Pharmacology; Molecular Pharmacology; and Toxicology)
MON. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 109B
CHAIR: D.W. BUSIJA AND P. KATAKAM

3:00 Mitochondrial Control of Ca²⁺ Signaling in Vascular Smooth Muscle J.G. McCarron. Univ. of Strathclyde.
4:30 Mechanisms of Control of Mitochondrial Structure and Function by Ovarian Hormones D.N. Krause. Univ. of California, Irvine.
5:00 Sex-Differences in Mitochondrial Respiration in Rat Cerebral Arteries I. Rutkai. Tulane Univ. (780.3)
5:15 Curcumin-Encapsulated Stem Cell Exosomes Mitigates Neuro-vascular Mitochondrial Dysfunction after Stroke in T1DM Mice A. Kalani. Univ. of Louisville. (773.15)

300. MOLECULAR PHARMACOLOGY DIVISION POSTDOCTORAL SCIENTIST AWARD FINALISTS

Division Oral Session
(Sponsored by: The Division for Molecular Pharmacology)
MON. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 108

3:00 Targeting the Transient Receptor Potential-Melastatin-Like 7 Kinase Domain with the First Inhibitor, Inhibited Breast Cancer Cell Migration, Invasion and Tumor Metastasis T.S. Kaoud. Col. of Pharm., Univ. of Texas at Austin and Fac. of Pharm., Minia Univ., Egypt. (1021.9)
3:30 High-Throughput Screening for Identification of Novel Allosteric Modulators of the D₂ Dopamine Receptor A.E. Moritz. NINDS, NIH. (772.4)
4:00 Nuclear Receptor PXR, a Novel Glucose Sensor that Regulates Hepatic Gluconeogenesis S. Gotoh. NIEHS, NIH, Research Triangle Park. (934.8)

301. NEUROPHARMACOLOGY DIVISION POSTDOCTORAL SCIENTIST AWARD FINALISTS

Division Oral Session
(Sponsored by: The Division for Neuropharmacology)
MON. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 106

Neurobiology

3:00 Inhibition of Poly(ADP-Ribose) Polymerase Activity Modulates Autophagy Induced by Experimental Spinal Cord Trauma I. Paterniti. Univ. of Messina.
3:40 Characterization of Real Time Adenosine Effluxes in the Brain of Anesthetized Rats Using Fast-Scan Cyclic Voltammetry E. Adamah-Biassi. Wake Forest Sch. of Med.
4:00 Effects of Extrasynaptic GABA-A Signaling in the PAG on Morphine Antinociception K. Tonsfeldt. Oregon Hlth. & Sci. Univ.
4:20 GPR171, a Newly Deorphanized Hypothalamic G Protein-Coupled Receptor Is Involved in the Regulation of Reward-Related Behaviors E. Bobeck. Mount Sinai Sch. of Med.
4:40 Selected Correction of Vigabatrin-Related Toxicity in Mice with Adjuvant Rapalog Intervention K. Vogel. Washington State Univ.
5:00 Keynote Speaker: The Brain and Opioids B. Kieffer. McGill Univ.

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Physiology

302. PRESIDENT’S SYMPOSIUM SERIES
PHYSIOLOGY: ANSWERS TO BIG QUESTIONS
THE FUTURE OF OBESITY RESEARCH
Symposium
MON. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210BC
CHAIR: A. HASTY

Translational Physiology
9:45
mTOR Signaling in Brown Fat D. Guertin. Univ. of Massachusetts Med. Sch.
9:45
10:00
Physiology of Low-Fit and High-Fit Rats V. Viera-Potter. Univ. of Missouri-Columbia.
3:00
3:15
MicroRNA and Adipose Tissue Inflammation B. Zhou. Texas A&M Univ.

303. CARL LUDWIG DISTINGUISHED LECTURESHIP
OF THE APS NEURAL CONTROL AND AUTONOMIC REGULATION SECTION
Lecture
MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210A

Abnormal Cardiovascular Response to Exercise in Hypertension: Contributing Neural Factors J.H. Mitchell. Univ. of Texas Southwestern Med. Ctr.

304. CELLULAR MEMBRANE REPAIR IN CARDIOVASCULAR PHYSIOLOGY AND PATHOPHYSIOLOGY
Featured Topic
(Sponsored by: Cardiovascular Section and The American Journal of Physiology: Heart and Circulatory Physiology)
MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 208
CHAIR: N. WEISLEDER

8:00
Synthetic Membrane Stabilizers for the Failing and Dystrophic Heart J. Metzger. Univ. of Minnesota, St. Paul.
8:15
Repairing the Plasma Membrane to Save the Heart During Stress R. Han. Loyola Univ. Med. Ctr.
9:00
9:15
Neutrophil Polarization following Myocardial Infarction in Mice Y. Ma, A. Decoux, A. Yabluchanskiy, R. Clark, Y-F. Jin and M.L. Lindsey. Univ. of Mississippi Med. Ctr. and Univ. of Texas at San Antonio. (801.4)
9:30
9:45
Chronic High Fat Diet Decreases CD34/CD133 Cell Population in Bone Marrow and Peripheral Circulation in Association with Decreased Level of Serum MG53 J.Z. Liu, H. Ma, D.Z. Liu, Y. Cui, S. Parthasarathy and H. Zhu. The Ohio State Univ. Wexner Med. Ctr. and Burnett Sch. of Biomed. Sci., Univ. of Central Florida Col. of Med. (801.6)

305. CELLULAR QUALITY CONTROL IN THE LUNG: ROLE OF ERAD, AUTOPHAGY, AND MITOPHAGY IN HEALTH AND DISEASE

Featured Topic
(Sponsored by: Respiration Section)
MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 212
CHAIR: M.F. BEERS AND C. PIRIOLO

8:00
Chair’s Introduction M. Beers. Univ. of Pennsylvania Sch. of Med.
8:05
Effects of Endoplasmic Reticulum Stress on Epithelial Injury and Fibrosis in Alveolar Epithelial Type II Cell (AT2)-Specific Grp78 Knockout Mice B. Zhou, P. Flodby, H. Wang, Y. Liu, P. Minoo, E. Crandall, A. Lee and Z. Borok. Univ. of So. California. (1015.4)
8:20
The Lung Macroautophagy Substrate Proteome: A Systems Biology Analysis J. Haspel, S. Chettimada, B. Lane and A. Choi. Washington Univ. Sch. of Med., Dana-Farber Cancer Ctr. and Harvard Univ. (1015.7)
9:15
Protein Quality Control in Alveolar Type 2 Cells: The Proteasome Is Essential for Control of Aggregation-Prone SP-C Mutations A. Hawkins, L.W. Gonzales, S.H. Guttentag, S. Mulugeta and M.F. Beers. Univ. of Pennsylvania and Vanderbilt Univ. (1015.5)
9:30
9:45
Akt-Mediated Mitochondrial Oxidative Stress Induces Mitophagy and Development of Pulmonary Fibrosis J.L. Casey, A.J. Ryan, S. Murthy and A.B. Carter. Univ. of Iowa and Iowa City VA Ctr. (1015.6)
306. GASTRO-RENAL COMMUNICATION

Symposium
(Sponsored by: Water and Electrolyte Homeostasis Section)
MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, Room 207

CHAIR: P. Jose

8:00 The Stomach and Kidney Can Smell J. Pluznick, Johns Hopkins Med. Sch.
8:30 Gastro-Renal Reflex P. Jose, Univ. of Maryland Baltimore.
9:00 Gut Microbiota and the Kidney D. Raj, George Washington Univ.
9:30 Sodium Transporters in GI and Kidney P. Soares da Silva, Univ. of Porto, Portugal.

307. ION CHANNELS AND TRANSPORTERS IN HEALTH AND DISEASE

Featured Topic
(Sponsored by: Cell and Molecular Physiology Section)
MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, Room 209

CHAIR: S.M. O’Grady and J. Sarathy

Transporters/Channels/ Barriers

8:00 Pseudomonas Aeruginosa Toxins Enhance the Degradation of wt-CFTR and delF508-CFTR Cl Channels B.A. Stanton, Dartmouth Univ.
9:00 ENaC Regulation by [Ca²⁺] Is Determined by Mitochondrial Ca²⁺ Uptake T.L. Thai, L.I. Galarza-Paez, L. Yu, H.F. Bao, J.D. Klein, J.M. Sands and D.C. Eaton, Emory Univ. (844.3)
9:15 Systematic Characterization of SLC2A9 (Glut9) Variants Associated with Serum Uric Acid Levels A. Ruiz and O. Bonny, Univ. of Lausanne. (844.4)
9:45 New Strategies for an Old Problem: Calcium Regulation in the Apicomplexan parasite, Toxoplasma gondii D.A. Pace and S.N.J. Moreno, California State Univ., Long Beach and Univ. of Georgia. (844.6)

308. LIMITATIONS TO AND POTENTIAL OF EXERCISE FOR THE SPINAL CORD INJURED

Symposium
(Supported by Univ. of California, Irvine Exercise Medicine and Sport Sciences Initiative)
(Sponsored by: Environmental and Exercise Physiology Section)
MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, Room 206A

CHAIR: J.A. Taylor

8:00 Harnessing the Mechano-adaptive Response of Bone: the Potential to Rescue Osteoporotic Bone in SCI Patients S. Shefelbine, Northeastern Univ.
8:30 Obesity and SCI: Fat Gone Wild! D. Gater, Penn State Hershey Col. of Med.
9:00 Cardiac Autonomic Neuroplasticity Following T5 Spinal Cord Transection Increases the Susceptibility to Ischemia-Induced Sustained Ventricular Tachycardia S. DiCarlo, Wayne State Univ. Sch. of Med.
10:00 Mechanisms of Activity-Dependent Mediated Recovery of Motor and Autonomic Function after SCI V.R. Edgerton, UCLA.

309. PUBLISHING 101: HOW TO GET YOUR WORK PUBLISHED AND AVOID ETHICAL MINEFIELDS

Symposium
(Sponsored by: Publications Committee)
MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, Room 205C

CHAIR: C. Sigmund and R. Scheman

Career Development

8:00 Choosing a Journal, Authorship and Peer Review C. Sigmund, Univ. of Iowa.
8:30 Ethical Minefields I: Plagiarism and Data Duplication K. Barrett, UCSJD.
9:00 Ethical Minefields II: Image Manipulation C. Bennett, APS.
9:30 Meet the Editors Panel B. Yates and J. Adams Univ. of Pittsburgh and Univ. of Bristol.
310. RECENT ADVANCES IN OBESITY RESEARCH

Featured Topic
(Sponsored by: APS Trainee Advisory Committee)

**Featured Topic**

MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 210BC

CHAIR: K. Haack, L. Gilliam, and J. Bradley

**Obesity**

**Translational Physiology**

8:00  Rapid Change in Afterload after Gastric By-Pass Surgery

8:15  A Role for Hydrogen Sulfide in Obesity-Dependent Microvascular Remodeling

8:30  Effects of Acute and Chronic Hyperglycemia on Lung Capillary Permeability

8:45  MnTBAP Ameliorates Obesity and Metabolic Dysfunction and Limits the TF-PAR2 Pro-inflammatory Pathway in White Adipose Tissue

9:00  Intestinal Insulin Receptor Contributes to Elevated Cholesterol and Stem, Enteroendocrine, and Paneth Cell Adaptations to Obesity
S.F. Andres, M.A. Santoro, A.T. Mah, J.A. Keku, A.E. Bortvedt, R.E. Blue and P.K. Lund. Univ. of North Carolina at Chapel Hill. (851.2)

9:15  Loss of Ulk1 in Skeletal Muscle and Heart Prevents Exercise Protection against Diet-Induced Insulin Resistance
V.A. Lira, J.A. Call, R.C. Laker, A.K. Lira, M. Zhang and Z. Yan. Univ. of Iowa, Univ. of Georgia and Univ. of Virginia. (821.6)

9:30  Sympathetic Overactivity to the Liver: A Possible Contributor to Hepatosteatosis in Diet-Induced Obesity

9:45  Melanocortin-4 Receptor Deficiency Promotes Increases in High-Fat Diet-Induced Body Weight Gain and Visceral Fat, but Not Hypertension, during Pregnancy
F.T. Spradley, A.C. Palei and J.P. Granger. Univ. of Mississippi Med. Ctr. (811.22)

311. RECENT ADVANCES IN RENAL PHYSIOLOGY AND KIDNEY DISEASE I

Featured Topic
(Sponsored by: APS Renal Section)

**Featured Topic**

MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 206B

CHAIR: P. Ortiz and X. Li

8:00  P2X7R Antagonism Improves Renal Medullary Blood Flow and Oxygenation in Angiotensin II-Dependent Hypertension
M.A. Bailey, R.I. Menzies and J.J. Mullins. Univ. of Edinburgh. (960.23)

8:15  Human Mannose-Binding Lectin (MBL2) Inhibitor Prevents Renal Injury in a Novel Animal Model of Endemic Hemolytic Uremic Syndrome

8:30  Aquaporin-1 Retards Renal Cyst Development in Polycystic Kidney Disease by Inhibition of Wnt Signaling
W. Wang, F. Li, H. Zhou, A. Verkman and B. Yang. Peking Univ. and UCSF. (663.2)

8:45  Flow-Stimulated NO Production Is Altered in Thick Ascending Limbs of Dahl Salt-Sensitive Rats Fed Either Normal or High Salt Diets
A. Gonzalez-Vicente, N.J. Hong and J.L. Garvin. Case Western Reserve Univ. (960.22)

9:00  Expression/Phosphorylation of the Renal NaCl Cotransporter (NCC) in Transplant Patients with Hypertension

9:15  Natriuretic Peptides Exert Marked Renoprotective Effects via Activation of the Natriuretic Peptide Receptor GC-A in Podocytes
J. Staffel, D. Valletta, A. Federlein, M. Kuhn and F. Schweda. Univ. of Regensburg and Univ. of Würzburg. (808.6)

9:30  Mechanism of Angiotensin II-Mediated Changes in Glomeruli Permeability and Calcium Influx in Podocytes
D. Ilatovskaya, O. Palygin, B. Endres, V. Levchenko and A. Staruschenko. Med. Col. of Wisconsin. (808.5)

9:45  The Succinate Receptor Contributes to Obesity-Induced Diabetes Type-II and Chronic Kidney Disease
312. RESOURCES AND EXPERIENCES IN DEVELOPING FLIPPED CLASSROOMS FOR GRADUATE AND MEDICAL PHYSIOLOGY

Symposium
(Sponsored by: Teaching of Physiology Section)
MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 211
CHAIR: T. WILSON

Education
8:00 Using a Flipped Classroom Model to Improve Graduate Student Learning in Cardiovascular, Respiratory, and Renal Physiology J. Tune. Indiana Univ. Sch. of Med.
8:30 Web-Based Resources to Engage Students Outside of Class to Improve In-Class Learning of Medical Cardiovascular Physiology R. Klabunde. Marian Univ. Col. Osteo. Med., Indianapolis.

313. THE PHYSICAL BIOLOGY OF THROMBUS FORMATION

Symposium
(Sponsored by: Cardiovascular Section)
MON. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205B
CHAIR: O. MCCARTY AND K. NEEVES

Shear-Dependent Regulation of Adhesion Receptors in the Vasculature E. Gardiner. Monash Univ., Australia.
Shear-Dependent Regulation of Coagulation K. Neeves. Colorado Sch. of Mines, Goldon.
Platelets Engineered to Target Tumor Cell-Associated Microthrombi M. King. Cornell Univ.

314. NEURAL CONTROL OF THE CIRCULATION DURING EXERCISE IN NORMAL AND DISEASE STATES

Minisymposium
(Sponsored by: APS Neural Control and Autonomic Regulation Section)
MON. 9:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210A
CHAIR: J.H. MITCHELL AND S. SMITH

9:00 Intrathecal Fentanyl Abolishes the Exaggerated Pressor Response to Cycling Exercise in Never-Treated Hypertensive Men L.C. Vianna, T.C. Barbosa, I.A. Fernandes, E. Prodel, N.H. Secher and A.C. Nobrega. Univ. of Brasilia, Fluminense Fed. Univ., Brazil and Univ. of Copenhagen. (827.5)
9:15 Potassium Channel Dysfunction in Dorsal Root Ganglia Contributes to the Exaggerated Exercise Pressor Reflex in Heart Failure H. Wang, G.J. Rozanski and I.H. Zucker. Univ. of Nebraska Med. Ctr. (827.1)
9:30 Role of NaV 1.7 Channels on Skeletal Muscle Afferents in Evoking the Exercise Pressor Reflex A.J. Stone, S.W. Copp and M.P. Kaufman. Penn State Col. of Med. (1054.6)
9:45 Augmented Skeletal Muscle Metaboreflex Activation in Patients with Type 2 Diabetes Mellitus S.W. Holwerda, R.M. Restaino, J.P. Fisher and P.J. Fadel. Univ. of Missouri-Columbia and Univ. of Birmingham Sch. of Sport, Exer. and Rehab. Sci. (827.7)

315. BRAINSTEM MECHANISMS UNDERLYING CARDIORESPIRATORY SIGNALING: FROM SYNAPSES TO CIRCUITS

Symposium
(Sponsored by: Central Nervous System Section)
MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205C
CHAIR: A.V. DERBENEV AND M.C. ANDRESEN

11:00 Synaptic and Extrasynaptic Regulation of RVLM Neurons: What is Behind the Scenes? A.V. Derbenev. Tulane Univ.

10:45 Effects of Thyroid Hormone Manipulations on Growth and Metabolism of American Alligator Hatchlings. T.S. Sirsat, S.K. Sirsat, J. Crossley and E.M. Dzialowski. Univ. of North Texas. (686.8)

11:00 Central Ang 1-7 Modulates Lipolysis and Thermogenesis in Adipose Tissue. F.S. Evangelista and T.J. Bartness. Univ. of Sao Paulo and Georgia State Univ. (981.1)


12:00 Changes in Grasshopper Jumping Muscle during Intermolt Development. M.W. Olson and S.D. Kirkton. Union Col., NY. (686.14)

12:15 Effect of Klotho Gene Delivery on Hypertension and Arterial Stiffness in Senescence Accelerated Mice P1

319. HYPOTHALAMIC AUTONOMIC CONTROL OF METABOLISM

Featured Topic

(Sponsored by: Neural Control and Autonomic Regulation)

MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 209
CHAIR: Y. JIANG AND A. ZSOMBOK

Nutrition Physiology

10:30 Central TRPV1 and Regulation of Glucose Metabolism
A. Zsombok. Tulane Univ.
11:00 Bidirectional Communication Between the Brain and Adipose Tissue V. Ryu. Georgia State Univ.
11:30 Differential Involvement of POMC and AgRP Neurons in the Regional Sympathetic Responses to Leptin B.B. Bell, S.M. Harlan, D.A. Morgan and K. Rahmouni. Univ. of Iowa. (828.5)
11:45 Specific Control of Resting Metabolism by Angiotensin AT_1a Receptors in Leptin-Sensitive Cells K.E. Claflin and J.L. Grobe. Univ. of Iowa. (828.1)
12:15 Activation of Medulla-Projecting Perifornical Neurons Modulates the Adrenal Sympathetic Response to Hypoglycemia: Involvement of Orexin Type 2 (OX-2R) Receptors W.S. Korim and A.J.M. Verberne. Univ. of Melbourne. (828.2)

320. KALEY LECTURE AND COMPLEMENTARY PRESENTATIONS

Featured Topic

(Sponsored by: Cardiovascular Section and the Microcirculatory Society)

MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205B
CHAIR: M. NELSON

Transports/Channels/ Barriers

Cell Signaling

10:30 Ion Channel Cross-Talk in the Microcirculation M.T. Nelson. Univ. of Vermont.
11:00 Ca^{2+} Influx through Vascular Smooth Muscle Cell Voltage-Gated Ca^{2+} Channels Increases Endothelial Cell Ca^{2+} to Evoke Vasodilatation P. Bagher, C.J. Garland and K.A. Dora. Univ. of Oxford. (795.4)

11:30 TRPV1 Residues Vital to Protection against 4-HNE Modification, Preservation of Channel Activity and Microvascular Function D.J. DelloStritto, P. Connel, W. Geldenhuys and I.N. Bratz. Northeast Ohio Med. Univ. (795.8)

12:00 Microtubules Couple Sarcoplasmic Reticulum Calcium Release to TRPM4 and BK Channel Activation in Cerebral Artery Myocytes A.L. Gonzales, P.W. Pires, B.T. Drumm, E.A. Ko, K.M. Sanders and S. Earley. Univ. of Vermont and Univ. of Nevada Sch. of Med. (795.9)
12:15 Loss of Hydrogen Sulfide-Stimulated Ca^{2+} Spark Activity in Arteries from Rats with Intermittent Hypoxia-Induced Hypertension N.L. Kanagy, J.M. Osmond and V.S. Naik. Univ. of New Mexico. (795.10)

321. LUNG EPITHELIUM AND ENDOTHELium: INJURY, REPAIR, AND REMODELING

Featured Topic

(Sponsored by: Respiration Section)

MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 206A
CHAIR: Y. ZHAO AND I. PETRACHE

Regulation of Epithelial Function

Injury/Connective Tissue/Fibrosis

10:30 Signaling Pathways in the Regulation of Pulmonary Endothelial Barrier Integrity K. Birukov. Univ. of Chicago.
11:00 Syndecan-1 Regulation of Lung Injury from Influenza P. Chen. Cedars-Sinai Med. Ctr.
11:45 Redox Regulation of EGFR Signaling in Innate Airway Epithelial Responses to Injury D.E. Heppner, M. Hristrova, A. Habibovic and A. van der Vliet. Univ. of Vermont. (863.4)
12:00 Abi Family Kinases Differentially Regulate LPS-Induced Endothelial Barrier Dysfunction A.N. Rizzo, E. Letsiou, M. Brown, J.G.N. Garcia and S.M. Dudek. Univ. of Illinois at Chicago and Univ. of Arizona. (863.11)
322. NEUROHORMONAL MECHANISMS IN BLOOD PRESSURE CONTROL

Symposium

MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210BC
CHAIR: J.R. HAYWOOD AND A. COWLEY

10:30 Cardiac Sympathetic Afferent Denervation in Heart Failure: Impact on SNA and Cardiac Remodeling
I.H. Zucker. Univ. of Nebraska Med. Ctr.

10:55 Sympathetic Nervous System Overactivity and Its Role in the Development of Cardiovascular Disease
S. Malpas. Univ. of Auckland.

11:20 Sympathetic Regulation of the Splanchnic Circulation in Arterial Pressure Regulation
G. Fink. Michigan State Univ.

11:45 Baroreceptors versus Renin-Angiotensin System in Blood Pressure Control
P. Persson. Charité.

12:10 Neural Mechanisms in Models of Hypertension
J.T. Cunningham. Univ. of North Texas Hlth. Sci. Ctr.

323. NOVEL MECHANISMS IN RENAL FUNCTION AND BLOOD PRESSURE REGULATION

Symposium

(Sponsored by: Renal Section)

MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 211
CHAIR: O. WEIZS AND P. CACERES

10:30 Olfactory Receptors in Renal Function and Blood Pressure Control
B. Shepard. Johns Hopkins Univ. Sch. of Med.

11:00 Cilia in Renal Function
B. Yoder. Univ. of Alabama at Birmingham.

11:30 SNARES in Renin Release and Blood Pressure Regulation
M. Mendez. Henry Ford Hosp.

12:00 BBSome Proteins in Hypertension
V.C. Sheffield. Univ. of Iowa.

324. SOLOMON A. BERSON DISTINGUISHED LECTURESHIP OF THE APS ENDOCRINOLOGY AND METABOLISM SECTION

Lecture

MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210A

AMP-Activated Protein Kinase: Promoting Energy Homeostasis at the Cellular and the Whole-Body Levels
G. Hardie. Univ. of Dundee Col. of Life Sci.

325. TARGETING COLONIC CONTENTS FOR TREATMENT OF DISEASE

Featured Topic

(Sponsored by: Gastrointestinal and Liver Physiology Section)

MON. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 208
CHAIR: S.J. KELLY

Microbiome

10:30 Therapeutic Targeting of Bile Acids

11:00 Fecal Microbial Transplant in Treatment of Disease
M. Sadowsky. Univ. of Minnesota, Minneapolis.

11:30 VSL#3 Probiotic Stimulates T-Cell Protein Tyrosine Phosphatase-Mediated Protection of Intestinal Epithelial Barrier Function
M. Krishnan, N. Shah, H. Penrose, R.R. Marchelletta and D.F. McCoile. Univ. of California Riverside and UCSD. (857.1)

12:00 Bile Acids Regulate Colonic Epithelial Defensin Secretion: Implications for Pathogenesis and Therapy of Inflammatory Bowel Disease
N.K. Lajczak, V. Saint-Criq and S.J. Keely. Royal Col. of Surgeons in Ireland. (857.3)

326. EDWARD F. ADOLPH DISTINGUISHED LECTURESHIP OF THE APS ENVIRONMENTAL AND EXERCISE PHYSIOLOGY SECTION

Lecture

MON. 2:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210A

Importance of Physical Activity-Induced Remodeling of Striated Muscle Vasculature in Treatment of T2D
H. Laughlin. Univ. of Missouri-Columbia.

327. CARL W. GOTTSCHALK DISTINGUISHED LECTURESHIP OF THE APS RENAL SECTION

Lecture

MON. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205B

Epithelial Sodium Channels Are Also Sodium Sensors
T.R. Kleyman Univ. of Pittsburgh.
328. COMPARATIVE BIOLOGY OF MITOCHONDRIA: FROM PHYSIOLOGY TO MOLECULES AND BACK

Symposium
(Supported by Seahorse Bioscience)
(Sponsored by: Comparative and Evolutionary Physiology Section)
MON. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 212
CHAIR: M. JASTROCH AND F. PEROCCHI

3:15 Mitochondrial Adaptations to High-altitude Hypoxia G. Scott. McMaster Univ., Canada.
3:45 Mitochondrial Adaptation during Torpor and Hybernation J. Staples. Univ. of Western Ontario.
4:45 Systems-level Understanding of Mitochondrial Signaling by Comparative Biology F. Perocchi. Ludwig Maximilians Univ. of Munich.

329. JOSEPH ERLANGER DISTINGUISHED LECTURESHIP OF THE APS CENTRAL NERVOUS SYSTEM SECTION

Lecture
MON. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205C

Optical Tools for Probing Intact Biological Systems K. Deisseroth. HHMI, Stanford Univ.

330. ORGANOIDS AND PHYSIOLOGY – THE WAY OF THE FUTURE AND BEYOND?

Symposium
(Sponsored by: Cell and Molecular Physiology Section)
MON. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 206B
CHAIR: K.L. HAMILTON AND E. RODRIGUES

Regulation of Epithelial Function


331. PATHOGENESIS OF SUDDEN INFANT DEATH SYNDROME: IS IT JUST A BREATHING DISORDER?

Symposium
(Sponsored by: Respiration Section)
MON. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210A
CHAIR: E. NATTIE AND D.S. PATERSON

3:45 Altered 5-HT Function in Rodent Models Relevant to SIDS K. Cummings. Univ. of Missouri Sch. of Vet. Med.

332. PROTECTING AND RESTORING FUNCTIONAL BETA CELL MASS IN TYPE 1 DIABETES: RESEARCH FROM BENCH TO BEDSIDE

Symposium
(Sponsored by: American Federation for Medical Research)
MON. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 206A
CHAIR: C. EVANS-MOLINA AND P. FUEGER

3:15 Immune Interventions to Preserve Beta Cell Function in Type 1 Diabetes M. Ehlers. Immune Tolerance Network, Bethesda.
3:45 Significance of Beta Cell Regeneration in Type 1 Diabetes R. Kulkarni. Joslin Diabetes Ctr.
4:15 Endoplasmic Reticulum Stress and the Development of Type 1 Diabetes F. Engin. Univ. of Wisconsin-Madison.
4:45 Extending the Honeymoon: Harvesting the Beta Cell’s Endogenous Ability to Regenerate P. Fueger. Indiana Univ.

333. TREATING CARDIOVASCULAR DISEASE WITH EXERCISE: MECHANISTIC INSIGHT TRANSLATED FROM ANIMAL MODELS

Symposium
(Sponsored by: Cardiovascular Section)
MON. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 208
CHAIR: C.A. EMTER AND J. LIBONATI

3:15 Promoting Physiological Growth in a Setting of Pathology L. Leinwand. Univ. of Colorado Boulder.
3:40 Cardiovascular Limits to Exercise Performance in Heart Failure Patients with Preserved or Reduced Ejection Fraction M.J. Haykowsky. Univ. of Alberta.
334. WATER, ELECTROLYTE, AND BLOOD PRESSURE HOMEOSTASIS: NEURAL AND HUMORAL REGULATORS AND STRESSORS

Featured Topic

(Sponsored by: Water and Electrolyte Homeostasis Section)

MON. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 207

CHAIR: J. GAO AND R. VEELKEN


4:00 Sex Differences in the Diurnal Natriuretic Response to a Salt Load in Rats Lacking a Functional ET1 Receptor J.G. Johnston, J.A. Mason, C. Jin, J.S. Speed and D.M. Pollock. Univ. of Alabama at Birmingham. (968.24)


4:30 Differential Effects of Endoplasmic Reticulum Stress on Dipsogenic and Blood Pressure Responses to DOCA-Salt C.D. Sigmund, F. Jo, H. Jo, A.M. Hilzendeger, M.D. Cassell, T. Rutkowski, R.L. Davison and J.L. Grobe. Univ. of Iowa and Cornell Univ. (968.5)


5:00 Glucocorticoids and the Diurnal Rhythm of the Thiazide-Sensitive NaCl Cotransporter J.R. Ivy, E. Aldujaili, P.W. Flatman and M.A. Bailey. Univ. of Edinburgh. (968.1)

335. WHAT'S YOUR MAJOR? THE RISE OF THE UNDERGRADUATE PHYSIOLOGY DEGREE

Symposium

(Sponsored by: Teaching of Physiology Section)

MON. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 211

CHAIR: J.R. HALLIWILL AND E. WEAHRWEIN

Education

3:15 What’s Your Major? The Rise of the Undergraduate Physiology Degree J.R. Halliwill. Univ. of Oregon.

3:20 Undergraduate Degrees in Physiology – Is This a Rebirth of the Field or Something Different? E.J. Henriksen. Univ. of Arizona.

3:45 Physiology Curriculum – What Should Be in at the Undergraduate Level, and What Should Be Out? D.J. McCann. Gonzaga Univ.

4:10 What Methods Are Used to Teach Large and Small Physiology Courses? S. Dawson. Univ. of Oregon.


5:00 Where Do We Go From Here? J.R. Halliwill. Univ. of Oregon.

336. MODERN METHODS TO UNDERSTAND BRAIN CONNECTIONS AND NEURAL FUNCTION

Minisymposium

(Sponsored by: Journal of Neurophysiology and APS Central Nervous System Section)

MON. 4:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205C

CHAIR: K. DEISSEROTH


4:45 DREADD 2.0: An Enhanced Chemogenetic Toolkit B. Roth. Univ. of North Carolina at Chapel Hill.

337. A CONVERSATION WITH DENIS NOBLE AND MICHAEL JOYNER ON THE INTEGRATION OF EVOLUTIONARY BIOLOGY WITH PHYSIOLOGICAL SCIENCE

Special Session

(Sponsored by: APS and The Physiological Society (UK))

MON. 5:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205B

CHAIR: D.J. PATERSON

TUESDAY, MARCH 31
Across Societies – Experimental Biology

339. CAREER DEVELOPMENT WORKSHOPS

Workshop
TUES. 9:00 AM—BOSTON CONVENTION & EXHIBITION CENTER—EXHIBIT HALL B

Career Development
The following workshops will be held in the EB2015/FASEB Career Center. There is no fee or pre-registration associated with the workshops — just walk in and sit down!

Critiquing of CV/Resumes is by appointment and starts at 9:00 AM on Sunday and continues until 3:00 PM on Wednesday. Sign up on-site in the EB2015/FASEB Career Center, Hall B.

9:00 NIH K Awards. H. Khachaturian. NIH.
9:00 Talking about Yourself: How to Interview N. Saul. UCSF.
9:30 Developing your Core Message/“Elevator Pitch” J. Lombardo. Med. Col. of Wisconsin and Marquette Univ.
9:30 Negotiation Strategies for Scientists D. Behrens. Univ. of California, Berkeley.
11:00 Successful Behaviors for Winning an Interview J. Blumenthal. Montgomery Col., Rockville, MD.
1:00 Creating Effective CV’s Cover Letters, Research & Teaching Statements A. Green. Univ. of California, Berkeley.

1:00 Job Search in Academia & Industry D. Behrens. Univ. of California, Berkeley.
1:00 Job Hunting in Biotech Part 1: Finding & Applying for Scientist Positions B. Lindstaedt. UCSF.
1:30 Making the Connection: The Relationship between the Resume, the Interview and the Job J. Blumenthal. Montgomery Col., Rockville, MD.
2:15 NIH F Awards. H. Khachaturian. NIH.
2:30 Handshakes, Eye Contact, Small Talk: How to Successfully Network at a Conference N. Saul. UCSF.
3:00 But I Have No Skills! J. Lombardo. Med. Col. of Wisconsin and Marquette Univ.

340. 2014 TANG PRIZE IN BIOPHARMACEUTICAL SCIENCE

Lecture
(Sponsored by: Tang Prize Foundation)
TUES. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 156BC
CHAIR: SHU CHIEN


Anatomy

341. LET’S GET EDUCATED! HOW ANATOMISTS CAN HELP WITH ACCREDITATION REQUIREMENTS

Symposium
TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 102AB
CHAIR: A. POZNANSKI

Education & Teaching
Education
8:00 341.1 Your Role in Meeting LCME Accreditation Standards B. Barzansky. American Med. Assn., Chicago.
8:30 341.2 Competencies 101: The knowledge, Skills, Behaviors and Attitudes of a Top Notch Anatomy Educator V. Lyons. Geisel Sch. of Med. at Dartmouth.
9:00 341.3 Wide and Deep Preparation for Any Residency? Really? K. Topp. UCSF.

342. THE EVOLUTIONARY TAPESTRY OF VERTEBRATE MORPHOLOGY AND FUNCTION

Symposium
(Cosponsored by: International Society of Vertebrate Morphologists and The Anatomical Record)
TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104AB
CHAIR: L. WITMER

Evolution/Anthropology

8:00 342.1 Evolution of Vertebrate Lung Morphology and Function C. Farmer. Univ. of Utah.
344. ANATOMY EDUCATION PLATFORM 2

Platform
TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 102AB
CHAIR: V. LYONS & T. WILSON

Education & Teaching
Education
Observational Learning and Assessment

10:30 344.1 Are Spot Test Multiple Choice Questions Easier to Answer than Short Answer Questions? T. Wilkinson and H.M. Shaw. Univ. of Dundee and Cardiff Univ.
11:15 344.3 Withdrawn.

345. EVOLUTION AND COMPARATIVE ANATOMY PLATFORM

Platform
TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 104AB
CHAIR: T. FRANZ-ODENDAAL

Evolution/Anthropology

10:30 345.1 Genetic and Environmental Control on Mandibular Form and Function in Mice E.J. Rayfield. Univ. of Bristol Sch. of Earth Sci.
10:45 345.2 Changes in Vertebral Morphology with Increasing Aquatic Adaptation in Crocodylomorphs J.L. Molnar, S.E. Pierce and J.R. Hutchinson. Coastal Carolina Univ., Harvard Univ. and Royal Vet. Col., Hatfield, U.K.
11:00 345.3 Mechanisms of Mammalian Middle Ear Oscillate Transition from the Reptilian Jaw Joint D.J. Urban and K. Sears. Univ. of Illinois at Urbana-Champaign.
11:30 345.5 Using Geometric Morphometrics to Examine Cranial Disparity in Extinct and Extant Marsupial and Placental Carnivores M.R. Borths and K. Corbin. Stony Brook Univ.
346. STEM CELLS, TISSUE ENGINEERING AND REGENERATION PLATFORM

Platform
TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104C

CHAIR: D. MUNNWALD

Regeneration/Tissue Engineering
Regenerative Medicine (Stem Cells, Tissue Regeneration, Biomaterials)


347. BONES, CARTILAGE AND TEETH PLATFORM

Platform
TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 105

CHAIR: R. MARCUOIO


11:00 347.3 FGF and TGFβ Signaling Are Required during Secondary Chondrogenesis in the Jaw Skeleton K.C. Woronowicz, D.Z. Jaal, S.T. Herfat, A.J. Fields, J.C. Lotz and R.A. Schneider. UCSF.


348. KEEP CALM AND CARRY ON EDUCATING

Symposium
(Sponsored by: The Anatomical Society)
TUES. 2:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 102AB

CHAIR: C. SMITH

Education & Teaching

Education


3:30 348.3 The Anatomy Schema Network Nyamse and Parker, Glasgow Caledonian Univ., U.K.

4:00 348.4 Spatial Ability and Learning Anatomy C. Smith. Brighton and Sussex Med. Sch., Univ. of Sussex., U.K.

349. THE DEVELOPMENT AND CONTROL OF VERTEBRATE MORPHOLOGY

Symposium
(Cosponsored by: International Society of Vertebrate Morphologists and The Anatomical Record)
TUES. 2:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104AB

CHAIR: D. ADRIAENS

Evolution/Anthropology

2:30 349.1 Timing the Developmental Origins of Mammalian Limb Diversity K. Sears, J. Maier, R. Behringer, C. Cretekos, J. Rasweiler, S. Zhong and Z. Rapti. Univ. of Illinois at Urbana-Champaign, UCSD, Univ. of Texas MD Anderson Cancer Ctr., Idaho State Univ. and SUNY Downstate Med. Ctr.

3:00 349.2 Origin, Development, Function, and Evolution of Cypriniform Trophic Novelties L.P. Hernandez. George Washington Univ.

3:30 349.3 Sensorimotor Integration in Anatomy and Function during Feeding R. German. Northeast Ohio Med. Univ.
350. BREAKING THE BARRIER: THE GASTROINTESTINAL TRACT IN HEALTH AND INFLAMMATORY BOWEL DISEASE

Symposium
TUES. 2:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104C

CHAIR: A. JURJUS AND I.H. HUSSEIN

Regeneration/Tissue Engineering
Inflammation/Immunity

2:30 350.1 Inflammation in Colorectal Cancer
Inflammatory Bowel Disease, and Diabetes Mellitus: The Link
American Univ. of Beirut and George Washington Univ.

3:00 350.2 Role of Chaperones in Healthy Bowel and IBD
F. Cappello, G. Tomasello, F. Rappa, F. Farina, G. Zummo, E. Conway de Macario and A.J.L. Macario. IEMEST, Palermo, Univ. of Palermo and Univ. of Maryland Baltimore.

3:30 350.3 New Insight in Inflammatory Bowel Disease
Pathophysiology: Current and Future Therapeutic Applications

4:00 350.4 Integrating Histology, Gross Anatomy and Histopathology in a Case Based Approach to Inflammatory Bowel Disease

351. MAKING CONNECTIONS: COMPARATIVE BIOMECHANICS AND EVOLUTION OF JOINTS

Symposium
TUES. 2:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 105

CHAIR: C. HOLLIDAY

Evolution/Anthropology


3:00 351.2 PMJs and TMJs: Convergence in the Craniofacial Joints of Crocodilians and Mammals C. Holliday, K.C. Sellers, L.B. Porro, C.F. Ross, L.M. Witmer and M.K. Vickaryous. Univ. of Missouri-Columbia, Univ. of Bristol Sch. of Earth Sci., Univ. of Chicago, Ohio Univ. and Univ. of Guelph, Canada.

3:30 351.3 Skeletal Kinematics Reveal the Complex Interactions of Degrees of Freedom at Joints Kambic. Harvard Univ.

4:00 351.4 Solutions for Gigantism: Evolutionary and Biomechanical Implications of Dinosaur Hip Joint Soft Tissues H. Tsai, K.M. Middleton and C.M. Holliday. Univ. of Missouri-Columbia.

352. HENRY GRAY SCIENTIFIC AWARD SYMPOSIA

Award Lecture
TUES. 5:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104AB

5:00 352.1 How Anatomical Artifacts Are Leading to Novel Treatments for Osteoporosis D. Burr. Indiana Univ. Sch. of Med.

353. HENRY GRAY DISTINGUISHED EDUCATOR AWARD SYMPOSIA

Award Lecture
TUES. 5:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104AB


354. LADMAN AWARD SYMPOSIA

Award Lecture
TUES. 6:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 104AB

6:00 354.1 Service and Mentoring: The Joy in Academics K. Jones. Indiana Univ. Sch. of Med.
Biochemistry and Molecular Biology

355. ASBMB PLENARY LECTURE AND FRITZ LIPMANN LECTURESHIP

Plenary
TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 253 ABC

8:30 Plenary and Award Lecture Introduction and Award Presentation.
8:35 355.1 Structural, Functional, and Mechanistic Diversity in Protein Ubiquitination R.E. Klevit. Univ. of Washington.

356. DELANO AWARD FOR COMPUTATIONAL BIOSCIENCES LECTURE

Award Lecture
TUES. 8:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 253 ABC

9:05 Award Lecturer Introduction and Award Presentation.
9:10 356.1 Understanding Protein Folding Yields Important Insights into Protein Conformational Change: New Insights into Kinases and GPCRs V. Pande. Stanford Univ.

357. LIPIDS CAUGHT IN ACTION

Symposium
TUES. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 252AB

CHAIR: A. SALIC

Follow the conversation: #lipids

9:45 Chair’s Introduction.
10:30 357.2 Imaging Cellular Protein Fatty Acylation R. Hannoush. Genentech.
10:55 Does PtdIns(4,5)P_2 Concentrate So It Can Multitask? G. Hammond and T. Balla. NICHD, NIH and Univ. of Pittsburgh Sch. of Med. (568.22)
11:50 Discussion.

358. CHEMISTRY OF COMMENSAL BIOLOGY

Symposium
TUES. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 254AB

CHAIR: M. REDINBO

Follow the conversation: #microbiome

9:45 Chair’s Introduction.
9:50 358.1 Expanding the Language of Bacterial Quorum Sensing Using Synthetic Ligands H. Blackwell. Univ. of Wisconsin-Madison.
10:20 Functional Association Profiling of Metabolic Landscape and Microbiome in Chronic Pressure Ulcer Wounds M.C.B. Ammons and V. Copie. Montana State Univ. (575.19)
11:20 358.4 A Milk-Oriented Microbiota (MOM) in Infants: Lessons from your Other MOM D. Mills. Univ. of California, Davis.
11:50 Discussion.

359. REGULATION OF STEM CELL NICHES BY THE EXTRACELLULAR MATRIX

Symposium
TUES. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 257AB

Follow the conversation: #ECM

9:45 Chair’s Introduction.
9:50 359.1 ECM Remodeling Events during EC-Pericyte Tube Co-assembly in 3D Matrices G.E. Davis. Univ. of Missouri Sch. of Med.
10:30 359.2 Mesenchymal Stem Cells: Diseases and Cure S. Shi. Univ. of Pennsylvania Sch. of Dent. Med.
11:25 359.3 Proteolytic Remodeling of the 3D Extracellular Matrix Controls the Nuclear Regulation of Mesenchymal Stem Cell Fate and Function S.J. Weiss. Univ. of Michigan.
11:50 Discussion.
360. ENZYME MODULES AND COMPLEXES

Symposium
TUES. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258A
CHAIR: K. ALLEN

Follow the conversation: #enzyme

9:45 Chair’s Introduction.


10:15 Substrate Specificity and Quaternary Structure of a Novel Class of Tryptophan Synthases F. Busch and R. Sterner. Univ. of Regensburg. (573.5)

10:30 360.2 Quaternary Structure Dynamics in Allostery – Application to Mammalian Phenylalanine Hydroxylase E.K. Jaffe. Fox Chase Cancer Ctr., Temple Univ. Hlth. Syst. (891.2)


11:25 360.3 Mass Spectrometry in Structural Biology: Surface-Induced Dissociation/Ion Mobility of Protein Complexes V.H. Wysocki, R. Quintyn, S. Harvey, Y. Song, J. Yan, Y. Ju, A. Tanimoto and A. Sahasrabuddhe. The Ohio State Univ. (880.28)

11:50 Discussion.

361. CROSSTALK BETWEEN RNA, TRANSCRIPTION AND CHROMATIN

Symposium
TUES. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258B
CHAIR: D. BENTLEY

Follow the conversation: #RNA

9:45 Chair’s Introduction.

9:50 361.1 Biogenesis and Mechanism of Action of Enhancer RNAs R. Shiekhattar. Univ. of Miami.

10:15 Regulation of Chromatin Accessibility by GPS2-Mediated Inhibition of Ubiquitin Signaling on Selected Promoters M.D. Cardamone, B. Tanasa, J. Huang, C. Cederquist, M.G. Rosenfeld and V. Perissi. Boston Univ. Sch. of Med. and UCSD. (880.28)


10:55 An Epigenetic Switch of let-7 Targeted Oncofetal Genes C. Jnjbaptiste, A. Gurtan, V. Lu, A. Bhutkar and P. Sharp. MIT. (562.24)

11:10 The Brahma Chromatin Remodeling Complex and its Multiple Roles in Regulating Circadian Transcription R.S. Kwok, Y.H. Li and J.C. Chiu. Univ. of California, Davis. (877.15)


11:50 Discussion.

362. TRANSPORTERS I – CRYSTALLOGRAPHIC INSIGHT INTO TRANSPORTER MECHANISMS

Symposium
TUES. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258C
CHAIR: S. C. BLANCHARD

Follow the conversation: #protein

9:45 Chair’s Introduction.


10:30 362.2 Wiggle Wiggle Not a Trickle: How Do Membrane Transporters Work (to Concentrate Ions 1000 Fold)? R. Stroud. UCSF.

10:55 Molecular Basis for Substrate and Inhibitor Interactions with the Glycine Transporter, GlyT2 R.J. Vandenberg, J.E. Carland, A. Edington and R.M. Ryan. Univ. of Sydney. (866.6)


11:50 Discussion.

Visit the Exhibits
Sunday – Tuesday
9:00 AM – 4:00 PM
363. INTEGRATING EVOLUTION AND HOMEOSTASIS WITH THE CORE CONCEPTS OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

Symposium
TUES. 9:45 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 256
CHAIR: E. BELL

9:45 RCN-UBE: Integrating Evolution and Homeostasis with the Core Concepts of Biochemistry and Molecular Biology J.E. Bell, A. Aguanno, P. Mertz, M. Johnson and K.M. Fox. Univ. of Richmond, Union Col., NY, Univ. of Alabama, St Mary’s Col. of Maryland and Marymount Manhattan. (559.2)

Presenters:
Small Group Work: Integrating Evolution and Homeostasis into the Core Concepts E. Bell, Univ. of Richmond A. Aguanno, Marymount Manhattan Col.

Group Discussion on Core Concept integration with Homeostasis A. Aguanno, Marymount Manhattan Col.

Small Group Work: Question Development Involving Evolution and Homeostasis M. Johnson, Univ. of Alabama

Group Presentations and Discussion on Question Implementation K. Fox. Union Col.

364. CHEMICAL AND OPTOGENETIC MANIPULATION OF LIPID SIGNALING WORKSHOP

Workshop
(Supported by Avanti Polar Lipids)
TUES. 12:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 251

Refreshments will be enjoyed on a first come, first served basis.

12:30 364.1 Optogenetic Manipulation of Phosphoinositides O. Idevall-Hagren. Uppsala Univ.

365. ASBMB PLENARY LECTURE

Plenary
TUES. 2:45 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 253 ABC

2:45 Plenary Lecturer Introduction.
2:50 365.1 Varying the Terrain of Epigenetic Landscapes: Implications for Human Cancer C.D. Allis. The Rockefeller Univ.

366. PLANT LIPID METABOLISM

Symposium
TUES. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 252AB
CHAIR: J. M. DYER

Follow the conversation: #plants

3:55 Chair’s Introduction.
4:00 366.1 Lipid Transport Involving Chloroplast Envelope Membranes in Plants and Algae C. Benning, A.K. Hurlock and J. Warakanont. Michigan State Univ.
4:25 Systems Analysis of Soybean Seed Development: Lipid Body Ontogeny J.A. Miernyk, R.S. Wilson, M.L. Johnston and J.J. Theilen. USDA, Columbia, Univ. of Missouri-Columbia and Univ. of Missouri-Columbia. (887.9)
4:40 366.2 To Grow or Die: Regulation of Plant Sphingolipid Metabolism E. Cahoon, A.N. Kimberlin, G. Han and T. Dunn. Univ. of Nebraska-Lincoln and Uniformed Svcs. Univ. of Hlth. Sci.
5:20 366.3 New Insights into Biosynthesis of Cuticular Wax L. Kunst. Univ. of British Columbia.
5:35 366.4 Metabolism and Actions of N-Acylethanolamines in Seedling Development K.D. Chapman, J. Keereetaweep and E.B. Blancaflor. Univ. of North Texas and Samuel Roberts Noble Fndn., OK.

367. METABOLISM: WARBURG AT 90

Symposium
TUES. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 254AB
CHAIR: E. A. MAHER

Follow the conversation: #cancer

3:55 Chair’s Introduction.
4:00 367.1 Metabolism, Metabolomics and Cancer D.L. Wishart. Univ. of Alberta.
4:40 367.2 Using Comparative Metabolomics to Target Cancer J.L. Griffin. Univ. of Cambridge and MRC Human Nutr. Res.
5:05 GTP Metabolism Regulates Cancer Cell Invasion M.A. Nikiforov and A. Bianchi-Smiraglia. Roswell Park Cancer Inst. (725.12)
5:35 367.3 Metabolic Complexity of Aggressive Primary and Metastatic Brain Tumors beyond the Warburg Effect: What Substrates Are Fueling the Citric Acid Cycle? E.A. Maher. Univ. of Texas Southwestern Med. Ctr.
6:00 Discussion.
368. MICROBIOME AND MUCOSAL HOMEOSTASIS

Symposium
TUES. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 255

3:55 Chair’s Introduction.
4:00 368.1 Vaginal Microbiota, Racial/Ethnic Groups, and Risk of Preterm Birth B. Foxman, Univ. of Michigan Sch. of Publ. Hlth.
4:30 Proinflammatory Environmental Exposures in Asthma C. Cheah, M. Daines and W. Morgan, Univ. of Arizona. (571.8)
4:45 368.2 Gut Microbiota, Low-Glycemic Inflammation, and Metabolic Syndrome A. Gewirtz, Georgia State Univ.
5:15 Symbiotic Bacterial Metabolites Regulate Gastrointestinal Barrier Function via the Xenobiotic Sensor PXR and Toll-Like Receptor 4 S. Mani and H. Li. Albert Einstein Col. of Med. (575.17)
5:30 368.3 Microbiome in Inner-City Asthma S. Lynch. UCSF.
6:00 Discussion.

369. BIOCHEMISTRY AND SYSTEMS BIOLOGY OF HOST-PATHOGEN INTERACTIONS

Symposium
TUES. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 257AB

CHAIRED: D. M. KRANZ

Follow the conversation: #immunology

3:55 Chair’s Introduction.
4:00 369.1 Metabolomics by Mass Spectrometry-Based Molecular Networking and Spatial Mapping N. Garg, D. Conrad and P.C. Dorrestein. UCSD.
4:25 Rescuing Nod2, an Innate Immune Receptor of Bacterial Cell Wall Fragments, in Crohn Disease C.L. Grimes and V. Mohanan. Univ. of Delaware. (571.19)
5:05 Mapping the DNA and RNA Binding Domains of the HIV Restriction Factor APOBEC3G H.C. Smith, W. McDougall, B. Polevoda, A. Friedman, R. Bennett and R. Stewart. Univ. of Rochester and OyaGen Inc., Rochester. (718.9)
6:00 Discussion.

370. POSTTRANSLATIONAL MODIFICATIONS OF CYSTEINE: LIPIDATION AND OXIDATION

Symposium
TUES. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258A

CHAIRED: G. W. HART

Follow the conversation: #PTMs

3:55 Chair’s Introduction.
4:00 370.1 A Chemical-Proteomic Platform to Investigate Cysteine S-Nitrosation E. Weerapana. Boston Col.
4:40 370.2 Rescuing Cell Polarity with Small Molecule Inhibitors of De-palmitoylation B. Martin. Univ. of Michigan.
6:00 Discussion.

371. DNA TOPOLOGY AND REPAIR

Symposium
TUES. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258B

CHAIRED: L. LINDSEY-BOLTZ

Follow the conversation: #DNA

3:55 Chair’s Introduction.
4:00 371.1 Visualizing Replication and Recombination on Single Molecules of DNA S. Kowalczykowski. Univ. of California, Davis.
4:25 CTCF Protein Recruits Centromeric Protein CENP-E to the Centromeric Regions through Unusual CTCF Binding Sites T. Xiao, P. Wongtrakoonmate, C. Trainer and G. Felsenfeld. NIDDK, NIH. (709.6)
4:40 371.2 Tying Up the Ends: Recognition of ssDNA at Telomeres D.S. Wuttke and T.H. Dickey. Univ. of Colorado Boulder.
5:05 Base Flipping in Lesion Search and Recognition by the Human Thymine DNA Glycosylase Revealed by Single Molecule Imaging I. Tessmer, C.N. Buechner, A. Maiti and A. Drohat. Univ. of Wuerzburg and Univ. of Maryland Baltimore. (879.11)
5:20 Nucleosome Dynamics around a DNA Double Stranded Break during Repair by Gene Conversion M. Tsabar, W.M. Hicks and J.E. Haber. Brandeis Univ. and Harvard Med. Sch. (709.8)

5:35 371.3 Topoisomerase-Induced DNA Cleavage at Ribonucleotide Misincorporation Sites Y. Pommier, S-Y. Huang, J.S. Williams and T.A. Kunkel. NCI, NIH and NIEHS, NIH.

6:00 Discussion.

372. DEFINING PROTEIN DISORDER

Symposium
TUES. 3:55 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258C
CHAIR: S. METALLO

Follow the conversation: #protein

3:55 Chair’s Introduction.

4:00 372.1 Fuzziness – Disorder in Protein Complexes – Imparts Versatility on Signalling M. Fuxreiter. Univ. of Debrecen, Hungary.


4:40 372.2 Assessing Intrinsically Disordered Protein Structure and Function through Carbon Detected NMR S. Showalter, D. Sahu, M. Bastidas and C.W. Lawrence. Penn State.

5:05 Intrinsic Structural Disorder Observed in the Cell Cycle Regulatory GTPase Nucleostemin T.H. Daman and V.L. Robinson. Univ. of Connecticut. (712.4)


5:35 372.3 Disorder in Protein Switches J. Gsponer. Univ. of British Columbia.

6:00 Discussion.

373. ASBMB WOMEN BMB SCIENTISTS PANEL AND NETWORKING EVENT

Special Event
TUES. 6:30 PM—WESTIN BOSTON WATERFRONT, MARINA BALLROOM III
CHAIR: K. ALLEN

Each year, the ASBMB sponsors a session where women scientists reflect on some aspect of their careers or general issues surrounding women’s participation in science. Networking, mentoring, refreshments and fun. ASBMB members and biochemistry attendees welcome.

Nutrition

374. ASN SPONSORED SATELLITE PROGRAM: PAIRING NUTS AND DRIED FRUIT FOR CARDIOMETABOLIC HEALTH

ASN Satellite

(Sponsored by: The Sun-Maid Growers of California and American Pistachio Growers)

TUES. 6:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 52A

375. ASN SPONSORED SATELLITE PROGRAM: SMART SNACKING: WHEN SCIENCE MEETS NUTRITION

ASN Satellite

(Sponsored by: PepsiCo, Inc.)

TUES. 6:30 AM—RENAISSANCE BOSTON WATERFRONT HOTEL, ATLANTIC BALLROOM 123

376. DIET AND IMMUNOMETABOLISM

Symposium

(Sponsored by: Nutritional Immunology RIS and Obesity RIS)

TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM EAST
CHAIR: S.R. SHAikh and L. COLEMAN

Biochemical, Molecular and Genetic Mechanisms


9:40 Adipose Tissue Inflammation and Insulin Sensitivity. A.S. Greenberg. JM-USDA HNRCA at Tufts Univ.
377. IS “WHEN” WE EAT AS IMPORTANT AS “WHAT” WE EAT? – CHRONOBIOLOGICAL ASPECTS OF FOOD INTAKE

Symposium
(Supported by Kellogg Company and PepsiCo, Inc.)
(Sponsored by: Energy and Macronutrient Metabolism RIS and Nutrition Translation RIS)
TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 157ABC
CHAIR: L.M. SANDERS and C.E. O’NEIL

Human Nutrition and Metabolism

8:30 Eat Breakfast Like a King? Meal Timing, Frequency and Composition as a Regulator of Body Clocks. J. Johnston. Univ. of Surrey.
9:00 Impact of Circadian Dysregulation on Food Intake, Gastrointestinal Function and Metabolism – What We’ve Learned from Animal Models. F. Turek. Northwestern Univ.

378. INTERNATIONAL FORUM – CHINA

International Forum
(Sponsored by: Chinese Nutrition Society)
TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 151AB
CHAIR: Y. YUEXIN

379. ENERGY AND MACRONUTRIENT METABOLISM: CARBOHYDRATE METABOLISM

Minisymposium
(Sponsored by: Energy & Macronutrient Metabolism RIS)
TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 152
CHAIR: A. H-M. LIN
COCHAIR: S. LEE

8:00 379.1 High-Carbohydrate Liquid Diet Induced Greater Severity in Hepatic Steatosis and Inflammatory Responses than High-Fat Liquid Diet in Mice X. Li, F. Lian, C. Liu, K. Hu and X-D. Wang. USDA at Tufts Univ., Sch. of Publ. Hlth., Med. Col. of Soochow Univ. and Hangzhou Normal Univ. Sch. of Med., China.
8:15 379.2 Glycemic and Insulinemic Responses Are Blunted by the Consumption of a Smoothie-Type Beverage Containing a Whole-Grain Fiber Composite Ingredient L.E. O’Connor and W.W. Campbell. Purdue Univ.

8:45 379.4 Metabolic Fate of a Fructose Load Ingested Before or After Exercise L. Egli, V. Lecolitre, R. Rosset, J. Cros and L. Tappy. Univ. of Lausanne.
9:00 379.5 Effect of Fermentable Carbohydrate Intake on Body Fat and Metabolic Criteria in U.S. College Students B.M. Navrkal, E.R. Nelson, I.E. Lofgren and K.J. Melanson. Univ. of Rhode Island.

380. DIETARY BIOACTIVE COMPONENTS: DIETARY BIOACTIVE COMPOUNDS OF MEDICINAL, FUNCTIONAL, AND FERMENTED FOODS

Minisymposium
(Sponsored by: Dietary Bioactive Components RIS)
TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153A
CHAIR: J.Y. LEE
COCHAIR: Y.S. CHA

8:00 380.1 Grape Seed Extract Enhances Jejunum Epithelial Differentiation Likely through Suppressing Inflammation in IL10/-/- Mice S. Bibi, Y. Kang, M. Du and M-J. Zhu. Sch. of Food Sci., Washington State Univ., Washington State Univ. and Sch. of Food Sci., Univ. of Idaho.
8:15 380.2 Chemopreventive Effects of North American Cranberry (Vaccinium macrocarpon) on Colitis-Associated Colon Carcinogenesis in Mice X. Wu, M. Song, X. Cai, C. Neto and H. Xiao. Univ. of Massachusetts Amherst and Univ. of Massachusetts Dartmouth.
9:00  380.5  A Comparison of Diets Enriched with Purified Resistant Starch or Resistant Starch in the Form of Whole-Grain Flour in Goto-Kakizaki Rats  

9:15  380.6  A Comparison of Moderate Fat and High Fat Diets Enriched with Purified Resistant Starch or Resistant Starch in the Form of Whole Grain Flour in Rats  
LSU AgCtr., Univ. of California, Davis, Pennington Biomed. Res.Ctr., Ingredion, Bridgewater, NJ and USDA, Davis.

9:30  380.7  The Efficacy of the Probiotic *Bifidobacterium animalis* subsp. *lactis* bb-12 on Regional Gut Transit Times in a Healthy Population  

9:45  380.8  The Safety of Green Tea Extract Supplementation in Postmenopausal Women at Risk for Breast Cancer: Results of the Minnesota Green Tea Trial  
383. AGING: RISK FACTOR MODIFICATION FOR HEALTHY AGING

Minisymposium

(Sponsored by: Aging and Chronic Disease RIS)

TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 154

CHAIR: B. H. ARJMANDI

COCHAIR: E. REVERRI


9:45 383.8 “I Try to Keep That Sugar Down” Homebound Older Adults with Type 2 Diabetes Mellitus: Barriers to Self-Management B.D. Bustillos and J.R. Sharkey. Texas A&M Univ., Sch. of Publ. Hlth.

384. PUBLIC POLICY: NUTRITION POLICIES, PROGRAMS, AND PUBLIC-PRIVATE PARTNERSHIPS

Minisymposium

(Sponsored by: Public Policy Committee)

TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 156A

CHAIR: A. LICHTENSTEIN

COCHAIR: S. OHLHORST

8:00 384.1 Effect of Meeting the Healthy People 2020 Objectives on Diet Quality Relative to Current Trends M.M. Wilson, J. Reedy and S.M. Krebs-Smith. NCI, NIH.


8:45 384.4 Measuring Children’s Milk Acceptance under New School Nutrition Regulations B. Yon and R. Johnson. Univ. of Vermont.


385. OBESITY: GUT MICROBIOME AND OBESITY

Minisymposium

(Sponsored by: Obesity RIS)

TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 156B

CHAIR: D. ALLISON

8:00 385.1 Prebiotics Impact Fecal Microbiota and Gut Physiology in Diet-Induced Obese Mice T-W. Liu, H.D. Holscher, K.D. Cephas, K.R. Kerr, H.F. Mangian, K.A. Tappenden and K.S. Swanson. Univ. of Illinois at Urbana-Champaign.

8:15 385.2 Effects of Elevating Colonic Propionate on Liver Fat Content in Adults with Non-alcoholic Fatty Liver Disease E.S. Chambers, A. Viardot, A. Psichas, D.J. Morrison, K.G. Murphy, S.E.K. Zac-Varghese, T. Preston, C. Tedford, J.D. Bell, L. Thomas, W.S. Dhillo, S.R. Bloom and G.S. Frost. Imperial Col. London, Univ. of Glasgow and Univ. of West of Scotland.


8:45 385.4 High Fat Diet-Induced Obesity Is Associated with Increased Abundance of Pro-inflammatory Lactobacillus In Peyer’S Patches of Small Intestine J. Sun, C. Qi, Y. Qiao, W. Jiang and H. Xiao. Sch. of Food Sci. and Technol., Jiangnan Univ., China and Univ. of Massachusetts Amherst.

9:00 385.5 Whole-Wheat Supplemented Diet Changed Fecal Microbial Ecology of Obese Diabetic Mice E. García-Pérez, I.V. Ivanov, D.A. Mills and G. Noratto. Sch. of Food Sci., Washington State Univ., Texas A&M Univ. and Univ. of California, Davis.


386. AN INTERDISCIPLINARY EXAMINATION OF POTENTIAL EFFECTS OF MATERNAL OBESITY ON LACTATION PHYSIOLOGY AND THE HUMAN MILK MICROBIOME

Symposium

(Supported by Mead Johnson Pediatric Nutrition Institute)

(Sponsored by: Lactation RIS)

TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM EAST

CHAIR: C. LOVELADY AND L.A. NOMMSEN-RIVERS

Pediatric Nutrition and Early Development


11:05 Diet-induced Obesity Compromises Lactation by Redistributing Zn Pools and Promoting Premature Involution. S.L. Kelleher. Penn State Hershey Col. of Med.

11:35 The Human Milk Microbiome May Be Influenced By Maternal Obesity. M.C.Collado. Inst. of Agrochemistry and Food Tech., Spanish Nat’l Res Council (IATA-CSIC)

12:05 Differences in Bioactive Components in Milk between Lean and Overweight Women and Their Relationship to Infant Body Composition. B.V. Young. Univ. of Colorado.

387. FOOD AND NUTRITION BOARD UPDATE: NEW DIRECTIONS IN FOOD, NUTRITION, AND POPULATION HEALTH

Symposium

TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 157ABC

CHAIR: A.L. YAKTINE AND S.P. MURPHY

Global and Public Health Nutrition


389. ENERGY AND MACRONUTRIENT METABOLISM: METABOLIC PHENOTYPING, METABOLOMICS AND BIOMARKERS

Minisymposium
(Sponsored by: Energy & Macronutrient Metabolism RIS)
TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 152
CHAIRMEN: G. Cline
COCHAIRMEN: M. Puchowicz

11:15 389.4 Low Serum Sphingolipids in Attention Deficit Hyperactivity Disorder M. Henriquez-Henriquez, S. Solari, F. Allende, T. Quiroga, B. Kim, R.J. Deckelbaum and T.S. Worgall. Col. of P&S, Columbia Univ., Pontifical Catholic Univ. of Chile, Santiago and Colmbia Univ.
11:30 389.5 Serum Metabolomic Response to Vitamin E Supplementation in a Controlled Cancer Prevention Trial D. Albanes, S. Moore, S. Weinstein and A. Mondul. NCI, NIH.

391. GLOBAL NUTRITION: UNDERSTANDING PATHWAYS TO INTERVENTION IMPACT

Minisymposium

(Sponsored by: Global Nutrition Council)

TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153B

CHAIR: B. Rogers

COCHAIR: E. Monterrosa


11:00 391.3 Availability and Intake of Foods with Naturally Occurring or Added Vitamin D in a Setting of High Vitamin D Deficiency M.B. Cooper, S.S. Shanta, A.A. Mahmud, D.E. Roth and A.D. Gernand. Penn State, ICDDR, Bangladesh and Univ. of Toronto & Hosp. for Sick Children.


392. NUTRITION ACROSS THE LIFESPAN

Minisymposium

(Sponsored by: Aging and Chronic Disease RIS)

(Sponsored by: Obesity RIS and Nutrition Translation RIS)

TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153C

CHAIR: C. Sceppa and C. Tangney


11:45 392.6 EEG Measures of Brain Function during a Memory Task Successfully Assesses Memory in 4-6 Month Old Infants and May Reveal Associations between Early Iron Status and Memory Development J.E.H. Nevins, S.M. Stoyell, S.S. Robertson, R.L. Canfield and J.D. Haas. Cornell Univ.


393. MEDICAL NUTRITION: NUTRITION AND INFLAMMATION

Minisymposium
(Sponsored by: Medical Nutrition Council)
TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 154
CHAIR: P. KRIS-ETHERTON


11:30 393.5 Postprandial Endotoxemia Increases with Fat Amount in Obese Men: Inflammatory Impact of LPS Handling M-C. Michalski, C. Vors, G. Pineau, J. Drai, C. Malpuech-Brugère and H. Vidal. INSERM U1060, Univ. Lyon 1 and INRA, Clermont Ferrand, France.


12:00 393.7 The cAMP Responsive Element Binding Protein H Links Metabolic Inflammation with Hyperlipidemia in Hepatic Insulin Resistance. M. Zhao, X. Tong and Q. Su. Univ. of Nebraska -Lincoln.


394. DIET AND CANCER: FAT VERSUS FIBER IN COLON CANCER: OPPOSITE IN THE END?

Minisymposium
(Sponsored by: Diet and Cancer RIS)
TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 156A
CHAIR: J. FENTON
COCHAIR: D.R. DONOHOE


11:00 394.3 Epigenetic Mechanisms by Which Chemoprotective Natural Compounds Promote RXR/FXR Signaling and Reduce Colon Cancer Progression. K. Triff, J. Knight, I. Ivanov, B. Zhou and R. Chapkin. Texas A&M Univ.


11:30 394.5 Pro-inflammatory Cytokine, IL-1B, Diminishes Butyrate Oxidation in Colorectal Cancer Cells. M. Johnstone and D.D. Donohoe. Univ. of Tennessee, Knoxville.

11:45 394.6 Carnitine Is a Pivotal Contributor for Butyrate Oxidation in Colon Cancer Cells. A. Han and D.R. Donohoe. Univ. of Tennessee, Knoxville.

12:00 394.7 Dried Plums Modify Colon Microbiota Composition and Spatial Distribution, and Protect against Chemically-Induced Carcinogenesis. D.V. Seidel, K.K. Hicks, S.S. Taddeo, M.A. Azcarate-Peril, R.J. Carroll and N.D. Turner. Texas A&M Univ. and Univ. of North Carolina at Chapel Hill.

395. NUTRITION EDUCATION AND BEHAVIOR SCIENCE: DEVELOPING HEALTHY EATING AND PHYSICAL ACTIVITY BEHAVIORS ACROSS THE LIFESpan

Minisymposium

(Sponsored by: Nutrition Education and Behavior Science RIS)

TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 156B

CHAIR: J. BANNA

COCHAIR: K. OYELOLA


11:00 395.3 Reliability and Validity of an Online Questionnaire to Measure Food Literacy in Primary School Children S.A. Skeaff and T.G. O’Sullivan. Univ. of Otago, New Zealand.


11:30 395.5 Beliefs Regarding Weight Gain during Pregnancy among Participants of the Special Suplemental Nutrition Program for Women, Infants and Children (S.A. Skeaff and T.G. O’Sullivan. Univ. of Otago, New Zealand.


12:15 395.8 Use of a Systematic 3-Pronged Evaluation to Measure, Monitor, and Test Fidelity of the 5-State iCook 4-H Program D. Mathews, L. Franzien-Castle, K. Kettelmann, S. Colby, M. Olflert and A. White. Univ. of Maine, Univ. of Nebraska-Lincoln, South Dakota State Univ., Univ. of Tennessee, Knoxville and West Virginia Univ.

396. W.O. ATWATER MEMORIAL LECTURE

Award Lecture

(Supported by USDA ARS, Beltsville)

TUES. 12:45 PM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM EAST

12:45 Introduction.

1:00 Food Is Not a Talisman: Reflections on the Science and Practice of Nutrition J.L. Slavin. Univ. of Minnesota.

397. INTERNATIONAL FORUM – TAIWAN

International Forum

(Sponsored by: Nutrition Society of Taiwan)

TUES. 12:45 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 151AB

CHAIR: H.C. Lo and F.Y. Tang

12:45 Activities of the Nutrition Society of Taiwan in the Past 40 years G-S.W. Hsu. Fu Jen Catholic Univ.

1:00 Nutrition Policy of Government in Taiwan TBD.


2:00 Panel Discussion.

398. PEDIATRIC NEUROCOGNITIVE DEVELOPMENT: EMERGING INSIGHTS AND APPLICATIONS IN NUTRITION

Symposium

(Supported by University of Illinois at Urbana-Champaign’s Center for Nutrition, Learning and Memory, which is sponsored by Abbott Nutrition)

(Sponsored by: Nutrition Translation RIS and Endorsed by Global Nutrition Council, Nutritional Sciences Council and Lactation RIS)

TUES. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM EAST

CHAIR: M. ALONSO-ALONSO and E.C. RADOLOWSKI

Pediatric Nutrition and Early Development

3:00 Diet and Cognition: Overview of Influences and Current Directions N.J. Cohen and N.A. Khan. Univ. of Illinois at Urbana-Champaign.


399. IMPROVING CARDIO-SKELETAL HEALTH BY EXPLORING THE HEART - BONE CONNECTION

Symposium
(Supported by National Dairy Council)
Tues. 3:00 pm—Boston Convention & Exhibition Center, Room 157ABC

Chair: C.M. Weaver

Diet and Non-Communicable Diseases
3:00 The Impact of Dietary Calcium and Vitamin D on the Heart and Bone C.M. Weaver. Purdue Univ.
3:25 Racial Differences and the Impact of Nutrition in Osteoporosis, CVD and Chronic Kidney Disease R. Bailey. NIH.
3:50 The Role of Dietary Phosphorus in Kidney, Cardiovascular, and Bone Health K. Hill Gallant. Purdue Univ.
4:40 Panel Discussion.

400. HISTORY OF NUTRITION: THE LONG ROAD LEADING TO THE DIETARY REFERENCE INTAKES

Symposium
(Sponsored by: History of Nutrition Committee)
Tues. 3:00 pm—Boston Convention & Exhibition Center, Room 151AB

Chair: F.H. Nielsen and A.L. Yaktine

Education Track
3:00 The Advent of the DRI Paradigm: Why it Improved on the RDAs A.A. Yates.
3:20 Conventions and Controversies in Setting the DRIs S.A. Atkinson. McMaster Univ., Canada.
3:40 The Expanded Uses of the DRIs S.J. Barr. Univ. of British Columbia.
4:00 How the DRIs Have Changed Nutrition Policies J.T. Dwyer. NIH.
4:20 Current and Projected Development of the DRIs S.P. Murphy. Univ. of Hawaii Cancer Ctr.

401. ENERGY AND MACRONUTRIENT METABOLISM: DIETARY FATTY ACIDS AND HEALTH

Minisymposium
(Sponsored by: Energy & Macronutrient Metabolism RIS)
Tues. 3:00 pm—Boston Convention & Exhibition Center, Room 152

Chair: E. Parks

3:00 401.1 Omega-3 Fatty Acids Modify Treatment Effect of High-Dose B Vitamins in Cognitively Impaired Elderly F. Jernerén, A.K. Elshorbagy, A. Oulhaj, S.M. Smith, H. Refsum and D. Smith. Univ. of Oxford, Univ. of Alexandria, United Arab Emirates Univ. and Univ. of Oslo.
4:00 401.5 The Effects of Hypogonadism and Conjugated Linoleic Acid on Regional Adipose Tissue and Fatty Acid Composition in Male Guinea Pigs S. Santosa, S. Yang, H. Weller, J. DeGuire and S. Agellon. Concordia Univ., Montreal and Sch. of Dietetics and Human Nutr., McGill Univ.
4:30 401.7 Consumption of Ahiflower Oil Is Safe and Increases Tissue EPA Levels Compared to Flaxseed Oil – Results of a Phase I Clinical Trial M-A. Giroux and M.E. Surette. Univ. of Moncton, Dr. G.L. Dumont Hosp., Moncton, Canada and Univ. of Quebec at Rimouski.
4:45 401.8 Omega-3 Polynsaturated Fatty Acids Have Sex-Specific Effects on the Phospholipid Fatty Acid Composition and Neurotrophin Expression in the Brain of C57BL/6 Mice B.A. Feltham, K.A. Balogun and S.K. Cheema. Mem. Univ. of Newfoundland.
402. DIETARY BIOACTIVE COMPONENTS: EFFECTS OF DIETARY BIOACTIVE COMPONENTS IN ANIMAL MODELS OF OBESITY AND CARDIODIABETIC RISK

Minisymposium

(Sponsored by: Dietary Bioactive Components RIS)

TUES. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153A

CHAIR: O. CHEN

COCHAIR: S. WANG


3:30 402.3 Carnosic Acid as the Major Bioactive Component in Rosemary Extract Ameliorates High-Fat Diet-Induced Obesity and Metabolic Syndrome in Mice Y. Zhao, R. Sedighi, P. Wang, H. Chen, Y. Zhu and S. Sang. North Carolina A&T State Univ.


4:00 402.5 The Effect of EGCG and EGCG Nanoparticles on Body Weight and Body Composition in LDL Receptor Null Mice Y. Zu, J. Zhang, S. Nie and S. Wang. Texas Tech Univ.

4:15 402.6 Ellagic Acid Supplementation Attenuates Sucrose-Induced Obesity and Metabolic Complication in C57BL/6 Mice I. Kang, T.P. Carr and S. Chung. Univ. of Nebraska-Lincoln.


4:45 402.8 Oxyresveratrol Normalized Body Weight Gain and Feed Efficiency of Mice Fed High-Fat Diet E.T.S. Li, H.Y. Tan and M.F. Wang. Sch. of Biol. Sci., The Univ. of Hong Kong.

403. GLOBAL NUTRITION: RECENT ADVANCES IN BIOMARKER DEVELOPMENT AND USE

Minisymposium

(Sponsored by: Global Nutrition Council)

TUES. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153B

CHAIR: A. PRENTICE

COCHAIR: G. AARON


4:45 403.8 Sensitivity and Specificity of Serum Retinol in Determining Vitamin A Deficiency D. Suri, J. Tanumihardjo, B. Gannon and S. Tanumihardjo. Univ. of Wisconsin-Madison.
404. NUTRITION ACROSS THE LIFESPAN: EARLY CHILDHOOD NUTRITION

Minisymposium
TUES. 3:00 PM — BOSTON CONVENTION & EXHIBITION CENTER, ROOM 153C
CHAIR: D. RAITEN

3:00 Chair’s Introduction.
3:30 404.2 Complementary Feeding Pattern Reduces the Impact of Diarrhea on Relative Weight: A Longitudinal Analysis of the Interaction of Diet and Diarrhea on Weight-for-Length in Cebu Infants M. Wright and L. Adair. Univ. of North Carolina at Chapel Hill.
3:45 404.3 Lyophilization of Infant-Formula Samples Collected from Low-Income Mothers at ~2 Months of Infant Age K.F. Kavanagh, Z. Lou, J.L. Burney, B.P. Greer, K.M. Bower and J.C. Nicklas. Univ. of Tennessee, Knoxville and WIC, City and County of Broomfield, CO.

405. NUTRIENT-GENE INTERACTIONS: OBESITY AND INFLAMMATION

Minisymposium
(Sponsored by: Nutrient-Gene Interactions RIS)
TUES. 3:00 PM — BOSTON CONVENTION & EXHIBITION CENTER, ROOM 154
CHAIR: M. HAMADEH
COCHAIR: J. BAUM

3:00 405.1 Macronutrients Differentially Regulate PFKFB3 Expression and Increase Inflammation in Intestinal Epithelial Cells R. Botchlett, X. Hu, T. Qi, J. Zhao, H. Li and C. Wu. Texas A&M Univ.
3:15 405.2 Tocotrienol Attenuates Insulin Resistance through Inhibition of Nlrp3 Inflammasome Activation in Diabetic Leptin Receptor Knockout Mice S. Chung and W. Wang. Univ. of Nebraska-Lincoln.
4:00 405.5 Diverse Classes of Bitter Phytochemicals Modulate Carbohydrate Metabolism and Immune Responses through Gastrointestinal Bitter Taste Receptors K. Palatini, M. Wilson, J. Alley, D. Esposito and S. Komarnytsky. North Carolina State Univ., Kannapolis and Raleigh and Appalachian State Univ.
4:30 405.7 Chronic Activation of Pattern Recognition Receptors Suppresses Brown Adipogenesis of Multipotent Mesodermal Stem Cells and Brown Preadipocytes L. Zhao, J. Bae and J. Chen. Univ. of Tennessee, Knoxville.

Symposium
(Sponsored by: ASIP Liver Pathobiology and Regenerative Medicine Scientific Interest Groups)
TUES. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 161
CHAIRED: S.P.S. MONGA

Liver Pathobiology
Regenerative Medicine

8:30 Liver Regeneration: Adult Liver Cells as Facultative Progenitors G.K. Michalopoulos. Univ. of Pittsburgh.
9:00 Role of Non-parenchymal Cells in Hepatic Homeostasis and Regeneration: Wnt/β-Catenin Perspective S.P.S. Monga. Univ. of Pittsburgh.

10:30 iPS Cells to Hepatocytes: Novel Innovations in Stem Cell Differentiation and Tissue Engineering S.N. Bhatia. MIT.

408. MODULATORS OF ENDOTHELIAL CELL INFLAMMATION AND ANGIOGENESIS

Symposium
(Sponsored by: ASIP Vascular and Mucosal Pathobiology (VAMP) Scientific Interest Group)
TUES. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 160A/B
CHAIRED: T.N. MAYADAS AND P. ALCAIDE

Inflammation
Vascular Biology
Inflammation/Immunity

8:30 Introduction.
8:35 The Endothelium as a Target of Controlling Inflammation and Immunity J.S. Pober. Yale Univ. Sch. of Med.
9:05 miRNA Regulation of NF-κB and Insulin Signaling in Endothelial Inflammation M.W. Feinberg. Brigham and Women’s Hosp.
10:30  Mechanisms of miR-mediated Endothelial KLF4 and NFκB Regulation by Hemodynamics in vivo and in vitro P.F. Davies. Univ. of Pennsylvania.
11:00  Regulation of Angiogenic Functions of Endothelial Cells by microRNAs Y. Suarez. Yale Univ. Sch. of Med.

409. MOLECULAR AND CELLULAR BASIS OF DISEASE: NEOPLASIA MORNINGS: CROSSROADS OF CANCER GENETICS AND EPIGENETICS

Symposium
(Sponsored by: ASIP Neoplasia/Growth Regulation Scientific Interest Group)
TUES. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 162A
CHAIR: J. Pollack and W.M. Puszyk

Neoplasia
Cancer Biology
8:40  Disrupted Cytosine Methylation in Leukemogenesis: Linking Metabolism to Epigenetics M.E. Figueroa. Univ. of Michigan.
9:20  Histone Mutations as Cancer Drivers P.W. Lewis. Univ. of Wisconsin.
10:00 Targeting Histone Methylation in Cancer S.A. Armstrong. Mem. Sloan Kettering Cancer Ctr.

410. CELL INJURY WORKSHOP: SCARS AND SOUVENIRS: INFLAMMATION AND FIBROSIS IN THE HEART, LUNG, AND SKIN

Workshop
(Sponsored by: ASIP Cell Injury Scientific Interest Group)
TUES. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 162B
CHAIR: C.C. Yates and M.S. Willis

Cell and Tissue Injury
Cardiac Pathobiology
Injury/Connective Tissue/Fibrosis
10:45 Pulmonary Fibrosis – It’s Personal D. Kass Univ. of Pittsburgh.
10:00  Scars on my Heart: Understanding the Molecular Pathogenesis of Cardiac Fibrosis as a Therapeutic Target M.S. Willis. Univ. of North Carolina at Chapel Hill Sch. of Med.

411. MECHANISMS OF OXIDANT-INDUCED LUNG INJURY AND DISEASE

Minisymposium
TUES. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 160C
CHAIR: J. Dye and J. Chao

Pulmonary Pathobiology
Injury/Connective Tissue/Fibrosis
9:15  411.4  Combination Treatment with Histone Deacetylase 3 and 6 Selective Inhibitors Attenuates Lipopolysaccharide-Induced Acute Lung Injury in Mice. C.D. Birmpas, A.D. Joshi, N. Barabutis, G. Thangjam, B.W. Gregory and J.D. Katravas. Old Dominion Univ.
10:00  411.7  Effects of Aging and Respiratory Syncytial Virus Infection on the uPA/Plasmin System in Pulmonary Fibrosis M. Gharae-Kermani, M.R. Gyetko and J.A. Macoska. Univ. of Massachusetts and Ann Arbor VA Hosp. and Univ. of Michigan.
10:15  411.8  Incidence of Pulmonary Fibrosis in Lungs of CUX-1 Transgenic Mice S. Helgeson, E. Harris, B. Herndon, G. Vanden Heuvel, R. Baybutt and A. Molteni. Sch. of Med., Univ. of Missouri-Kansas City, Wheaton Col., IL and Sch. of Med., Western Michigan Univ.
10:30  411.9  MCP-1-Induced Protein Promotes Human Pulmonary Fibroblast Migration Induced by SiO₂ via MAPKs and PI3K Signaling J. Chao, H. Liu, X. Dai, X. Wang, T. Yun, X. Liu, Q. Yin and H. Yao. Med. Sch., Southeast Univ., Nanjing, China.

Visit the Exhibits
Sunday – Tuesday
9:00 AM – 4:00 PM
412. HIGH SCHOOL TEACHER SESSION: SCIENTIFIC SLEUTHING OF HUMAN DISEASE FOR HIGH SCHOOL TEACHERS

Special Session

(Sponsored by: ASIP Education Committee and Intersociety Council for Pathology Information)

Tues. 9:30 am—Westin Boston Waterfront, Marina I

Chair: K. Nejak-Bowen and M.B. Furie

Pulmonary Pathobiology
Regenerative Medicine
Inflammation/Immunity

9:30 Check In and Light Snack.
10:00 Welcome and Introductions K. Nejak-Bowen. Univ. of Pittsburgh.
10:20 Menacing Microbes: Emerging Infectious Diseases M.B. Furie. Stony Brook Univ.
12:15 Stem Cells: A Case of Dr. Jekyll and Mr. Hyde S.P.S. Monga. Univ. of Pittsburgh.
1:15 Tour the Exhibits at the Boston Convention and Exhibition Center.

413. LUNCH AND LEARN: THE ETHICS OF PERSONALIZED MEDICINE: QUANDARIES AMONG THE POSSIBILITIES

Special Session

(Sponsored by an unrestricted educational grant from Elsevier)

(Sponsored by: ASIP Education Committee)

Tues. 11:45 am—Westin Boston Waterfront, Marina IV

Chair: W. Mars, D.A. Milner and R.N. Mitchell

Education

11:45 Introduction.
12:00 Personalized Medicine: Can We Distinguish the Hope and the Hype? D.S. Jones. Harvard Med. Sch.
12:25 Identity Crisis-Helping Trainees Manage the Tension Between Patient Privacy and the Promise of Personalized Medicine J.P. Horn. Univ. of Pittsburgh.
1:15 Round Table Discussion.

414. EPITHELIAL JUNCTIONS, POLARITY AND CANCER

Symposium

(Sponsored by: ASIP Vascular and Mucosal Pathobiology (VAMP) Scientific Interest Group)

Tues. 2:00 pm—Boston Convention & Exhibition Center, Room 160A/B

Chair: A.I. Ivanov and A. Nusrat

Epithelial Pathobiology
Neoplasia
Cancer Biology

2:00 Tumor Suppressor Function of Alpha-Catenin in Squamous Cell Carcinoma V. Vasioukhin. Fred Hutchinson Cancer Res. Ctr.
3:30 Polarity Proteins Suppress Tumorigenesis Through Spatial Restriction of Signaling I.G. Macara. Univ. of Virginia Sch. of Med.
4:15 Control of Malignant Behavior By Claudins S.B. Howell. UCSD.

415. SCVP SYMPOSIUM: PROTEIN MISFOLDING IN THE HEART: CONFORMATION CARDIOMYOPATHIES

Symposium

(Supported by an unrestricted educational grant from Elsevier)

(Sponsored by: The Society for Cardiovascular Pathology)

Tues. 2:00 pm—Boston Convention & Exhibition Center, Room 162A

Chair: J.R. Stone and M.S. Willis

Cardiac Pathobiology

2:00 The Translational Science of Transthyretin-Associated Cardiomyopathies L.H. Connors. Boston Univ. Sch. of Med.
2:35 Tafamidis, A Pharmacological Chaperone Therapy for Transthyretin Amyloidosis C. Bulawa. Pfizer.
3:10 From Heart to Brain – Chemical and Genetic Modifiers of Protein Aggregation I.A. Graef. Stanford Sch. of Med.
416. CELLULAR AND MOLECULAR MECHANISMS OF LIVER REPAIR

Minisymposium
TUES. 2:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 161
CHAIRMED: U. APTE AND G.K. MICHALOPOULOS

Liver Pathobiology
2:00 416.1 Cell-Specific Wnts Regulate Liver Zonation and Regeneration after Partial Hepatectomy M. Preziosi, J. Yang, H. Okabe, C. Diegel, B.O. Williams and S.P. Monga. Univ. of Pittsburgh and Van Andel Inst., Grand Rapids, MI.


2:30 416.3 Attenuation of the Inflammatory Response after Acetaminophen-Induced Injury by Human Mesenchymal Stem Cell-Derived Hepatocytes in Mice P. Stock, S. Brückner, S. Winkler, M. Dollinger and B. Christ. Univ. of Leipzig and Univ. Hosp. Ulm, Germany.


3:15 416.6 Reprogramming Factor OCT4 Is Crucial for Transdifferentiation of Hepatocytes to Biliary Epithelial Cells V. Bhave, M. Doffou, G. Adams, W.C. Bowen, S. Donthamsetty and G. Michalopoulos. PCOM Sch. of Pharm., Univ. of Pittsburgh Sch. of Med. and Georgia State Univ.

3:30 416.7 Wnt/Beta-Catenin Cooperates with Yap Signaling to Promote Hepatobiliary Repair in a Model of Chronic Liver Injury K. Nejak-Bowen, H. Okabe and S.P. Monga. Univ. of Pittsburgh.


417. EXPLORING AND DEFINING BIOMARKERS IN CANCER

Minisymposium
TUES. 2:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 162B
CHAIRMED: T. GIORDANO

Cancer Biology
2:00 Introductory Remarks.

2:05 417.1 Trefoil Factor Family 1 Inhibit the Invasion of Tumor Cells of the Pancreas J. Yamaguchi, T. Kokuryo, Y. Yokoyama and M. Nagino. Nagoya Univ. Grad. Sch. of Med.


418. VASCULAR CELL BIOLOGY AND MOLECULAR MECHANISMS OF DISEASE

Minisymposium
TUES. 2:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 160C
CHAIR: P.A. D’AMORE AND D. SULLIVAN

Vascular Biology

Cardiac Pathobiology


3:00 418.5 The Mechanosensitive MicroRNA-712, Induced by Disturbed Blood Flow in Endothelium, Plays a Key Role in Atherosclerosis S. Kumar, D.J. Son, C. Kim and H. Jo. Emory Univ.

3:15 418.6 Destabilization of Endothelial Cell-Cell Contacts Modifies Inflammatory Responses A.J. Glading, M. Corr, I. Lerman, I.H. Sarelius and J. Kuebel. Univ. of Rochester and UCSD.


419. MOLECULAR DIAGNOSTIC SCIENTIFIC INTEREST GROUP POSTER DISCUSSION AND NETWORKING SESSION

Poster Discussion
(Sponsored by: ASIP Molecular Diagnostic Pathology Scientific Interest Group)
TUES. 5:30 PM—RENAISSANCE BOSTON WATERFRONT HOTEL, PACIFIC GRAND BALLROOM ABCD

Neoplasia

Cancer Biology


Caveolin-1 Loss in Human Breast Cancer Is Associated with Increased Tumor Aggressiveness and Mortality P.C. Hart, R.D. Minshall and M.G. Bonini. Univ. of Illinois at Chicago. (284.6)


Anti-ALK Antibody for Cancer Diagnosis and Prognosis A.J. Glading, M. Corr, I. Lerman, I.H. Sarelius and J. Kuebel. Univ. of Rochester and UCSD.


Nuclear Localization of β-Catenin Associates EMT with Aggressive Vulvar Squamous Cell Carcinoma E.R. Holthoff, S. Jeffus, T. Kelly, C.M. Quick and S. Post. Univ. of Arkansas for Med. Sci. (147.3)
420. GENE EXPRESSION SCIENTIFIC INTEREST GROUP POSTER DISCUSSION AND NETWORKING SESSION

Poster Discussion

(Sponsored by: ASIP Gene Expression Scientific Interest Group)

TUES. 5:30 PM—RENAISSANCE BOSTON WATERFRONT HOTEL, PACIFIC GRAND BALLROOM ABCD

Neoplasia
Cancer Biology


P8 CTBP-BRCA1 Modulates Epithelial Cell Fate in Breast Cancer J.S. Byun and K. Gardner. NCI, NIH. (926.5)

P9 Epigenetic Modification of Von Willebrand Factor Leads to Its Expression in Cancer Cells with Increased Metastatic Activity A. Mojiri, D. Eisenstat, J. Lewis, K. Stoletov, K.C. Simmen and N. Jahroudi. Univ. of Alberta. (143.3)

P10 The Role of TarA in Regulating Gene Expression and Physiological Processes in Vibrio cholerae V.Y. Vargas-Zapata, M.E. Taveirne and V.J. DiRita. Univ. of Puerto Rico Ponce and Univ. of Michigan. (766.14)


P12 ΔNp63 Regulates HTRA4 Expression during Extravillous Trophoblast Differentiation Y. Li, M. Parast, M. Moretto Zita and F. Soncin. UCSD. (927.3)

P13 The Mechanosensitive MicroRNA-712, Induced by Disturbed Blood Flow in Endothelium, Plays a Key Role in Atherosclerosis S. Kumar, D.J. Son, C. Kim and H. Jo. Emory Univ. (418.5)

421. BIOBANKING SCIENTIFIC INTEREST GROUP POSTER DISCUSSION AND NETWORKING SESSION

Poster Discussion

(Sponsored by: ASIP Biobanking Scientific Interest Group)

TUES. 5:30 PM—RENAISSANCE BOSTON WATERFRONT HOTEL, PACIFIC GRAND BALLROOM ABCD

Biomarkers and Biobanking

Imaging, Immunohistochemistry and Microscopy

Injury/Connective Tissue/Fibrosis


P15 Urinary Biomarkers of Oxidative Stress and Insulin Resistance in Childhood Obesity N. Ramachandra, L. Rodriguez and S. Devaraj. Baylor Col. of Med. and Univ. of Houston. (927.2)


P17 Cryosectioning Method for Microdissection of Murine Colonic Mucosa C.T. Capaldo, A.E. Farkas and A. Nusrat. Emory Univ. (765.3)

P18 Immunohistochemical Analysis of LGR5 Expression in Pediatric Liver Disease Z. Khan, A. Orr, G.K. Michalopoulos and S. Ranganathan. Children’s Hosp. of Pittsburgh and Univ. of Pittsburgh Sch. of Med. (45.1)


P22 Mitochondria in Renal Tubules: Light Microscopic, Immunohistochemical and Enzyme Activity Analysis Z. Zsengeller and S. Rosen. Beth Israel Deaconess Med. Ctr. (762.5)
**422. BREAST CANCER SCIENTIFIC INTEREST GROUP POSTER DISCUSSION AND NETWORKING SESSION**

**Poster Discussion**

*Sponsored by: ASIP Breast Cancer Scientific Interest Group*

**TUES. 5:30 PM—RENAISSANCE BOSTON WATERFRONT HOTEL, PACIFIC GRAND BALLROOM ABCD**

**Neoplasia**

**Epithelial Pathobiology**

**Cancer Biology**


P28 Leptin as a Mediator of Tumor-Stromal Interactions Promotes Breast Cancer Stem Cell Activity S. Catalano, C. Giordano, S. Panza, F.C. Chemi, I. Barone, D. Bonofiglio, A. Cordella, A. Hashim, B. Simoes, R. Clarke, A. Weisz and S. Andò. Univ. of Calabria, Fndn. IRCCS, Naples, Univ. of Salerno, Italy and Univ. of Manchester. (284.5)


P30 Exploring Molecular and Morphological Relationships between Obesity and CtBP in Breast Cancer S.S. Park, D.I. Yi, G. Liang, T. Yan, S. Ambs, J.S. Byun and K. Gardner. NCI, NIH. (926.4)

P31 CtBP-BRCA1 Modulates Epithelial Cell Fate in Breast Cancer J.S. Byun and K. Gardner. NCI, NIH. (926.5)


P33 Therapeutic Benefit of Chemotherapy and Hormone Therapy among Estrogen Response Signature-Positive ER+/PR+/HER2- Breast Cancers R. Sandhu, J.S. Parker, C.K. Anders and W.B. Coleman. Univ. of North Carolina at Chapel Hill Sch. of Med. (926.6)

**423. CLUB HEPATOMANIA (LIVER PATHOBIOLOGY) SCIENTIFIC INTEREST GROUP POSTER DISCUSSION AND NETWORKING SESSION**

**Poster Discussion**

*Sponsored by: ASIP Liver Pathobiology Scientific Interest Group*

**TUES. 5:30 PM—RENAISSANCE BOSTON WATERFRONT HOTEL, PACIFIC GRAND BALLROOM ABCD**

**Liver Pathobiology**

**Injury/Connective Tissue/Fibrosis**

P38 15-PGDH Prevents LPS-induced Acute Liver Injury through Activation PPAR-γ L. Yao, C. Han and T. Wu. Tulane Univ. Sch. of Med. (53.1)


P40 Mitochondrial-Targeted Antioxidant Treatment in a Mouse Model of Non-alcoholic Fatty Liver Disease M.D. Thompson, M. Cismowski, H.K. Bid and P.A. Lucchesi. Nationwide Children’s Hosp., Columbus. (53.3)

P41 Integrated Computational Model of Intracellular Signaling and MicroRNA Regulation Predicts the Molecular Components and Timing Critical to Hepatic Stellate Cell Activation A. Parrish, L. Kuttipurathu and R. Vadigepalli. Thomas Jefferson Univ. (53.4)

P42 Regulation of Kupffer Cell Activation by Hepatic Stellate Cells K. Roth, R. Albee and B. Copple. Michigan State Univ. (53.5)


**P46** Origin and Diversity of Fibroblastic Cells From Intrahepatic Cholangiocarcinoma. A.E. Sirica, A. Usui, D.J.W. Campbell and C.I. Dumur. Virginia Commonwealth Univ. Sch. of Med. (45.5)


**P51** Attenuation of the Inflammatory Response after Acetaminophen-Induced Injury by Human Mesenchymal Stem Cell-Derived Hepatocytes in Mice. P. Stock, S. Brückner, S. Winkler, M. Dollinger and B. Christ. Univ. of Leipzig and Univ. Hosp. Ulm, Germany. (461.3)


**P53** Reprogramming Factor OCT4 Is Crucial for Transdifferentiation of Hepatocytes to Biliary Epithelial Cells. V. Bhave, M. Doffou, G. Adams, W.C. Bowen, S. Donthamsetty and G. Michalopoulos. PCOM Sch. of Pharm., Univ. of Pittsburgh Sch. of Med. and Georgia State Univ. (461.6)

**P54** Wnt/Beta-Catenin Cooperates with Yap Signaling to Promote Hepatopiliary Repair in a Model of Chronic Liver Injury. K. Nejak-Bowen, H. Okabe and S.P. Monga. Univ. of Pittsburgh. (461.7)

**P55** Mice Lacking β-Catenin in Liver Develop Hepatic Fibrosis in Response to Iron Overload. M. Preziosi, S. Singh, T. Ganz and S.P. Monga. Univ. of Pittsburgh and UCLA. (611.6)

**P56** Activating β-Catenin Mutations and AKT Synergize to Promote Lipogenic Liver Tumors In Mice. J. Tao, X. Li, S. Singh, X. Chen and S.P. Monga. Univ. of Pittsburgh and UCSF. (611.8)

**P57** GPC3-CD81 Axis in the HCV Mediated Liver Carcinogenesis. Y. Xue, B. Bowen, A. Orr, K. Koral, M. Haynes, A. Bell, S. Paranjpe, W. Mars and G. Michalopoulos. Univ. of Pittsburgh. (611.9)

**P58** Mechanism of Liver Injury Caused by Autophagy Deficiency. B. Khambu, H. Zhang, Y. Li, X. Chen and X-M. Yin. Indiana Univ. (148.10)

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**424. VASCULAR AND MUCOSAL PATHOBIOLOGY**

**SCIENTIFIC INTEREST GROUP POSTER DISCUSSION AND NETWORKING SESSION**

**Poster Discussion**

(Sponsored by: ASIP Vascular and Mucosal Pathobiology Scientific Interest Group)

**TUES. 5:30 PM—RENAISSANCE BOSTON WATERFRONT HOTEL, PACIFIC GRAND BALLROOM ABCD**

**Inflammation**

**Mucosal Pathobiology**

**Transports/Channels/Barriers**


**P60** RvD1 Activates Resolution of Inflammation following Myocardial Infarction Leading to Improved Ventricular Function. V. Kain, K.A. Ingle, S.D. Prabhu, C.N. Serhan, M. Joshi and G.V. Halade. Univ. of Alabama at Birmingham, Harvard Med. Sch. and Midwestern Univ., IL. (285.4)

**P61** Inflammatory Leukocytes Exhibit Distinct Rhythms in Their Recruitment to Arteries and Veins. A. de Juan, D. Druzd, K. Kraus and C. Scheiermann. Ludwig Maximilians Univ., Munich. (285.6)


**P63** Desmoglein 3 Inhibits Keratinocyte Migration by Suppressing p38MAPK Activity. V. Spindler, E. Hartlieb, V. Rötzer and J. Waschke. Ludwig Maximilians Univ. Munich. (142.12)

**P64** Regulation of Tight Junction and Adherent Junction Disassembly by Connexin43 Hemichannels. J. Yao, Y. Chi, K. Gao, X. Zhang and R. Yoda. Univ. of Yamanashi, Japan. (282.5)
P66 F-Actin Binding Protein, Anillin, Regulates Integrity of Intercellular Junctions in Human Epithelial Cells D. Wang, G.K. Chadha, A. Feygin and A. Ivanov. Virginia Commonwealth Univ. (282.7)


P68 CLMP Expression Is Increased in the Intestinal Epithelium under Inflammatory Conditions and Regulates Intercellular Adhesion, Proliferation and Migration A-C. Luissint, L. Xiaoming, A. Bennett, H. Nishio, R. Hilgarten, I. McCall, A. Nusrat and C.A. Parks. Emory Univ. and Univ. of Michigan. (282.9)

P69 Critical Role of Protein Kinase D in VEGF-Induced Vascular Permeability and Angiogenesis Z.G. Jin, J. Zhao, M. Yin, I-S. Kwon and M. Mastrangelo. Univ. of Rochester Med. Ctr. (282.10)


P72 KRIT1 Depletion Modifies Endothelial Cell Behavior through Increased VEGF Signaling P.V. DiStefano, J.M. Kuebel, I.H. Sarelius and A.J. Glading. Univ. of Rochester Med. Ctr. (418.4)

P73 Giardia duodenalis Depletes Goblet Cell Mucins and Degrades MUC2, Facilitating Bacterial Translocation C.B. Amat, J-P. Motta, A. Bhargava, K. Chadee and A.G. Buret. Univ. of Calgary, Canada. (507.1)

P74 Distinct Roles of the Mucus Layer and Microbiota in Conferring Innate Host Defense and Susceptibility to Disease A. Leon-Coria, F. Moreau, M. Surette and K. Chadee. Univ. of Calgary. (507.7)


P76 IL6 Is Part of an Autocrine Loop in TNF-α/SFK Induced Increase in Endothelial Monolayer Permeability H. Alsaaffar, N.C. Martino, A. Lowery, A. Adam and P.A. Vincent. Albany Med. Col. (763.5)


425. INFLAMMATION/IMMUNOPATHOLOGY

SCIENTIFIC INTEREST GROUP POSTER DISCUSSION AND NETWORKING SESSION

Poster Discussion

(Sponsored by: ASIP Inflammation/Immunopathology Scientific Interest Group)

TUES. 5:30 PM—RENAISSANCE BOSTON WATERFRONT HOTEL, PACIFIC GRAND BALLROOM ABCD

Inflammation

Inflammation/Immunity


PATHOLOGY TUESDAY

P84 *Entamoeba histolytica* Induces Pro-inflammatory Mediator HMGBl Release in Early Contact with Macrophage S. Begum, J. St-Pierre, F. Moreau and K. Chadee. Univ. of Calgary, Canada. (507.3)


P86 *Staphylococcus aureus* Activation of NLRP3 Inflammasome and Necroptosis through MLKL Exacerbates Pneumonia K. Kitur and A. Prince. Columbia Univ. (148.5)

P87 Alteration of Murine Regulator of Calcineurin 1 Results in Dysmorphogenesis of Pancreatic Islets G.T. Gurda, A.S. Baras, J.A. Williams and T.C. Cornish. Univ. of Pittsburgh Med. Ctr., Johns Hopkins Univ. and Univ. of Michigan. (765.1)


P89 The Role of Talin-1 and Kindlin-3 in Neutrophilic Mac-1 Activation L.M. Watts and C.T. Lefort. Brown Univ. and Rhode Island Hosp. (418.10)


P91 Myeloid-Derived Suppressor Cells as Mediator of High MUC2 Production in Goblet Cells Induces Coxsackieviral Infection Causes Cytoplasmic Resolvin D4 Potent Antiinflammatory Proresolving J. Dalli, N. Chiang and C.N. Serhan. Brigham and Women's Hosp. and Harvard Med. Sch. (285.5)

P92 Asthma Model Provides a Cardiac-Specific Murine Model of Protein Misfolding and Aggregation M. Quintana, C. Yates, S. Takayama and M. Willis. Univ. of North Carolina at Chapel Hill. (46.6)


P95 Critical Roles for the IQ-Motif and Actin-Binding Domain in Dysmorphogenesis of Pancreatic Islets A.S. Baras, J.A. Williams and T.C. Cornish. Columbia Univ. (148.5)

P96 Prevention of Angiotensin II-Induced Aortic Aneurysm and Associated Pathogenesis by Inhibiting CYP1B1 or Its Gene Disruption (ApoE<sup>-/-</sup>/Cyp1b1<sup>-/-</sup> Mice) S. Thirunavukkarasu, N.S. Khan, B.L. Jennings and K.U. Malik. Univ. of Tennessee Hlth. Sci. Ctr., Memphis. (418.2)


Effects of Quercetin and α-Lipoic Acid on α-Cypermethrin-Induced Oxidative Stress in Rats S.O. Rotimi, E. Ugwu, I. Essien, I.B. Adelani and O.A. Rotimi. Covenant Univ., Nigeria. (611.2)


Ambient Fine Particulate Matter Induces Endothelial Progenitor Cells Apoptosis via Reactive Oxygen Species Formation Y. Cui, X. Xie, F. Jia, J. He, Z. Li, M. Fu, H. Hao, Y. Liu, J.Z. Liu, P.J. Cowan, H. Zhu, Q. Sun and Z. Liu. The Ohio State Univ. and Univ. of Melbourne. (411.2)


Development of a Pretreatment Strategy to Enhance the Efficiency of Hepatocyte Transplantation in Mice Y.C. Hsu, M-N. Fan, Y.J. Huang, I-S. Yu, C-Y. Chen, Y-M. Wu and S-W. Lin. Natl. Taiwan Univ. and Natl. Taiwan Univ. Hosp. (611.1)

Ethanol Affects the Progression of Planarian Head Regeneration in a Time-Dependent Manner L. Hanna, J. McGee, D. Srinivasan and M. Staehle. Rowan Univ., NJ and Rochester Inst. of Technol. (1018.5)


Nuclear Reprogramming with Hindbrain Patterning Genes by Nanochannel Electroporation C. Czeisler, D. Gallego-Perez, C. Ortiz, P. Gygli, C. Askwith, L.J. Lee and J.J. Otero. The Ohio State Univ. Col. of Med. and Col. or Engin. (1018.4)
PATHOLOGY TUESDAY


430. DER SCHADENKLUB (CELL INJURY) SCIENTIFIC INTEREST GROUP POSTER DISCUSSION AND NETWORKING SESSION Poster Discussion (Sponsored by: ASIP Cell Injury Scientific Interest Group) TUES. 5:30 PM—RENAISSANCE BOSTON WATERFRONT HOTEL, PACIFIC GRAND BALLOON ABCD

Cell and Tissue Injury
Cardiac Pathobiology
Inflammation/Immunity

P128 The Absence of MuRF1 Protects against Calpain1-Induced Systolic Dysfunction in Vivo D.J. Brown, J. Robbins and M.S. Willis. Univ. of North Carolina at Chapel Hill and Cincinnati Children’s Hosp. (46.1)
P130 PAR2 Activation Protects against Colitis but Inhibits Epithelial Wound Healing E.H. Trusevych, V. Iablokov, M. Dicay, P.L. Beck and W.K. MacNaughton. Univ. of Calgary. (142.3)

P132 Coronary Arteries Injury in a Model of Pulmonary Fat Embolism Syndrome C.R. Patel, S. Alqalyooobi, D. Naji, B. Herndon, A. Poisner and A. Molteni. Univ. of Missouri-Kansas City and Univ. of Kansas Med. Ctr. (610.6)
P136 CD36. Fibroblasts and Intestinal Inflammation T.A. Reaves, A. Nillas and M. Anderson-Thomas. Med. Univ. of South Carolina. (142.2)
P137 MCP-1-Induced Protein Promotes Human Pulmonary Fibroblast Migration Induced by SiO2 via MAPKs and PI3K Signaling J. Chao, H. Liu, X. Dai, X. Wang, T. Yun, X. Liu, Q. Yin and H. Yao. Med. Sch., Southeast Univ., Nanjing, China. (411.9)
P138 Incidence of Pulmonary Fibrosis in Lungs of CUX-1 Transgenic Mice S. Helgeson, E. Harris, B. Herndon, G. Vanden Heuvel, R. Baybutt and A. Molteni. Sch. of Med., Univ. of Missouri-Kansas City, Wheaton Col., IL and Sch. of Med., Western Michigan Univ. (411.8)
P140 A Role for FIZZ1 in a Model of Scleroderma T. Liu, V. Martins, Z. Wu, F. Gonzalez De los Santos and S.H. Phan. Univ. of Michigan Sch. of Med. and Univ. of São Paulo Fac. of Med. (927.10)
P141 Granzyme B Mediates Both Direct and Indirect Cleavage of Extracellular Matrix in Skin after Chronic Low-Dose Ultraviolet Light Irradiation L.G. Parkinson, A. Toro, H. Zhao and D.J. Granville. Univ. of British Columbia and St Paul’s Hosp., Vancouver. (925.5)

431. VETERINARY AND COMPARATIVE PATHOLOGY SCIENTIFIC INTEREST GROUP POSTER DISCUSSION AND NETWORKING SESSION Poster Discussion (Sponsored by: ASIP Veterinary and Comparative Pathology Scientific Interest Group) TUES. 5:30 PM—RENAISSANCE BOSTON WATERFRONT HOTEL, PACIFIC GRAND BALLOON ABCD

Veterinary Pathology
Inflammation/Immunity

P142 Carnitine Palmitoyltransferase 2 (CPT2) Inhibition in Rats and Dogs Resembles Inborn Human CPT2 Deficiency M.C. De Vera Mudry, M. Festag, J-C. Hoflack and F. Cramerl. F. Hoffmann-La Roche Ltd., Basel. (612.3)
P143  Effects of Aging and Respiratory Syncytial Virus Infection on the uPA/Plasmin System in Pulmonary Fibrosis M. Gharae-Kermani, M.R. Gytko and J.A. Macoska. Univ. of Massachusetts and Ann Arbor VA Hosp. and Univ. of Michigan. (411.7)

P144  TNF Modulates the Gut Microbiota and Drives Inflammation A.J. Kozik, Y.L. Jones-Hall and C.H. Nakatsu. Purdue Univ. (142.8)

P145  Human and Canine Codon Optimization of Measles and Canine Distemper Viral Nucleic Acid Sequences Increases Sequence Identity and Protein Expression Compared to Wild Type and Human Codon Sub-optimized Constructs E.W. Uhl, M.L. Osborn, F.J. Michel and R.J. Hogan. Univ. of Georgia. (927.4)

P146  Napsin A and Thyroid Transcription Factor-1 Immunohistochemistry in the Diagnosis of Canine Pulmonary Carcinomas J. Beck, M. Miller, C. Frank, D. DuSold and J. Ramos-Vara. Purdue Univ., NCI, NIH and Colorado State Univ. (762.2)

432. NEUROPATHOLOGY SCIENTIFIC INTEREST GROUP POSTER DISCUSSION AND NETWORKING SESSION

Poster Discussion

(Sponsored by: ASIP Neuropathology Scientific Interest Group)

TUES. 5:30 PM—RENAISSANCE BOSTON WATERFRONT HOTEL, PACIFIC GRAND BALLROOM ABCD

Neuropathology

P147  AT101 Down-regulates CXLC12 mRNA and Secreted Protein in Malignant Peripheral Nerve Sheath Tumor cells C.D. Graham, N. Kaza, B. Klocke and K. Roth. Univ. of Alabama at Birmingham. (149.2)


P149  Oxidative Damage Is Correlated with Mitochondrial Autophagy G. Perry, E.A. Perry, P.I. Moreira, S. Correia, R.J. Castellani, X. Wang, H-g. Lee and X. Zhu. Univ. of Texas at San Antonio, Case Western Reserve Univ., Univ. of Maryland Sch. of Med. and Univ. of Coimbra, Portugal. (613.1)


P152  Analysis of Glial Activation around Brain Metastases of Breast Tumors in a Mouse Model S.A. Amico-Ruvio, Y. Shapovalov, C.E. Lamantia, S. Spielman, E.B. Brown and A.K. Majewska. D’Youville Col., Buffalo and Univ. of Rochester. (613.6)

P153  Neurobiology


P155  Visualization and Objective Quantification of Autonomic Circuitry in Mouse Area Postrema Using a Genetic Method H.N. Gokozan, S. Corcoran, C. Czeisler, P.E. Gygli, F.P. Catucutan, F. Baig and J.J. Otero. The Ohio State Univ. (613.10)
433. **REYNOLD SPECTOR AWARD IN CLINICAL PHARMACOLOGY LECTURE**

*Lecture*

**TUES. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 107C**

The Reynold Spector Award in Clinical Pharmacology was established in 2014 by ASPET in recognition of Dr. Spector’s dedication and contributions to clinical pharmacology. The Award recognizes excellence in research and/or teaching in clinical pharmacology.

8:30 Introduction.
8:35 Bench-to-Bedside Translation in Clinical Pharmacology: From Knowledge Generation to Healthcare Delivery

**S.A. Waldman, Thomas Jefferson Univ.**

434. **“CAN WE TALK?” STRATEGIES FOR COLLABORATIVE PHARMACOLOGY EDUCATION**

*Symposium*

**(Sponsored by: The Divisions for Pharmacology Education; Molecular Pharmacology; Cardiovascular Pharmacology; and Neuropharmacology)**

**TUES. 9:30 AM—WESTIN BOSTON WATERFRONT, GRAND BALLROOM C**

**CHAIR: A.L. Gorman, J.S. Reuben and J.L. Szarek**

*Education*

9:30 Simulations as a Tool to Enhance Collaborative Pharmacology Learning in the Context of Professionalism, Interprofessional Communication, and Teamwork

**J.L. Szarek, The Commonwealth Med. Col.**

10:20 Using Small Group Case Studies to Teach Pharmacotherapeutics for a Diverse World

**P. Wagner and J.S. Reuben, Univ. of South Carolina Sch. of Med. – Greenville.**

11:05 Many Heads are Better than One: It’s TBL Time

**A.L. Gorman, Univ. of Central Florida Col. of Med.**

435. **BIASED GPCR SIGNALING IN DRUG DEVELOPMENT: FROM THEORY TO PHYSIOLOGY**

*Symposium*

**(Sponsored by: The Divisions for Molecular Pharmacology; Neuropharmacology; Drug Discovery and Development; and Translational and Clinical Pharmacology)**

**TUES. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 106**

**CHAIR: S. Rajagopal and A. Christopoulos**

*Neurobiology*

9:30 Biased Receptor Signaling and Beyond

**T.P. Kenakin, Univ. of North Carolina Sch. of Med.**

10:00 Structural Features Responsible for GPCR Functional Selectivity

**B.L. Roth, Univ. of North Carolina Sch. of Med.**

10:30 Delineating the Dynamics of μ-Opioid Receptor Signaling and Regulation

**M. Caron, Duke Univ. Med. Ctr.**

11:00 Implications for GPCR Functional Selectivity/Biased Signaling in the Actions of Dopamine

**M.G. Caron, Duke Univ. Med. Ctr.**

11:30 Bias in The 4th Dimension: The Influence of Ligand Binding Kinetics upon the Quantification of Biased Agonism at G Protein-Coupled Receptors

**J.D. Lane, Monash Inst. of Pharmaceut. Sci., Australia. (772.1)**

11:45 A Pre-Assembled GPCR-Signalosome Reveals Unappreciated Ligand Sensitivity and Mediates Unique Whole Cell Responses

**M.L. Halls, Monash Univ., Australia. (935.3)**

436. **CARDIAC FIBROBLASTS: FAIR-WEATHER FRIENDS IN MYOCARDIAL FIBROSIS AND REPAIR**

*Symposium*

**(Sponsored by: The Divisions for Cardiovascular Pharmacology; Molecular Pharmacology; and Drug Discovery and Development)**

**TUES. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 107AB**

**CHAIR: P.A. Insel and U. Mende**

*Regenerative Medicine (Stem Cells, Tissue Regeneration, Biomaterials)*

*Inflammation/Immunity*

*Injury/Connective Tissue/Fibrosis*

9:30 New Ideas on Cardiac Fibroblast Activation and New Therapeutic Approaches

**B. Hinz, Univ. of Toronto.**

9:55 Cardiac Fibroblasts and Cellular Cross Talk in Heart Failure

**B.C. Blaxall, Univ. of Cincinnati and Cincinnati Children’s Hosp.**
10:20 GPCRs as Regulators of Cardiac Fibroblasts **P.A. Insel.** UCSD.

10:45 Extracellular Matrix/Cardiac Fibroblast Communication: New Opportunities for Therapy **M.L. Lindsey.** Univ. of Mississippi Med. Ctr.

11:10 Eicosapentaenoic Acid Prevents Interstitial Cardiac Fibrosis in a Mouse Model of Hypertensive Heart Disease **J.A. Eclov.** Univ. of South Dakota. (942.7)

11:25 Persistent Phenotypic Shift in Cardiac Fibroblasts following Transient ACE Inhibition **L. Madhavpeddi.** Univ. of Arizona Col. of Med.-Phoenix. (942.2)

11:40 Panel Discussion.

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**437. NEW TECHNOLOGIES TO MEASURE MITOCHONDRIAL CHANGES**

Symposium

*(Sponsored by: The Divisions for Toxicology and Drug Metabolism)*

**TUES. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 108**

**CHAIR: C.C. Beeson and B.S. Cummings**

9:30 Identification of Mitochondrial Toxicophores **C.C. Beeson.** Med. Univ. of South Carolina.

10:00 Identification of Mitochondrial Toxicants and Mitochondrial Changes in Human Tissues **D.P. Jones.** Emory Univ.

10:30 Urinary Biomarkers of Mitochondrial Dysfunction **R.G. Schnellmann.** Med. Univ. of South Carolina.

11:00 Mitochondrial Subpopulation Lipidomics in Aging Tissue **B.S. Cummings.** Univ. of Georgia.

11:30 Idiosyncratic Drug-Induced Liver Injury Potential of Zileuton is Detected in Diversity Outbred Mice **A.H. Harrill.** Univ. of Arkansas for Med. Sci. (937.3)

11:45 Pesticide-Induced Mitochondrial Dysfunction Augments NLRP3 Inflammasome Signaling Pathway in Primary Microglia **S. Sarkar.** Iowa State Univ. (777.5)

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**438. NOVEL THERAPEUTIC TARGETS AND PRECLINICAL MODELS OF POST-TRAUMATIC STRESS DISORDER**

Symposium

*(Sponsored by: The Divisions for Behavioral Pharmacology; Neuropharmacology; and Toxicology)*

**TUES. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 109B**

**CHAIR: C.K. Jones and M. Nedelcovych**

**Neurobiology**

9:30 PTSD and the Neurocircuitry of Impaired Fear Extinction **M. Milad.** Harvard Med. Sch.

10:00 Using Positron Emission Tomography (PET) to Gain Insight into Targeted Pharmacological Treatment of PTSD **A. Neumeister.** NYU Langone Med. Ctr.

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**439. SYSTEMS PHARMACOLOGY: ENHANCING TRANSLATIONAL RESEARCH BY NETWORK AND PHARMACODYNAMIC MODELING**

Symposium

*(Sponsored by: The Divisions for Drug Discovery and Development; Translational and Clinical Pharmacology; and Toxicology)*

**TUES. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 109A**

**CHAIR: D.E. Mager and D.R. Abernethy**

9:30 Systems Pharmacology for Prediction of Adverse Drug Events **D.R. Abernethy.** FDA.

10:00 Network Analysis to Identify Multiscale Mechanisms of Drug Action **D.A. Lauffenburger.** MIT.

10:30 Merging Network Analysis and Pharmacodynamics for Translational Modeling **D.E. Mager.** Univ. at Buffalo, SUNY.

11:00 Computational and Functional Genomics to Understand Human Disease and Drug Response **N. Ahituv.** UCSF.

11:30 Extraction and Integration of Diverse Data Streams to Support Systems Networks **N. Shah.** Stanford Univ.

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**440. THE HUMAN MICROBIOME: SYSTEMS PHARMACOLOGY INSIGHTS AND THE POTENTIAL FOR NEW DRUG DISCOVERY**

Symposium

*(Sponsored by: The Divisions for Translational and Clinical Pharmacology; Toxicology; Molecular Pharmacology; Drug Discovery and Development; and Cardiovascular Pharmacology)*

**TUES. 9:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 107C**

**CHAIR: R. Corriden and C. LaRock**

**Microbiome**

**Inflammation/Immunity**

**Cancer Biology**

9:30 The Human Microbiome in Health and Disease **S.K. Mazmanian.** Caltech.

10:15 Inflammatory Cell Dynamics in Cancer and Infection: Interrogating the Role of the Microbiome **R.S. Goldszmid.** NCI, NIH.
10:40 Pharmacomicrobiomics: The Impact of Human Microbiome Variations on Systems Pharmacology and Personalized Therapeutics **R.K. Aziz.** Cairo Univ.

11:05 Obesity and Gut Barrier Function: Using the Microbiota and Prebiotics to Understand Early Consequences of a High Fat Diet **K. Hamilton.** Univ. of California, Davis.

11:30 Panel Discussion.

### 441. DIVISION FOR CARDIOVASCULAR PHARMACOLOGY TRAINEE SHOWCASE

**Division Oral Session**

*(Sponsored by: The Division for Cardiovascular Pharmacology)*

**Tues. 2:30 PM — Boston Convention & Exhibition Center, Room 107AB**

**Chair:** L.E. See Hoe and J.M. Schilling

<table>
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<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker(s)</th>
<th>Institution(s)</th>
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<tr>
<td>2:30</td>
<td>Toll-Like Receptor 9 Signals through Both the Stress-Tolerance and Inflammatory Cascades after Pharmacological Stimulation in Isolated Rat Arteries</td>
<td>C.G. McCarthy</td>
<td>Georgia Regents Univ. (783.2)</td>
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<tr>
<td>2:45</td>
<td>P2Y2 Receptor Control of Tissue Factor Transcription in Human Coronary Artery Endothelial Cells: New AP-1 Site and Negative Regulator</td>
<td>Y. Liu.</td>
<td>Auburn Univ. (625.7)</td>
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<td>3:00</td>
<td>Caveolin-3/AdipoR1 Dependent Mitochondrial STAT3 Activation in Ischemic Postconditioning Cardioprotection</td>
<td>H. Li.</td>
<td>The Univ. of Hong Kong (777.3)</td>
</tr>
<tr>
<td>3:15</td>
<td>β2-Adrenergic Receptor Expression on Hematopoietic Cells Is Critical for Survival following Myocardial Infarction</td>
<td>L. Grisanti.</td>
<td>Temple Univ. (942.11)</td>
</tr>
<tr>
<td>3:30</td>
<td>Neddylation Promotes Vascular Endothelial Dysfunction: A Role for Histone Deacetylases 2 and Arginase 2</td>
<td>D. Pandey.</td>
<td>Johns Hopkins Univ. (626.5)</td>
</tr>
<tr>
<td>3:45</td>
<td>Increased Energy Expenditure Induced by Ptp1b Deletion in Proopiomelanocortin Neurons Leads to Inflammation and Endothelial Dysfunction</td>
<td>T. Bruder-Nascimento.</td>
<td>Georgia Regent Univ. (626.3)</td>
</tr>
<tr>
<td>4:00</td>
<td>Pharmacogenomics Studies of PAR4 Regulation in Human Platelets</td>
<td>B. Tourdot.</td>
<td>Thomas Jefferson Univ. (941.3)</td>
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### 442. BEHAVIORAL PHARMACOLOGY DIVISION SYMPOSIUM: SIGMA RECEPTORS IN HEALTH AND DISEASE

**Division Symposium**

*(Sponsored by: The Division for Behavioral Pharmacology)*

**Tues. 3:00 PM — Boston Convention & Exhibition Center, Room 109A**

**Chair:** H. Khoshbouei

**Transporters/Channels/Barriers**

**Cancer Biology**

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<tr>
<td>3:00</td>
<td>Introduction.</td>
<td></td>
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<td>3:05</td>
<td>Sigma1 in Cancer Cell Protein Homeostasis</td>
<td>K.J. Felix.</td>
<td>Drexel Univ. Col. of Med.</td>
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<tr>
<td>3:30</td>
<td>Sigma-1R-dependent Modulation of Neuronal Excitability: A Novel Mechanism Involved in Addictive Processes</td>
<td>S. Kourrich.</td>
<td>Univ. of Texas Southwestern Med. Ctr.</td>
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<tr>
<td>4:01</td>
<td>Sigma Receptor Involvement in Stimulant Abuse</td>
<td>J.L. Katz.</td>
<td>NIDA, NIH.</td>
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<td>4:29</td>
<td>A Role for Sigma Receptors in Excessive Alcohol Drinking</td>
<td>V. Sabino.</td>
<td>Boston Univ. Sch. of Med.</td>
</tr>
<tr>
<td>4:57</td>
<td>Sigma1R Regulation of Dopamine Transporter</td>
<td>H. Khoshbouei.</td>
<td>Univ. of Florida.</td>
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</table>

**Session Summary.**

### 443. DIVISION OF TOXICOLOGY SYMPOSIUM: PHARMACOGENETICS AND DRUG TOXICITY

**Division Symposium**

*(Sponsored by: The Division for Toxicology)*

**Tues. 3:00 PM — Boston Convention & Exhibition Center, Room 108**

**Chair:** G.O. Rankin

<table>
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<tr>
<td>3:45</td>
<td>CYP2D6 Pharmacogenetics: Controlling the Atomoxetine Dose-Exposure Relationship to Improve Efficacy and Reduce Toxicity in Adolescents with ADHD</td>
<td>J.S. Leeder.</td>
<td>Children's Mercy Kansas City.</td>
</tr>
<tr>
<td>4:20</td>
<td>Carboxylesterase 1: Recent Developments in Pharmacogenetics</td>
<td>J.S. Markowitz.</td>
<td>Univ. of Florida.</td>
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</table>
444. PRESYNAPTIC AUTORECEPTORS AND IMPROVED TREATMENTS OF MAJOR PSYCHIATRIC DISORDERS

Symposium
(Sponsored by: The Divisions for Neuropharmacology; Molecular Pharmacology; Behavioral Pharmacology; Drug Discovery and Development; and Translational and Clinical Pharmacology)

TUES. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 109B

CHAIR: S.Z. LANGER

Neurobiology

3:00 Presynaptic, Autoreceptor-Mediated Regulation of Neurotransmission: Physiological and Pharmacological Relevance S.Z. Langer. Euthymia Ltd.


4:30 Implicating the Alpha-2 Receptor in Unique Actions of Drugs W.Z. Potter. NIMH.

5:00 Role of Monoaminergic Autoreceptor Desensitization in the Antidepressant Response P. Blier. Univ. of Ottawa.

445. STRUCTURAL AND DYNAMIC BASIS OF RECEPTOR-LIGAND INTERACTIONS

Symposium
(Sponsored by: The Divisions for Molecular Pharmacology; Neuropharmacology; and Translational and Clinical Pharmacology)

TUES. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 106

CHAIR: E. ORTLUND AND S.F. TRAYNELIS

Neurobiology

3:00 Structural Advances in Glutamate Receptors H. Furukawa. Cold Spring Harbor Lab.


4:00 Cryo-electron Microscopy Comes of Age: Applications to Molecular Pharmacology S. Subramaniam. NCI, NIH.


5:00 Unexpected Allosteric Network Drives Nuclear Receptor-Phospholipid Signaling E.A. Ortlund. Emory Univ. Sch. of Med.

446. TRANSLATIONAL AND CLINICAL PHARMACOLOGY DIVISION: YOUNG INVESTIGATOR AWARDS PLATFORM SESSION

Division Oral Session
(Sponsored by: The Division for Translational and Clinical Pharmacology)

TUES. 3:00 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 107C

CHAIR: M.A. HOLINSTAT

3:00 Introduction.

3:15 GPSM3 as a Therapeutic Target for Rheumatoid Arthritis B.J. Gall. West Virginia Univ. (1022.5)

3:30 Preclinical Evaluation of the Mitochondria-Targeted Antioxidant MitoTEMPO on the Renal Microcirculation in a Pediatric Model of Sepsis-Induced Renal Injury C.R. Sims. Univ. of Arkansas for Med. Sci. (784.6)

3:45 HIV-1 Tat Sensitizes Enteric Neurons to Bacterial Proteins J. Ngwainmbi. Virginia Commonwealth Univ. (628.13)

4:00 12-LOX Modulates FcγRIIa-mediated Platelet Response J. Yeung. Thomas Jefferson Univ. (941.1)

4:15 Biventricular Differences in β-Adrenergic Receptor Signaling following Burn Injury A.N. Guillory. Univ. of Texas Med. Branch. (1025.8)

4:30 Glucose Metabolism Is Impaired in Cultured Myotubes from Severely Obese Humans K. Zou. East Carolina Univ. (944.11)

4:45 Awards.

447. BENEDICT R. LUCCHESI DISTINGUISHED LECTURESHIP IN CARDIAC PHARMACOLOGY

Lecture
(Sponsored by: The Division for Cardiovascular Pharmacology)

TUES. 4:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 107AB

Regenerative Medicine (Stem Cells, Tissue Regeneration, Biomaterials)

The Benedict R. Lucchesi Award in Cardiac Pharmacology was established to honor Dr. Lucchesi's lifelong scientific contributions to our better understanding and appreciation of the pharmacological treatment and prevention of cardiovascular disease and for his mentoring of countless prominent cardiovascular pharmacologists in translational approaches.

4:30 Introduction.

Physiology

448. PRESIDENT’S SYMPOSIUM SERIES
PHYSIOLOGY: ANSWERS TO BIG QUESTIONS
THE FUTURE OF HYPERTENSION RESEARCH

Symposium
TUES. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 210BC

CHAIR: H. JACOB

3:45 Hypertension and the Brain. What Are We Thinking? R. DAVisson. Cornell Univ.
4:45 The Treatment of Hypertension, How Did We Get Here and Where Are We Going? S. Oparil. Univ. of Alabama at Birmingham.

449. AUTONOMIC DENERVATION IN CARDIOVASCULAR DISEASE: MECHANISMS AND THERAPEUTIC POTENTIAL

Symposium
(Sponsored by: Neural Control and Autonomic Regulation)
TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 210A

CHAIR: I.H. ZUCKER AND J. PATON

8:00 The Carotid Body in Heart Failure: Alternative Therapies N. Marcus. Univ. of Nebraska Med. Ctr.
8:30 Targeted Ablation of Renal Efferent and Afferent Nerves for Treatment of Hypertension J. Osborn. Univ. of Minnesota Sch. of Med.
9:00 Carotid Body Ablation: A Preclinical Study for the Treatment of Hypertension W. Pijacka. Univ. of Bristol.
9:30 Stellate Ganglionection for Ventricular Arrhythmia Therapy K. Shrivkumar. UCLA.

450. CELL SIGNALING: PROTEINS, PATHWAYS AND MECHANISMS

Featured Topic
(Sponsored by: Cell and Molecular Physiology Section)
TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER,
ROOM 209

CHAIR: H.M. JONES AND N.A. BRADBURY

Cell Signaling

8:00 Speed and Amplitude in G Protein Signaling Modules E. Ross. Univ. of Texas Southwestern Med. Ctr.
8:30 Towards New Insights in Epithelial Ion Channels Regulation by the ER Luminal Chaperone ERp29 Y. Bikard, L. Suaud, Y.S. Grumbach, J. Litvak and R.C. Rubenstein. The Children’s Hosp. of Philadelphia and Univ. of Pennsylvania Perelman Sch. of Med. (974.1)
9:00 O-GlcNAc Plays a Role in Nrf2 Regulation in the Myocardium B.P. Dieter, E.J. Johnson, H.M. Medford, L.E. Miller, C.A. Vella and S.A. Marsh. Univ. of Idaho and Washington State Univ. (974.3)
9:30 Mechanism of Linaclotide-Induced Trafficking of CFTR and NHE3 in the Human Intestinal Cell-Lines Caco-2 BBe and T84 cells M.K. Ahsan, I. Silos-Santiago and N. Ameen. Yale Univ. Sch. of Med. and Ironwood Pharmaceut., Cambridge, MA. (974.5)
451. CNS MECHANISMS OF BLOOD PRESSURE REGULATION

Featured Topic
(Sponsored by: Central Nervous System Section)
TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 206B
CHAIR: R.D. Wainford

8:00 CNS Regulation of Blood Pressure via the Pro-renin Receptor Y. Feng. Colorado State Univ.
9:00 Dynamic Regulation of microRNA Networks in the Brainstem Characterize Hypertension Development D. DeCicco, J.S. Schwaber and R. Vadigepalli. Thomas Jefferson Univ. (984.12)
9:15 How Does the Brain Talk to the Arteries and Heart? M.P. Blaustein, L. Chen, H. Song, F.H.H. Leenen and J.M. Hamlyn. Univ. of Maryland Sch. of Med. and Univ. of Ottawa Heart Inst. (984.3)
9:30 Angiotensin Converting Enzyme 1 Knockdown in the Median Preoptic Nucleus Attenuates Downstream Neural Activation following Chronic Intermittent Hypoxia K. Faulk and J.T. Cunningham. Univ. of North Texas Hlth. Sci. Ctr. (984.15)

452. DIET, NUTRITION, AND ADIPOSE TISSUE: YOU ARE WHAT YOU EAT

Featured Topic
(Sponsored by: Endocrinology and Metabolism Section)
TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 206A
CHAIR: G.L.C. Yosten

Nutrition Physiology
8:00 Lipophilic Environmental Chemicals and Their Influence on Adipose Tissue Metabolism G. Carey. Univ. of New Hampshire.

453. EPITHELIAL TRANSPORT: CELL BIOLOGY

Featured Topic
(Sponsored by: Epithelial Transport Group)
TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 208
CHAIR: H. Møller and M. Blount

Regulation of Epithelial Function
8:00 Steve Hebert Lecture. WNKs under High Pressure M. Cobb. Univ. of Texas Southwestern Med. Ctr.
8:45 Role of Bile Acids for Regulation of Aquaporins in Rodent Large Intestine J. Yde, H.B. Moeller, N. Lajczak, A. O’Dwyer, S. Keely and R.A. Fenton. Aarhus Univ. and Royal Col. of Surgeons in Ireland. (970.12)
9:15 AMPK Regulates the Vacuolar $H^{+}$-ATPase via 14-3-3 Proteins M.M. Al-bataineh, H. Li, A.L. Marciszyn, V. Bhalla, K.R. Hallows and N.M. Pastor-Soler. Univ. of Pittsburgh and Stanford Univ. (969.23)
9:30 Renal Caffeine Effects are Independent of NHE3 Abundance, Trafficking or Phosphorylation T. Rieg, M. Soleimani, J.A. Dominguez Rieg, M. Busslinger and R.A. Fenton. UCSD, VA San Diego Healthcare Syst., Univ. of Cincinnati, Bastyr Univ. California, Res. Inst. of Molec. Pathol., Vienna and Aarhus Univ., Denmark. (970.4)

454. EXERCISE AT THE MOLECULAR LEVEL: MYOKINES AND OTHER NOVEL THERAPEUTIC OPPORTUNITIES

Symposium

(Sponsored by: Environmental and Exercise Physiology Section)

TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 212

CHAIR: J. White

8:00 Exercise-Induced Myokines Irisin and Meteorin-Like: Therapeutic Effects of Muscle Through Modulation of the Adipose Tissues B. Spiegelman. Dana Farber Cancer Inst., Harvard Med. Sch.


9:00 Exercise-Based Discovery of Pathways Promoting Cardiac Repair T. Rosenzweig. Beth Israel Deaconess Med. Ctr.

10:00 Exercise Mediates the Muscle-Brain Crosstalk to Improve Psychiatric Disease J. Ruas. Karolinska Inst., Stockholm.

455. RECENT ADVANCES IN RENAL PHYSIOLOGY AND KIDNEY DISEASE II

Featured Topic

(Sponsored by: APS Renal Section)

TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 211

CHAIR: P.A. Welling and D. Ilatovskaya

8:00 Deletion of the Proximal Tubule Basolateral Bicarbonate Transporter, NBCe1, Impairs Ammonia Metabolism I.D. Weiner, H-W. Lee, G. Osis, M.E. Handlogten and J.W. Verlander. North Florida/South Georgia Veterans Hlth. Syst., Gainesville and Univ. of Florida. (809.26)


8:30 A Common Signal Patch Drives AP-1 Dependent-Golgi Export of the Basolateral Kir Channels in the Distal Nephron X. Li and P.A. Welling. Univ. of Maryland Sch. of Med. (666.14)

8:45 Cell-Specific Regulation of BK Channel and WNK Kinases in Cortical Collecting Duct by Dietary K R. Carrisoza, A. Subramanya, M. Carattino, T. Kleyman and L. Sattin. Icahn Sch. of Med. at Mount Sinai and Univ. of Pittsburgh Sch. of Med. (666.3)

9:00 Regulation of Renal TRPV4 Activity by Dietary Potassium Intake Is Essential for he Maintenance of K⁺ Homeostasis N. Boukelmoune, M. Mamenko, O. Zaika, R. O’Neil and O. Pochynyuk. Univ. of Texas Hlth. Sci. Ctr. at Houston. (666.4)


456. RESILIENCE IS POWER: DEALING WITH THE UPS AND DOWNS OF YOUR SCIENTIFIC CAREER

Symposium

(Sponsored by: Careers in Physiology Committee)

TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 207

CHAIR: E. Wehrwein and C. Schnackenberg

Career Development

How Do People Bounce Back After Disappointment Or Distress? S. Luthar. Arizona State Univ.


457. VOLTAGE-GATED CALCIUM CHANNELS AND THE FUNCTION OF EXCITABLE CELLS: FROM BASIC MECHANISMS TO DISEASE

Symposium
(Sponsored by: Physiological Society, The Journal of Physiology, and The American Physiological Society)

TUES. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205C

CHAIR: A.C. DOLPHIN

Transporters/Channels/ Barriers

Neurobiology

8:00 Voltage Gated L-Type Calcium Channels: Drug Targets in the Brain? J. Striessnig. Univ. of Innsbruck.

8:30 Cav1.2 (CACNA1c) and Cav1.3 (CACNA1d) L-Type Ca2+ Channel Signaling Mechanisms and Cocaine Addiction A. Rajadhyaksha. Weill Cornell Med. Col.

9:00 Regulation of Neuronal N-Type Calcium Channel Trafficking A. Dolphin. University Col. London.

9:30 The Role of T-Type Calcium Channels in the Electrical Excitability of Aldosterone-Producing Cells of the Adrenal Cortex P. Barrett. Univ. of Virginia.

458. EPITHELIAL TRANSPORT: PATHOPHYSIOLOGY

Featured Topic
(Sponsored by: Epithelial Transport Group)

TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 208

CHAIR: J. BOMBERGER AND T. RIEG

Regulation of Epithelial Function

Transporters/Channels/ Barriers

10:30 Hans Ussing Lecture Regulation of Mucosal Barrier Function beyond the Chambers J. Turner. Univ. of Chicago.

11:15 Intravital Imaging Reveals Angiotensin II-Induced Endocytosis and Shedding of Plasma Albumin by Podocytes I.M. Schießl, V. Kattler, A. Hammer and H. Castrop. Univ. of Regensburg, Germany. (970.3)


11:45 Regulation of Intestinal SGLT1 by Catestatin in Hyperleptinemic Type 2 Diabetic Mice J.A. Dominguez Rieg, V.R. Chirasani, H. Köpsell, S. Senapati, S.K. Mahata and T. Rieg. Bastyr Univ. CA, VA San Diego Healthcare Syst., Indian Inst of Technol. Madras, Univ. of Würzburg and UCSD. (970.9)

459. INFLAMMATORY RESPONSES IN GASTROINTESTINAL AND LIVER CANCER: CURRENT INSIGHTS INTO MECHANISM AND TREATMENT

Featured Topic
(Sponsored by: Gastrointestinal and Liver Physiology Section)

TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 211

CHAIR: R.K. RAO

Oxidative Stress

Cancer Biology

Inflammation/Immunity


11:30 Stromal Loss of mRNA-Binding Protein IMP1 Promotes a Pro-tumorigenic Colon Tumor Microenvironment In Vivo P. Chatterji, K. Hamilton, E. Lundsmith, S. Andreas and A. Rustgi. Univ. of Pennsylvania. (999.3)


460. INTERACTIONS BETWEEN CARDIOVASCULAR AND INGESTIVE BEHAVIORAL SIGNALS AT THE CIRCUMVENTRICULAR ORGANS

Featured Topic
(Sponsored by: APS Neural Control and Autonomic Regulation Section)
TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 206A
CHAIR: J. COLLISTER AND A. FERGUSON

10:30 Traditional and New Roles of Circumventricular Organs in Cardiovascular Regulation and Homeostasis
A.K. Johnson. Univ. of Iowa.
11:00 Circumventricular Organs: Not Just for Cardiovascular Control! New Insights to CVO Involvement in Sensing Metabolic Signals and Mediating Ingestive Behaviors
T.A. Lutz. Univ. of Zurich.
11:30 Overexpression of Copper/Zinc Superoxide Dismutase (SOD1) in the Organum Vasculosum of the Lamina Terminalis Attenuates Chronic Angiotensin II Hypertension in the Rat
J.P. Collister, H. Taylor-Smith, D. Drebes, D. Nahey, J. Tian and M.C. Zimmerman. Univ. of Minnesota and Univ. of Nebraska Med. Ctr. (988.2)
11:45 OVLT Neurons Exhibit Exquisite Osmosensitivity to Elevated NaCl Concentrations
B.J. Kinsman, K.N. Browning and S.D. Stocker. Penn State Coll. of Med. (988.1)
12:00 Angiotensin Type 1a Receptors in the Forebrain Subfornical Organ Protect against High Fat Diet-Induced Hepatic Steatosis
12:15 Leptin and Amylin Influence the Excitability of Area Postrema Neurons, Possibly via cAMP-Mediated Mechanisms
P.M. Smith, P. Brzezinska, F. Hubert, D.H. Maurice and A.V. Ferguson. Queen’s Univ., Canada. (988.4)

462. JULIUS H. COMROE, JR. DISTINGUISHED LECTURESHIP OF THE APS RESPIRATION SECTION

Lecture
TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210A

Unique Aspects of the Pathobiology of Pulmonary Hypertension in the Developing and Mature Lung
U. Raj. Univ. of Illinois at Chicago.

463. OMICS AND EPITHELIAL SYSTEMS PHYSIOLOGY

Symposium
(Supported by Agilent)
TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210BC
CHAIR: E. DELPIRE AND J. MCCORMICK

Regulation of Epithelial Function

10:30 Proteomic Analysis of the Kidney Filtration Barrier
M. Rinschen. Univ. Hosp. of Cologne.
10:55 Protein Interaction Network of the Hippo Pathway Reveals Mechanisms of Kinase-Phosphatase Interactions
11:20 Global Compensatory Response to Loss of Thiazide-Sensitive Sodium Chloride Cotransporter Phosphorylation
R. Grimm. Univ. of Maryland Sch. of Med.
11:45 Genome-Wide Transcriptome and Epigenomics of Kidney Disease Reveals Notch Pathway in Podocytes
K. Susztak. Univ. of Pennsylvania.
12:10 Reading and Writing Regulatory Networks Underlying Human Epithelial Transport Diseases
J. Rinehart. Yale Univ. Sch. of Med.

464. OXIDATIVE STRESS: MECHANISMS AND RESPONSES

Featured Topic
(Sponsored by: Cell and Molecular Physiology Section)
TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 209
CHAIR: C. WHITE AND K. YADDAHAPUDI

Oxidative Stress

Injury/Connective Tissue/Fibrosis

10:30 Mitochondria Ca2+- Uniporter: a Platform for Redox Signaling
M. Muniswamy. Temple Univ. Sch. of Med.
11:00 Differential Effects of Buffer pH, CaCl2, and Superoxide Dismutase on Ca2+-Induced H2O2 Release from Mitochondrial Complexes I and III
R.J. Lubbe, D.P. Lindsay, M. Aldakkak, A.K.S. Camara and D.F. Stowe. Med. Col. of Wisconsin. (979.1)
11:15 PPARγ-Independent Side Effects of Thiazolidinediones on Mitochondrial Redox State in Rat Isolated Hearts
11:30 Truncation of GSK-3β in Cardiac Mitochondria Is the Master Switch of the mPTP
S.J. Hurst, L. Gomez, B. Jhun, J. O-Uchi and S-S. Sheu. Thomas Jefferson Univ. (979.3)

12:00 NADPH Oxidases Mediate Zinc Deficiency-Induced Oxidative Stress in Mouse Kidneys M.S. Li, J.L. Gooch, R.S. Hoover and C.R. Williams. Emory Univ. Sch. of Med., Philadelphia Col. of Osteo. Med. and Atlanta VA Med. Ctr. (979.5)

12:15 Nuclear Localization and Biological Function of Matrix Metalloproteinase-2 S. Baghirova, M.Y. Kondo, B.G. Hughes and R. Schulz. Univ. of Alberta. (979.6)

465. REJUVENATING THE BETA CELL

Symposium
(Sponsored by: Endocrinology and Metabolism Section)

TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205C

CHAIR: R.M. LYNCH AND W.K. SAMSON


11:00 Chemical Methods to Induce Beta-Cell Proliferation B. Wagner. Broad Inst. of MIT and Harvard.


12:00 Accessing the Molecular Barcode: Multivalent Ligands for Beta-Cell Specific Targeting and Therapeutics R. Lynch. Univ. of Arizona.

466. SEX HORMONE EFFECTS ON AUTONOMIC AND ENDOTHELIAL FUNCTION

Featured Topic
(Supported by: Experimental Physiology, The Physiological Society)
(Sponsored by: Environmental and Exercise Physiology Section)

TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 207

CHAIR: N. STACHENFELD

Regulation of Epithelial Function

10:30 Sex Differences and Blood Pressure Control in Humans M.J. Joynner. Mayo Cln.

11:00 Sympathetic Baroreflex Sensitivity in Normotensive Pregnant Women C.W. Usselman, R.J. Skow, M.K. Stickland, R.S. Chari, C.G. Julian, M.H. Davenport and C.D. Steinback. Univ. of Alberta and Univ. of Colorado Boulder. (820.5)

11:15 Membrane-Initiated Rapid Endothelial Responses to Estrogen J.R. Bender. Yale Univ. Sch. of Med.

11:45 Effects of LPS Endotoxemia on Cardiovascular Parameters and Plasma Nitric Oxide of Ovariectomized Rats J.C. Castardo de Paula, L. de Jager, R.V. da Silva, P. Pinge-Filho and M.C. Martins-Pinge. State Univ. of Londrina, Brazil. (820.3)

12:00 Diabetes and Estrogen: The Role of Oxidative Stress on Endothelial Function in Women W.H. Jarrard, L. Haack, N. Seigler and R.A. Harris. Georgia Regents Univ. and Univ. of Ulster, Jordanstown. (820.2)


467. THE BIOLOGY OF OXYGEN HOMEOSTASIS AND HYPOXIA

Featured Topic
(Sponsored by: Water and Electrolyte Homeostasis Section)

TUES. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 206B

CHAIR: A. POLICHNOWSKI AND R. EVANS


11:00 Effects of Norepinephrine on Blood Pressure and Intrarenal Perfusion and Oxygenation in Ovine Hypotensive Sepsis C.N. May, J. Kosaka, R.G. Evans, R. Bellomo and Y.R. Lankadeva. Florey Inst. of Neurosci. and Ment. Hlth., Monash Univ. and Austin Hlth., Victoria, Australia. (963.4)

11:15 Pericytes Protect against Renal Ischemia-Reperfusion Injury in Male and Female Spontaneously Hypertensive Rats G.R. Crislip, P.M. O’Connor and J.C. Sullivan. Georgia Regents Univ. (963.5)

11:30 Increased Oxygen Consumption and Basal Metabolism of the Proximal Tubule in Early Diabetes P. Singh, J. Thomas, H. Pham, S. Khang and S. Thomson. UCSD and VA San Diego Healthcare Syst. (963.8)


12:00 Intrarenal Blockade of Angiotensin II AT1 Receptor Abolishes Renal Cortical Hypoxia in Salt-Restricted Animals D. Patinha, L. Pihl and F. Palm. Linköping Univ. and Uppsala Univ., Sweden. (963.2)

### 468. THE COST OF PHYSIOLOGICAL PLASTICITY

**Featured Topic**

*(Sponsored by: Comparative and Evolutionary Physiology Section)*

_Tues. 10:30 AM—Boston Convention & Exhibition Center, Room 212_

**CHAired: A. Hinde and F. van Breukelen**

**Oxidative Stress**

10:30 Paradoxical Anaerobism in Desert Pupfish; When Oxidative Metabolism Costs More Than Anaerobic Metabolism

S. Hillyard. Univ. of Nevada, California, Irvine.

11:00 Anthropogenic Disturbance Reveals the Limits of Aerobic Diving in Turtles

C. Williams. Univ. of California, Irvine.

11:30 Do Late-Instar _Drosophila_ Larvae Experience Functional Oxygen Limitations?

J.F. Harrison, V. Callier and K.J. Greenlee. Sch. of Life Sci., Arizona State Univ. and North Dakota State Univ. (982.2)

11:45 Neuronal and Neuroendocrine Mechanisms of Social Rank and Stress Coping in Teleost Fish


12:00 Physiological Tradeoffs Underlie the Evolution of Hypoxia Tolerance and Exercise Performance in Fish


12:15 Torpor in Tenrecs, a Basal Protoendothermic Mammal

M.G. van Lier, J.A.E. Spaan, M. Siebes and J.P. van den Wijngaard. Acad. Med. Ctr., Univ. of Amsterdam. (953.5)

### 469. WIGGERS AWARD FEATURED TOPIC: RELATION BETWEEN EPICARDIAL ARtery PHYSIOLOGY AND MICROcirculation

**Featured Topic**

*(Sponsored by: Cardiovascular Section)*

_Tues. 10:30 AM—Boston Convention & Exhibition Center, Room 205B_

**CHAired: J.A.E. Spaan and W. Chilian**

**Translational Physiology**

10:30 The Bumpy Road of Coronary Pressure Flow Relations Into Clinical Application: the Role of Coronary Microcirculation

J.A.E. Spaan. Univ. of Amsterdam.

11:15 Variability in IV Adenosine-Induced Coronary Microvascular Resistance and Systemic Pressure Compromises FFR Determination Despite Stable Stenosis Hemodynamics


11:30 Aspirate from Stented Aortocoronary Saphenous Vein Grafts Reduces Coronary Flow and Left Ventricular Pressure in an Isolated Perfused Rat Hearts

P. Kleinbongard, H. Lieder, P. Kahlert and G. Heusch. Univ. of Essen Med. Sch. (953.4)

11:45 Endocardial Prevalence of Coronary Collaterals Becomes Transmurally More Uniform in a Human Heart with Left Ventricular Hypertrophy

M.G. van Lier, E.R. Oost, J.A. Spaan, M. Siebes and J.P. van den Wijngaard. Acad. Med. Ctr., Univ. of Amsterdam. (953.5)

12:00 Exercise Training Reverses Age-Induced Coronary Microvascular Dysfunction


12:15 Circulating MicroRNAs Characterize Insufficient Coronary Collateral Artery Development in Patients with Chronic Total Occlusion


### 470. HISTORY OF PHYSIOLOGY GROUP LECTURE

**Lecture**

*(Sponsored by: History of Physiology Group)*

_Tues. 1:00 PM—Westin Boston Waterfront, Grand Ballroom E_

Walter B Cannon’s WWI Experience: Treatment of Traumatic Shock Then and Now


### 471. ROBERT M. BERNE DISTINGUISHED LECTURESHIP OF THE APS CARDIOVASCULAR SECTION

**Lecture**

*(Supported by: History of Physiology Group)*

_Tues. 2:00 PM—Boston Convention & Exhibition Center, Room 210A_

Understanding Pathogenesis of Human Heart Failure: from Molecular Pathways to Phenotype Characterizations

P. Ping. UCLA Sch. of Med.

### 472. AUGUST KROGH DISTINGUISHED LECTURESHIP OF THE APS COMPARATIVE AND EVOLUTIONARY PHYSIOLOGY SECTION

**Lecture**

*(Supported by: Novo Nordisk Foundation)*

_Tues. 3:15 PM—Boston Convention & Exhibition Center, Room 210A_

The Role of Antifreeze Proteins in the Survival of Polar Fishes

A.L. DeVries. Univ. of Illinois at Urbana-Champaign.
473. AUTOPHAGY: IMPORTANCE IN HEALTH, EPITHELIAL TRANSPORT AND AGING

Symposium
(Sponsored by: Epithelial Transport Group)
TUES. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 208
CHAIR: M. LEVI AND J. KLEIN

Regulation of Epithelial Function
Transporters/Channels/ Barriers
3:15 Proteostasis in Biology Aging and Disease R.I. Morimoto. Northwestern Univ.
4:15 Nutrient Sensing Modulates Mitochondrial Quality Control and the Inflammasome. A Sirtuin Perspective M.N. Sack. NHLBI-NIH.

474. CATION CHANNELS CONTROLLING INTRACELLULAR FUNCTIONS

Symposium
(Sponsored by: Cell and Molecular Physiology Section)
TUES. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 206B
CHAIR: J.A. KOZAK AND L.I. BRUEGGEMANN

Transporters/Channels/ Barriers
3:45 Regulation of Trpm7: Insights from Mice and Humans J.A. Kozak. Wright State Univ.
4:15 CALHM Ion Channels K. Foskett. Univ. of Pennsylvania.
4:45 Ryanodine Receptor: Not Only a Ca Channel M. Fill. Rush Univ.

475. EMERGING ROLE OF AMPK IN KIDNEY EPITHELIAL TRANSPORT, METABOLISM AND DISEASE

Symposium
(Sponsored by: Renal Section)
TUES. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205B
CHAIR: P. SINGH AND A. MCDONOUGH

Regulation of Epithelial Function
Transporters/Channels/ Barriers
3:15 Role of Ampk in Diabetic Kidney Disease K. Sharma. UCSD.
3:45 Functional Interaction between AMPK, ACC1 and NKCC Co-transporters D.A. Power. Austin Hlth. and Univ. of Melbourne.
4:15 Role of AMPK in Acute and Chronic Kidney Disease P. Singh. UCSD.
4:45 Ampk Regulation of Kidney Tubular Transport K.R. Hallows. Univ. of Pittsburgh.

476. HORACE W. DAVENPORT DISTINGUISHED LECTURESHIP OF THE APS GASTROINTESTINAL AND LIVER PHYSIOLOGY SECTION

Lecture
TUES. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 205C

Transporters/Channels/ Barriers
Mediators of Intestinal Adaptation in Health and Disease: Stem Cells, Hormones, Nutrients, and Bugs P.K. Lund. Univ. of North Carolina at Chapel Hill.

477. INFLAMMATION IN OBESITY IS NOT ALL BAD

Symposium
(Sponsored by: Endocrinology and Metabolism Section)
TUES. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 209
CHAIR: J. YE AND O.P. MCGUINNESS

Inflammation/Immunity
Obesity
3:15 Inflammation-Driven Adipose Tissue Expansion As a Critical Mediator of Systemic Metabolic Homeostasis P.E. Scherer. Univ. of Texas Southwestern Med. Ctr.

478. MEMBRANE REPAIR IN MUSCLE CELLS: MOLECULAR MECHANISMS AND THERAPEUTIC APPROACHES

Symposium
(Sponsored by: Muscle Biology Group)
TUES. 3:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 206A
CHAIR: D.E. MICHELE AND J.M. METZGER

Regenerative Medicine (Stem Cells, Tissue Regeneration, Biomaterials)
3:40 Cytoskeleton Dependent Recruitment of Dysferlin in Membrane Repair D. Michele. Univ. of Michigan.
4:30 Targeting Cell Membrane Repair for Regenerative Medicine J. Ma, The Ohio State Univ.

4:55 Enhancing Membrane Resealing With Novel Triblock Copolymers in Cardiac and Skeletal Muscle Diseases J. Metzger, Univ. of Minnesota, Minneapolis.

4:47 MicroRNA 29b and Cardiotoxic Steroid-Induced Cardiac Fibrosis in Adult Cardiac Fibroblasts C.A. Drummond, M.C. Hill, C.J. Cooper, J.I. Shapiro and J. Tian. Univ. of Toledo and Marshall Univ. (814.5)

Analysis of MicroRNA-22 on Cardiac Hypertrophy Induced by High Fat Diet E.C. Guedes and G.P. Diniz. Univ. of São Paulo. (814.9)


A CRISPR/Cas9 System Based Targeted Disruption of a Novel Rat Long Non-coding RNA in a Rat Genetic Model of Hypertension X. Cheng, S. Miller, W. Filipiak, B. Mell, T. Saunders and B. Joe. Univ. of Toledo, Washington Univ. in St. Louis and Univ. of Michigan. (814.1)


SIRT3 Deficiency Impairs Hypoxic Signaling, Reprograms Basal Glycolytic Metabolism and Exacerbates Myocardial Ischemic Injury X. He, H. Zeng and J-X. Chen. Univ. of Mississippi Med. Ctr. (971.12)


482. APS BUSINESS MEETING

Business Meeting

TUES. 5:45 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210BC
WEDNESDAY, APRIL 1
Across Societies – Experimental Biology

483. CAREER DEVELOPMENT WORKSHOPS

Workshop

Wed. 9:00 AM—Boston Convention & Exhibition Center—Exhibit Hall B

Career Development

The following workshops will be held in the EB2015/FASEB Career Center. There is no fee or pre-registration associated with the workshops — just walk in and sit down!

Critiquing of CV/Resumes is by appointment and starts at 9:00 AM on Sunday and continues until 3:00 PM on Wednesday. Sign up on-site in the EB2015/FASEB Career Center, Hall B.

9:00 Transforming Your CV N. Saul. UCSF.
9:00 Job Hunting in Biotech Part 2: Interviewing for Scientist Position B. Lindstaedt. UCSF.
10:30 Job Talk/Chalk Talk: Making the Grade D. Behrens. Univ. of California, Berkeley.
10:30 Ten Ways to Get Lucky in the Job Search J. Lombardo and P. Clifford. Med. Col. of Wisconsin and Marquette Univ. and Univ. of Illinois at Chicago
11:00 Attitudes & Behaviors: How are You Perceived? J. Blumenthal. Montgomery Col., Rockville, MD.
11:00 Translating Your Credentials A. Green. Univ. of California, Berkeley.
1:00 Job Hunting in Biotech Part 3: Compensation Negotiation for Scientist Positions B. Lindstaedt. UCSF.
1:00 Nailing the Job Talk & Interview Prep A. Green. Univ. of California, Berkeley.
1:00 Your Behavioral CV J. Blumenthal. Montgomery Col., Rockville, MD.
1:00 Global Interview Skills: A Practice Workshop for International Candidates D. Behrens. Univ. of California, Berkeley.

Biochemistry and Molecular Biology

484. ASBMB PLENARY LECTURE

Plenary

Wed. 8:00 AM—Boston Convention & Exhibition Center, Room 253 ABC

8:00 Plenary Lecturer Introduction.
8:05 484.1 Structural Basis of Broad Neutralization of Viral Pathogens I.A. Wilson. The Scripps Res. Inst.

485. PLANTS AS SOURCES OF BIOENERGY

Symposium

Wed. 9:00 AM—Boston Convention & Exhibition Center, Room 252AB

CHAIR: L. Kunst

Follow the conversation: #plants

9:00 Chair’s Introduction.
10:25 Engineering High Value Oil Production into Biofuel Crops J. Chappell, C. Kempinski and Z. Jiang. Univ. of Kentucky. (887.23)
11:05 Discussion.
486. BIOLOGICS: ANTIBODIES AND ANTIDOTES

Symposium

Wed. 9:00 am—Boston Convention & Exhibition Center, Room 254AB

CHAIR: M. FABBRI

Follow the conversation: #cancer

9:00 Chair’s Introduction.

9:05 486.1 Update on the Development of Curative Cancer Immunotherapies N.P. Restifo. NCI, NIH.

9:30 Antibody Directed Enzyme Prodrug Therapy: Discovery of Novel Genes, Isolation of Novel Gene Variants and Production of Long Acting Drugs for Efficient Cancer Treatment S.K. Goda. Anti-doping Lab., Doha, Qatar. (897.28)

9:45 486.2 GPCR-Targeting Nanobodes as Attractive Research Tools, Diagnostics and Therapeutics M.J. Smit. VU Univ. Amsterdam.

10:10 Angiotensin-(1-7) as an Antinociceptive Agent in Cancer-Induced Bone Pain B.L. Forte, L.M. Slosky, W.D. Staatz, T.M. Largent-Milnes and T.W. Vanderah. Univ. of Arizona. (897.4)


10:40 486.3 Immunomodulation Therapy Goes to Tumor Site L. Chen. Yale Sch. of Mgmt.

11:05 Discussion.

487. ETHNICITY, RACE, MICROBIOME METABOLIC HOMEOSTASIS

Symposium

Wed. 9:00 am—Boston Convention & Exhibition Center, Room 255

9:00 Chair’s Introduction.

9:05 487.1 Periodontal Disease and the Oral Microbiome in Minority Populations P. Kumar and M.R. Mason. The Ohio State Univ.

10:05 Food System Disparities J.D. Burke. Univ. of New Hampshire.

10:35 487.2 Diet, Microbiota, and Microbial Metabolites in Rural Africans and African Americans S.J.D. O’Keefe. Univ. of Pittsburgh.

11:05 Discussion.

488. VISUALIZING MULTICOMPONENT STRUCTURES IN INFECTION AND IMMUNITY

Symposium

Wed. 9:00 am—Boston Convention & Exhibition Center, Room 257AB

CHAIR: E. ADAMS

Follow the conversation: #immunology

9:00 Chair’s Introduction.

9:05 488.1 Cryo-EM at Near-Atomic Resolution of Bacterial and Host Filaments E.H. Egelman. Univ. of Virginia.

9:30 The Role of RING Dimerization in the E3 Ubiquitin Ligase Activity of the TRIM5α Retroviral Restriction Factor D. Ivanov, Z. Yudina, R. Johnson, N. Biris, A.B. Taylor, P.J. Hart and B. Demeler. Univ. of Texas Hlth. Sci. Ctr. at San Antonio. (888.9)


10:25 Role of the U2AF Homology Motif in Human Tat-SF1 as a Cofactor for HIV-1 Splicing S. Loerch and C.L. Kielkopf. Univ. of Rochester. (718.21)


11:05 Discussion.

489. O-GLCNACYLATION: HOW SWEET IT IS

Symposium

Wed. 9:00 am—Boston Convention & Exhibition Center, Room 258A

CHAIR: E. WEERAPANA

Follow the conversation: #PTMs

9:00 Chair’s Introduction.


9:30 Defining the Mechanism of O-GlcNAc Signaling in Stress-Induced Autophagy and Cardioprotection K. Fahie, M. McCartin, M. Wolfgang and N. Zachara. Johns Hopkins Univ. Sch. of Med. (717.8)

9:45 489.2 O-GlcNAcylation of CaMKII in Cardiac Myocytes Can Be Pro-arrhythmic D. Bers. Univ. of California, Davis.

10:10 O-GlcNAc Modified Residues of IRS1 Impact Postprandial Lipid Metabolism L.E. Ball, K. Robinson, M.N. Berkaw and M.G. Buse. Med. Univ. of South Carolina. (728.47)
**490. COOPERATIVITY AND CROSSTALK**

**Symposium**

**WED. 9:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258B**

**CHAIR: D. S. WUTTKE**

Follow the conversation: #DNA

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
<th>Affiliations</th>
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<tbody>
<tr>
<td>9:00</td>
<td>Chair's Introduction.</td>
<td></td>
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<tr>
<td>9:45</td>
<td><strong>490.2</strong> A New Look at Transcription-Coupled DNA Repair</td>
<td>E. Nudler, V. Epstein, V. Kamarthapu, V. Svetlov and K. McGary.</td>
<td>NYU Sch. of Med., HHMI.</td>
</tr>
<tr>
<td>10:25</td>
<td>The Role of Histone H1 in S. cerevisiae</td>
<td>R. Leicher, S. Schilit and S. Holmes.</td>
<td>Wesleyan Univ. (709.4)</td>
</tr>
<tr>
<td>10:40</td>
<td><strong>490.3</strong> Crosstalk In DNA-Alkyltransferase Functions</td>
<td>M.G. Fried and I. Tessmer.</td>
<td>Univ. of Kentucky and Univ. of Würzburg.</td>
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<tr>
<td>11:05</td>
<td>Discussion.</td>
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**491. TARGETING DISORDER WITH SMALL MOLECULES**

**Symposium**

**WED. 9:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258C**

**CHAIR: S. SHOWALTER**

Follow the conversation: #protein

<table>
<thead>
<tr>
<th>Time</th>
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<tr>
<td>9:00</td>
<td>Chair’s Introduction.</td>
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<tr>
<td>9:05</td>
<td><strong>491.1</strong> Biophysical Studies of Amyloid Formation and Its Inhibition</td>
<td>S.E. Radford.</td>
<td>Univ. of Leeds.</td>
</tr>
<tr>
<td>9:30</td>
<td>Ligand-Induced Conformational Change Propagates NEMO-Mediated NF-κB Signaling</td>
<td>R. Shaffer, S. Cote, K. Allen and A. Whitty.</td>
<td>Boston Univ. (563.6)</td>
</tr>
<tr>
<td>9:45</td>
<td><strong>491.2</strong> Specificity and Promiscuity in Small Molecule Binding to Intrinsically Disordered Protein Regions</td>
<td>S. Metallo.</td>
<td>Georgetown Univ.</td>
</tr>
<tr>
<td>10:10</td>
<td>Safe Inhibition of Amyloid Proteins Toxicity without Protein Specificity</td>
<td>G. Bitan.</td>
<td>UCLA. (564.2)</td>
</tr>
<tr>
<td>10:40</td>
<td><strong>491.3</strong> On Modulating the Regulatory Role of Intrinsically Disordered Proteins Using Small Molecules</td>
<td>C. Camacho.</td>
<td>Univ. of Pittsburgh.</td>
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<tr>
<td>11:05</td>
<td>Discussion.</td>
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494. GUT MICROBES, DRUGS AND TOXINS

Symposium

WED. 1:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 254AB

CHAIR: A. GOODMAN

Follow the conversation: #microbiome

1:15 Chair’s Introduction.
1:50 Toxin-Antitoxin Systems and Their Role(s) in Persistence R. Page and W. Peti. Brown Univ. (575.23)
2:05 494.2 Pharmaceutical Control of the Microbiome M. Redinbo. Univ. of North Carolina at Chapel Hill.
2:50 494.3 TBD E. Alm. Broad Inst., MIT
3:20 Discussion.

495. FUNCTION OF THE EXTRACELLULAR MATRIX IN DEVELOPMENT AND DISEASE

Symposium

(Cosponsored by: AAA and ASBMB)

WED. 1:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 257AB

Follow the conversation: #ECM

1:15 Chair’s Introduction.
1:20 495.1 Recessive Forms of Osteogenesis Imperfecta and Implications for Mechanisms of Disease P.H. Byers. Univ. of Washington.
2:00 495.2 Crosstalk between Bone and Muscle: Deletion of Mbtps1 in Bone Leads to Age-Dependent Increase in Muscle Size and Contractile Function J.P. Gorski, N.T. Huffman, N.G. Seidah, L. Bonewald and M. Brotto. Sch. of Dent., Univ. of Missouri-Kansas City, Inst. of Res. Clins. of Montreal and Sch. of Nursing and Hlth. Studies, Univ. of Missouri-Kansas City.
2:40 Role of CD47 in Triple Negative Breast Cancer S. Kaur, S.P. Singh, A.G. Elkahlon, W. Wu, T. Song, A. Arora and D.D. Roberts. NCI, NIH, NIAID, NIH and NHGRI, NIH. (890.5)
2:55 496.3 Mechanisms of FGF-Mediated Morphogenesis R. Marcucio. UCSF.
3:20 Discussion.

496. STRATEGIES FOR SUBSTRATE RECOGNITION

Symposium

WED. 1:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258A

CHAIR: L. HEDSTROM

Follow the conversation: #enzyme

1:15 Chair’s Introduction.
1:20 496.1 Sirtuins and Novel Protein Posttranslational Modifications H. Lin. Cornell Univ.
1:45 Elucidating Anthrax Lethal Factor Interactions with MAP Kinase Kinase Substrates A.B. Goldberg, R. Ngongoni and B.E. Turk. Yale Univ. Sch. of Med. (894.4)
2:40 Active Role of the Substrate during Catalysis by the Therapeutic Enzyme L-Asparaginase II S.B. Rempe, J. Vanegas, A. Anishkin, D.M. Rogers and S. Sukharev. Sandia Natl. Labs., Albuquerque, Univ. of Maryland College Park and Univ. of South Florida. (573.51)
2:55 496.2 Substrate Recognition in Lantibiotic Biosynthesis W. van der Donk. HHMI and Univ. of Illinois at Urbana-Champaign.
3:20 Discussion.

497. RNA EXPRESSION AND CELL FATE

Symposium

WED. 1:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258B

CHAIR: Y. J. ZHANG

Follow the conversation: #RNA

1:15 Chair’s Introduction.
1:20 497.1 Signal-Dependent Regulation of Transcription Factor Activity G. Gill, G. Saia and J. Lalonde. Tufts Univ. Sch. of Med.
1:45 Characterization of the Transcriptional Regulation of Tetratricopeptide Repeat Doman 39c in Skeletal Muscle D. Waddell and J. Menke. Univ. of North Florida. (880.20)
2:00 497.2 Efficient Conversion of Human Fibroblasts to Functional Neurons by Sequential Inactivation of PTB/nPTB-Regulated RNA Programs X-D. Fu, Y. Xue, H. Qian and J. Hu. UCSD.

2:25 Talk TBD.

2:40 Role of Extracellular MicroRNAs in Atherosclerosis M. Nguyen, D. Karunakaran, M. Geoffrion and K. Rayner. Univ. of Ottawa. (562.31)


3:20 Discussion.

498. TRANSPORTERS II – CAPTURING FUNCTIONAL MOTIONS OF TRANSPORTERS

Symposium

Wed. 1:15 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 258C

CHAIR: O. BOUDKER

Follow the conversation: #protein

1:15 Chair’s Introduction.

1:20 498.1 Conformational Changes of a Type II ABC Importer for Small Substrate Transport H. Pinkett. Northwestern Univ.


2:00 498.2 Visualizing Functional Motions of Membrane Transporters at an Atomic Resolution E. Tajkhorshid. Univ. of Illinois at Urbana-Champaign.

2:25 Transport of Alzheimer’s Associated Amyloid-β through Membranes Catalyzed by P-Glycoprotein J.W. McCormick, P.D. Vogel and J.G. Wise. Southern Methodist Univ. (566.9)


3:20 Discussion.

Nutrition

499. ASN SPONSORED SATELLITE PROGRAM: NATIONAL FOOD AND NUTRITION POLICY: BALANCING THE ROLE OF RESEARCH, NUTRITION SCIENCE AND PUBLIC HEALTH

ASN Satellite

(Sponsored by: The Corn Refiners Association)

Wed. 6:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 151AB

500. ASN SPONSORED SATELLITE PROGRAM: PHENOTYPIC FLEXIBILITY

ASN Satellite

(Sponsored by: Nutritech, a European Commission-Funded Project)

Wed. 9:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, 151AB

501. RESISTANT STARCH, MICROBIOTA AND GUT HEALTH

Symposium

(Supported by PepsiCo, Inc.)

(Sponsored by: Nutritional Sciences Council)

Wed. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, GRAND BALLROOM EAST

CHAIR: D.F. BIRT

Human Nutrition and Metabolism

8:00 Resistant Starch, Potential for Reduction of Risk for Colon Cancer D.F. Birt. Iowa State Univ.


9:10 Resistant Starch and Inflammation: A Role in the Treatment of Inflammatory Bowel Disease J. Higgins. The Children’s Hosp.

9:45 Resistant Starch Mechanisms: Short Chain Fatty Acids, Gut Hormones, or Other Suspects; Does it Add Up? J.L. Slavin. Univ. of Minnesota.
502. WHAT'S NEW IN NATURAL PRODUCTS ANALYSIS? CUTTING-EDGE METHODS AND AVAILABLE RESOURCES FOR NUTRITION RESEARCH

Symposium

(Sponsored by: Nutritional Sciences Council and Dietary Bioactive Components RIS)

Wed. 8:00 am—Boston Convention & Exhibition Center, Room 157ABC

CHAIR: B.C. Sorkin and J.M. Harnly

Research Methods

8:00 Importance of Accurate Measurement in Nutrition Research: Flavonoids as a Case Study J.M Harnly. USDA, ARS.


8:50 The Challenge of Reproducibility in Natural Products Research: Perspectives and Examples from the NCCAM Product Integrity Policy D.C. Hopp. NCCAM, NIH.


503. MODERATE ALCOHOL USE, NUTRITION AND CHRONIC DISEASES: WHAT WE KNOW AND WHERE TO GO NEXT

Symposium

(Supported by PepsiCo, Inc.)

(Sponsored by: Nutritional Epidemiology RIS, Obesity RIS and Aging and Chronic Disease RIS)

Wed. 10:30 am—Boston Convention & Exhibition Center, Grand Ballroom East

CHAIR: N. Parekh and L.M. Troy

Human Nutrition and Metabolism

10:30 Alcohol Use and Association with Dietary Intake R.A. Breslow. NIAAA, NIH.


12:05 Research Gaps and Future Directions R.A. Breslow. NIAAA, NIH.

504. “ONE NUTRITION”: CLINICAL NUTRITION ACROSS SPECIES

Symposium

(Supported by PepsiCo, Inc.)

Wed. 10:30 am—Boston Convention & Exhibition Center, Room 157ABC

CHAIR: L.M. Freeman and S.N. Meydani

Diet and Non-Communicable Diseases


**Pathology**

505. HISTONES, INFLAMMASOMES, NETS AND CELL/ORGAN INJURY

Symposium

*Sponsored by: ASIP Cell Injury Scientific Interest Group*

**WED. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 160A/B**

*CHAIR:* P.A. WARD AND C.T. ESMON

Cell and Tissue Injury

*Inflammation/Immunity*


9:00  Histone Mediation of Acute Lung and Cardiac Injury  P.A. Ward. Univ. of Michigan.


10:00  Histopathological Features of NETs  P. Kubes. Univ. of Calgary Med. Ctr.


11:15  Discussion.

506. MOLECULAR AND CELLULAR BASIS OF DISEASE: NEOPLASIA MORNINGS: SIPMET SYMPOSIUM: CANCER STEM CELLS

Symposium

*Sponsored by: Italian Society of Pathology and Translational Medicine, ASIP Neoplasia and Growth Regulation Scientific Interest Group and ASIP Regenerative Medicine Scientific Interest Group*

**WED. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 162A**

*CHAIR:* S. ANDO AND K. GARDNER

Neoplasia

Cancer Biology

Regenerative Medicine


9:30  Connecting the Machinery of Fate Determination and Tumor Suppression in the Breast Stem Cell Compartment  P.P. Di Fiore. Univ. of Milan.

10:00  Epigenetic Regulation of Epithelial Phenotypic Transitions and Self-Renewal in Breast Cancer by a Metabolic Switch  K. Gardner. NIH.


11:00  Conclusion.

11:15  Summary and Discussion.

507. MICROBIAL INTERACTIONS WITH THE HOST

Minisymposium

**WED. 8:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 160C**

*COCHAIR:* D. MILNER AND A.S. DAVIS

*Inflammation*

*Inflammation/Immunity*

*Microbiome*

8:30  **507.1** *Giardia duodenalis* Depletes Goblet Cell Mucins and Degrades MUC2, Facilitating Bacterial Translocation  C.B. Amat, J-P. Motta, A. Bhargava, K. Chadee and A.G. Buret. Univ. of Calgary, Canada.

8:45  **507.2** *Entamoeba histolytica*-Induced Caspase-4/11 Activation Elicits a Pro-inflammatory Response in Macrophages  J. Quach, L. Mortimer, F. Moreau and K. Chadee. Univ. of Calgary, Canada.

9:00  **507.3** *Entamoeba histolytica* Induces Pro-inflammatory Mediator HMGB1 Release in Early Contact with Macrophage  S. Begum, J. St-Pierre, F. Moreau and K. Chadee. Univ. of Calgary, Canada.

9:15  **507.4** Binding and Entry of 1918 Pandemic Influenza Receptor Binding Domain Variants in Normal Human Bronchial Epithelial Cells  A.S. Davis, D. Chertow, L. Qi and J. Taubenberger. NIAID, NIH, Kansas State Univ. Col. of Vet. Med. and CC, NIH.


10:00  **507.7** Distinct Roles of the Mucus Layer and Microbiota in Conferring Innate Host Defense and Susceptibility to Disease  A. Leon-Coria, F. Moreau, M. Surette and K. Chadee. Univ. of Calgary.

10:15  **507.8** Intestinal Epithelial Ecto-5'-Nucleotidase CD73 Regulates the Homeostasis of *Salmonella typhimurium* and Commensal Bacteria  D.J. Kao, B.J. Saeedi, K.D. Schwisow, S.P. Colgan and D.J. Kominsky. Univ. of Colorado Anschutz Med. Campus, Aurora.


10:45  **507.10** Constitutive and Antigen-Induced Secretion of Cytokines by Peripheral Blood Mononuclear Cells of Tuberculosis Patients  A. Mustafa. Fac. of Med., Kuwait Univ.
Pharmacology

508. NORMAN WEINER LECTURE

Lecture
Wed. 8:30 am—Boston Convention & Exhibition Center, Room 107AB

Transporters/Channels/Barriers

The Norman Weiner Lecture was established in memory of Dr. Norman Weiner, past ASPET president and chair of the Department of Pharmacology at the University of Colorado and in honor of his many contributions to both ASPET and to pharmacology research and education.

8:30 Introduction A.E. Fleckenstein. Univ. of Utah.
8:35 Structural Basis for Function and Pharmacology of Voltage-Gated Sodium and Calcium Channels W.A. Catterall. Univ. of Washington.

509. COMMON PATHWAYS AND MECHANISMS OF CHRONIC PAIN AND OPIOID ADDICTION

Symposium
(Sponsored by: The Divisions for Neuropharmacology; Behavioral Pharmacology; Molecular Pharmacology; Translational and Clinical Pharmacology; and Drug Discovery and Development)

Wed. 9:30 am—Boston Convention & Exhibition Center, Room 106

CHAIRED: S.L. Ingram

Neurobiology

Inflammation/Immunity

9:30 NIH Efforts to Reduce Prescription Opioid Abuse and Improve Pain Treatment D.A. Thomas. NIDA, NIH.
10:00 Neuropathic Pain Modulates Dopaminergic Circuitry: Role for Microglial Activation C. Cahill. Univ. of California, Irvine.
10:30 Role of Ventral Tegmental Area TORC2 Signaling in Stress-Induced Morphone Reward S. Kaska. Michigan State Univ. (768.8)
11:15 Extrasynaptic GABAA Receptors in the Periaqueductal Gray are Involved in Descending Pain Modulation and Chronic Inflammatory Pain-Induced Plasticity S.L. Ingram. Oregon Health & Sci. Univ.
11:45 Effects of Daily Morphine Treatment on Impulsivity in Rats Responding under a 5-Choice Serial Reaction Time Task D.R. Maguire. Univ. of Texas Hlth. Sci. Ctr. at San Antonio. (769.7)

510. CROSSING THE LINE: EXPLORING THE BORDERS BETWEEN PHYSIOLOGICAL REDOX SIGNALING AND OXIDATIVE STRESS

Symposium

(Sponsored by: The Divisions for Cardiovascular Pharmacology; Toxicology; Molecular Pharmacology; Drug Discovery and Development; and Translational and Clinical Pharmacology)

Wed. 9:30 am—Boston Convention & Exhibition Center, Room 109A

CHAIRED: T. Michel and M. Haigis

Injury/Connective Tissue/Fibrosis

10:20 Posttranslational Regulation of Nox4 and its Role in Heart Failure J. Sadoshima. Rutgers New Jersey Med. Sch.
10:45 Dynamic Regulation of the Nitrosothiol Proteome in Cardiovascular Disease E. Murphy. NHLBI, NIH.
11:35 FP Prostanoid Receptor Mediated Up-regulation of Hypoxia-Inducible Factor-1α through Activation of Mitogen-Activated Protein Kinase and Reactive Oxygen Species Signaling Pathways C.M. Sanchez. Col. of Pharm., Univ. of Arizona. (621.13)

511. MOVING BEYOND TRADITIONAL STIMULANTS: EMERGING CHARACTERISTICS AND THERAPEUTIC APPLICATIONS OF ATYPICAL REUPTAKE INHIBITORS

Symposium

(Sponsored by: The Divisions for Behavioral Pharmacology; Molecular Pharmacology; Neuropharmacology; and Translational and Clinical Pharmacology)

Wed. 9:30 am—Boston Convention & Exhibition Center, Room 107C

CHAIRED: L.P. Carter and B.E. Blough

Neurobiology

Transporters/Channels/Barriers

9:40 Is Modafinil an Atypical DAT Inhibitor? M.H. Baumann. NIDA, NIH.
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<th>Speaker/Institution</th>
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<tbody>
<tr>
<td>10:05</td>
<td>Molecular Approaches for Differentiating Atypical Uptake Inhibitors from Traditional Stimulants at the Dopamine Transporter</td>
<td>K.C. Schmitt, NYU Sch. of Med.</td>
</tr>
<tr>
<td>10:30</td>
<td>Chemical and Pharmaceutical Approaches for Differentiating Atypical Monoamine Releasers and Uptake Inhibitors from Traditional Stimulants</td>
<td>B.E. Blough, Research Triangle Inst.</td>
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<tr>
<td>10:55</td>
<td>Clinical and Pharmacological Relevance of Rebound Hypersomnia in Differentiating Traditional Stimulants from Wake Promoting Agents</td>
<td>M. Tafti, Univ. of Lausanne</td>
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<tr>
<td>11:20</td>
<td>Characterization of the Atypical Effects of JZP-110 at the Dopamine Transporter and in Clinical Trials</td>
<td>L.P. Carter, Jazz Pharmaceut. Inc.</td>
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<td>11:45</td>
<td>General Discussion.</td>
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### 512. NATURAL PRODUCTS: BIOACTIVE MOLECULES FROM NATURE

**Symposium**

*(Sponsored by: The Divisions for Translational and Clinical Pharmacology; Toxicology; and Drug Metabolism)*

**Wed. 9:30 AM—Boston Convention & Exhibition Center, Room 108**

**Chair:** B.T. Green, B.E. Blough and M.A. Holinstat

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<tr>
<td>9:30</td>
<td>Introduction to Marine Toxins in Nicotinic Receptor Targeted Drug Design</td>
<td>W.R. Kem, Univ. of Florida</td>
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<tr>
<td>10:00</td>
<td>The &quot;Fungal Pharmacy&quot;: A Source for Structurally Diverse and Bioactive Compounds</td>
<td>N.H. Oberlies, Univ. of North Carolina at Greensboro</td>
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<td>10:30</td>
<td>CNS Drug Discovery from Marine Cyanobacteria</td>
<td>K.J. Tidewell, Duquesne Univ.</td>
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<td>11:00</td>
<td>Toxicities and Teratogenic Potential of Piperidine and Pyridine Enantiomers from Plants</td>
<td>S.T. Lee, USDA.</td>
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<td>11:30</td>
<td>Targeting Lactate Efflux Inhibition for the Development of Potent Antiproliferative Agents</td>
<td>S.S. Messeha, Florida A&amp; M Univ. (945.1)</td>
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<tr>
<td>11:45</td>
<td>Characterization of Synthetic Ircinianin Analogues as Potent and Selective Modulators of α3 Glycine Receptor</td>
<td>S. Talwar, Univ. of Queensland. (770.6)</td>
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</table>

### 513. STRUCTURAL BASIS FOR ION CHANNEL PHARMACOLOGY

**Symposium**

*(Sponsored by: The Divisions for Molecular Pharmacology; Neuropharmacology; and Translational and Clinical Pharmacology)*

**Wed. 9:30 AM—Boston Convention & Exhibition Center, Room 107AB**

**Chair:** W.A. Catterall

**Neurobiology**

**Transmitters/Channels/ Barriers**

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<tr>
<td>9:35</td>
<td>Structural Basis for Pharmacology of Pentameric Receptors</td>
<td>P-J. Corringer, Pasteur Inst.</td>
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<tr>
<td>10:10</td>
<td>Mechanism of Drug and Agonist Action on Glutamate Receptors</td>
<td>S.F. Traynelis, Emory Univ.</td>
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<td>10:45</td>
<td>Structural Basis for G Protein Regulation of Kir Channels</td>
<td>M. Whorton, Oregon Hlth. &amp; Sci. Univ.</td>
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<td>11:20</td>
<td>Structural Basis for Pharmacology of TRPV1 Channels</td>
<td>E. Cao, UCSF.</td>
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### 514. TRANSPORTER-MEDIATED DRUG INTERACTIONS: CLINICAL SIGNIFICANCE AND PREDICTIONS

**Symposium**

*(Sponsored by: The Divisions for Drug Metabolism; Toxicology; and Cardiovascular Pharmacology)*

**Wed. 9:30 AM—Boston Convention & Exhibition Center, Room 109B**

**Chair:** M.J. Zamek-Gliszczynski and C. Lee

**Transmitters/Channels/ Barriers**

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<tr>
<td>9:30</td>
<td>Can We Prospectively Predict Complex DDIs Involving Hepatic OATPs?</td>
<td>A. Galetin, Manchester Pharm. Sch.</td>
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<tr>
<td>11:00</td>
<td>When are Renal Transport DDIs Relevant from a PK and Kidney Toxicity Perspective?</td>
<td>J. Wang, Univ. of Washington.</td>
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<tr>
<td>11:30</td>
<td>Why have Clinical DDIs not been Observed at the Level of BBB Efflux?</td>
<td>M.J. Zamek-Gliszczynski, GlaxoSmithKline.</td>
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Physiology

515. PRESIDENT’S SYMPOSIUM SERIES
PHYSIOLOGY: ANSWERS TO BIG QUESTIONS
APS NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE LECTURE

Lecture

WED. 4:45 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210BC
CHAIR: R.J. LEFKOWITZ

Translational Physiology


516. CIRCADIAN CLOCK IN METABOLIC REGULATION

Featured Topic

(Sponsored by: Endocrinology and Metabolism Section)

WED. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 209
CHAIR: L. WANG

Obesity

8:00 Nuclear Receptor Control of Circadian and Metabolic Cycles L. Wang. Univ. of Connecticut.
9:00 Cardiomyocyte-Specific Bmal1 Deletion Triggers Extracellular Matrix Response Associated with Markers of Impaired Inflammation Resolution and Diastolic Dysfunction K.A. Ingle, V. Kain, M. Goel, S.D. Prabhu, M.E. Young and G.V. Halade. Univ. of Alabama at Birmingham. (1035.3)
9:15 Transcriptional Control of Oscillatory Homocysteine Homeostasis by Nuclear Receptor SHP Z. Yang, S. Lee and L. Wang. Univ. of Connecticut. (1035.1)
9:30 Contribution of PPARα and Ketone Body to Sleep Homeostasis in Mice S. Chikahisa, N. Shimizu, T. Shiuchi and H. Sei. Univ. of Tokushima Grad. Sch. (1035.4)
9:45 Metabolic Effects of Temporally Targeted Food Restriction in Female Rats with or without Estrogen R.J. Naukam and K.S. Curtis. Oklahoma State Univ. Ctr. for Hlth. Sci. (818.3)

517. EVOLUTION OF AIR BREATHING

Featured Topic

(Sponsored by: Respiration Section and Comparative and Evolutionary Physiology Section)

WED. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210A
CHAIR: M.B. HARRIS AND R.J.A. WILSON

8:00 Exaptations to Air Breathing: Lung Breathing from Lungless Vertebrates M.B. Harris. Univ. of Alaska Fairbanks.
8:30 Evolution of Respiratory Pumps and Their Control E. Brainerd. Brown Univ.
9:00 Development and Evolution of Respiratory Oscillators in Vertebrates P.A. Gray. Washington Univ. in St. Louis.
9:15 Oscillating Wildly: Turning the Evolution of Respiratory Rhythm Generation on Its Head M. Baghdawala, W. Trask and R.J. Wilson. Univ. of Calgary, Canada. (1033.7)

518. FROM BASIC SCIENCE TO PRECISION MEDICINE: THE USE OF GENOMIC, EPIGENOMIC AND TRANSLATIONAL RESEARCH TO DEVELOP PERSONALIZED TREATMENTS

Symposium

(Sponsored by: American Federation for Medical Research)

WED. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 212
CHAIR: K. PAYNE AND K. COBURN

Education

Translational Physiology

8:30 Applying Molecular Epidemiology in Pediatric Leukemia J.D. Schiffman. Univ. of Utah.
9:00 A Novel Xenograft Model to Deliver a Human Cytokine That Drives High-Risk Pediatric Leukemia K.J. Payne. Loma Linda Univ.
9:30 The Use of Global Epigenetic Analysis to Develop a Novel Treatment for Pediatric Leukemia S. Dovat. Penn State Hershey Col. of Med.
519. MENTORING FOR DIVERSE CAREERS: MENTOR AND PROTÉGÉ, PERSPECTIVES

Symposium  
(Sponsored by: Women in Physiology Committee)  
Wed. 8:00 AM—Boston Convention & Exhibition Center, Room 205B  
Chair: M.R. Dwinell and K.M. Mathis

Career Development
8:00 Should I Pursue An Alternative Career Path? L. Collins. Foley & Lardner LLP, Madison, WI.  
9:00 Career Opportunities That Fit: You Beyond the PhD M. Urso. Smith and Nephew Biotherapeutics, Fort Worth.  
9:30 Panel Discussion.

520. NEUROMUSCULAR DISEASES: NOVEL THERAPEUTIC STRATEGIES

Featured Topic  
(Sponsored by: Muscle Biology Group)  
Wed. 8:00 AM—Boston Convention & Exhibition Center, Room 206B  
Chair: V. Ljubicic

8:00 Novel Therapeutic Strategies for Mitochondrial Myopathies M.A. Tarnopolsky. McMaster Univ., Canada.  
8:30 Genetic Proof in Mice That Calcium is the Final Common Pathway Leading to Myofiber Necrosis in Muscular Dystrophy J.D. Molkentin. HHMI, Children's Hosp. Med. Ctr., Cincinnati.  
9:00 Long-Term Dietary Quercetin Enrichment Improves Muscle Function in Dystrophic Skeletal Muscle J.T. Selsby, C.G. Ballmann and J.C. Quindry. Iowa State Univ. and Auburn Univ. (1039.6)  
9:15 Chemical Chaperone Therapy Reduces Myofiber Damage in Dystrophin-null mdx Mice J.A. Roche and A.L. Mueller. Wayne State Univ. and Univ. of Maryland Sch. of Med. (1039.2)  
9:45 Effect of Long-Term Quercetin Supplementation on Dystrophic Cardiac Pathology in mdx/utrn Mice C.G. Ballmann, R. Beyers, T. Denney, J.T. Selsby and J.C. Quindry. Auburn Univ. and Iowa State Univ. (1039.4)

521. SALT-SENSITIVE HYPERTENSION: THE BRAIN OR THE KIDNEY TO BLAME

Symposium  
(Sponsored by: Brazilian Society of Physiology and Sociedad Chilena de Ciencias Fisiológicas)  
Wed. 8:00 AM—Boston Convention & Exhibition Center, Room 205C  
Chair: V.R. Antunes and J.G. Reyes

8:00 Renal Contributions to Salt-Sensitive Hypertension L.G. Navar. Tulane Univ. Sch. of Med.  
8:30 What Does the Brain Have to Do with Salt-Sensitive Hypertension? J.W. Osborn. Univ. of Minnesota, Minneapolis.  
9:00 Renin Expression in Kidney Collecting Ducts During Hypertension: is it Contributing to Sodium Reabsorption? A.A. Gonzalez. Pontificial Catholic Univ. of Valparaiso, Chile.  
9:30 Fine Tuning Between Hindbrain and Forebrain Mechanisms to Control Arterial Pressure and Sympathetic Nerve Activity During Hyperosmolality D.S.A. Colombo. Sao Paulo State Univ. Sch. of Dent.

522. THE PATHOPHYSIOLOGY OF DRUG-INDUCED VASCULAR INJURY (DIVI)

Symposium  
(Sponsored by: Cardiovascular Section)  
Wed. 8:00 AM—Boston Convention & Exhibition Center, Room 211  
Chair: B.R. Wamhoff and J. Turk

Injury/Connective Tissue/Fibrosis

8:25 The Role of Nitric Oxide in Drug-Induced Vascular Injury J.L. Weaver. FDA, Silver Spring.  
9:00 Identification of Biomarkers Associated with Hemodynamic-Related DIVI Mechanisms B. Enerson. Pfizer Inc.  
9:15 Translational Relevance of Non-vasoactive Vasculitides I. Mikaelian. Abbvie BioResearch Ctr., Worster, MA  
9:40 Recreating the Pathophysiology of Interspecies Drug-Induced Vascular Injury in Vitro B. Blackman. HemoShear, LLC, Charlottesville.
523. TRANSLATIONAL STRATEGIES FOR MUSCULOSKELETAL REGENERATIVE MEDICINE

Symposium
(Sponsored by: Translational Physiology Group)
Wed. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 206A
CHAIR: C. MENDIAS AND K. FUNAI

Translational Physiology
Regenerative Medicine (Stem Cells, Tissue Regeneration, Biomaterials)
8:00 Matrix-Based Strategies for Musculoskeletal Tissue Regeneration S. Badylak. Univ. of Pittsburgh.
9:10 Cell Therapy-Based Strategies for Musculoskeletal Tissue Regeneration A. Asakura. Univ. of Minnesota, Minneapolis.

524. WANTED AND UNWANTED PARACELLULAR PASSAGE IN INTESTINAL EPITHELIA

Symposium
(Sponsored by: Gastrointestinal and Liver Physiology Section)
Wed. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 208
CHAIR: M. FROMM AND J. SCHULZKE

Regulation of Epithelial Function
Transporters/Channels/ Barriers
8:30 Tricellular Tight Junction and Macromolecular Passage S.M. Krug. Charité.
9:00 Molecular Basis of Tight Junction Pore and Leak Pathways C.R. Weber. Univ. of Chicago.
9:30 Features That Make Tight Junctions Leaky Or Tight C.M. Van Itallie. NHLBI, NIH.

525. WHO CAN TOLERATE BLOOD LOSS? NEW INSIGHTS INTO MECHANISMS OF COMPENSATION TO HEMORRHAGE

Symposium
(Sponsored by: Environmental and Exercise Physiology Section)
Wed. 8:00 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 207
CHAIR: V.A. CONVERTINO AND C. HINOJOSA-LABORDE

8:00 Blood Loss versus LBNP: Perspective from Human Studies B. Johnson. Univ. at Buffalo.
Peripheral Control of the Circulation in Women With Low Orthostatic Tolerance N. Stachenfeld. John B. Pierce Lab., Yale Univ. Sch. of Med.

526. CONTRIBUTORS TO THE SLOWED AGING PHENOTYPE: EXERCISE AND OTHER COMMON MEDIATORS

Symposium
(Supported by Univ. of California, Irvine Exercise Medicine and Sport Sciences Initiative)
Wed. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 210BC
CHAIR: K.L. HAMILTON

10:30 The In Vivo Bioenergetics of Aging Skeletal Muscle in Humans J. Kent-Braun. Univ. of Massachusetts Amherst.
11:00 Is Proteostasis a Shared Characteristic of Slowed Aging? B. Miller. Colorado State Univ.
Exercise Adaptations for Slowing Age-Related Dysfunction and Disease P.J. Adhihetty. Univ. of Florida.
527. EFFECTS OF A CHANGING CLIMATE ON INSECT PHYSIOLOGY

Symposium
(Sponsored by: Comparative and Evolutionary Physiology Section)

WED. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 212

CHAIR: K. J. GREENLEE AND J. F. HARRISON

Oxidative Stress
10:30 Understanding Seasonally Cycling Selective Pressures: An Essential Component of Predicting Organismal Responses to Climate Change. C. Williams. Univ. of Florida.
11:00 Incorporating Temporal and Spatial Variation in Temperature into Predictions of Climate Change Impacts M. E. Dillon. Univ. of Wyoming.
11:30 Physiological Changes in the Insect Tracheal System throughout Juvenile Development K. J. Greenlee. North Dakota State Univ.
12:00 Gas Exchange in Tracheate Anthropods: Coping with Hypoxia and Metabolic Demands S. Hetz. Humboldt Univ.

528. ENTERIC NERVOUS SYSTEM REGULATION OF GI FUNCTION

Symposium
(Sponsored by: Gastrointestinal and Liver Physiology Section)

WED. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 211

CHAIR: R. MITAL

Neurobiology
10:30 Recent Advances in the Understanding of Gut Microbial Regulation of the Ens S. Srinivasan. Emory Univ.
11:00 Optogenetic Approaches to Investigate Colonic Motility T. Smith. Univ. of Nevada, Reno.
11:30 Enteric Nervous System in Diabetes Mellitus J. Wiley. Univ. of Michigan Hosp.
12:00 Stem Cell Transplantation of the Ens P. J. Pasricha. Johns Hopkins Univ. Sch. of Med.

529. MOLECULAR REGULATORS OF SKELETAL MUSCLE ANGIOGENESIS IN HEALTH AND DISEASE

Featured Topic
(Sponsored by: Cardiovascular Section)

WED. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 206B

CHAIR: T. HAAS AND T. GUSTAFSSON

11:00 Regulation of VEGFR2 Activation in Skeletal Muscle by VEGF Isoforms with Differential ECM- and NRP1-Binding: A Computational Study L. Clegg and F. Mac Gabhann. Johns Hopkins Univ. (1050.7)
11:30 Diabetic Status Impacts the Capacity for Angiogenesis in Peripheral Artery Disease B. Annex. Univ. of Virginia Hlth. Syst.
11:45 Conditional VEGF Gene Deletion in Both Endothelial Cells and Skeletal Myofibers Leads to Exercise Intolerance Accompanied by a Decrease in Body Mass and Cardiac Enlargement A. Sulaeman, J. Fine, P.D. Wagner and E.C. Breen. UCSD. (1050.1)
530. MUSCLE DISEASES: RECENT ADVANCES IN DISEASE MECHANISMS

Featured Topic
(Sponsored by: Muscle Biology Group)

Wed. 10:30 am—Boston Convention & Exhibition Center, Room 209

CHAIR: A. Beedle and J. Selsby

10:30 Mechanisms of Disease in MEGF10 Myopathy P.B. Kang, Univ. of Florida.
11:00 Specialization of Dystrophin and Utrophin Impacts Duchenne Muscular Dystrophy Pathogenesis J.M. Ervasti, Univ. of Minnesota, Minneapolis.
11:30 Therapeutic Targeting of Akt/mTOR Signaling in Fktn-Deficient Muscle S.J. Foltz, A. Patel, K.B. Peissig and A.M. Beedle, Univ. of Georgia. (1038.12)
12:00 Targeting Mechanically-Activated NOS Signaling in Dystrophic Cardiomyopathy J.F. Garbincius and D.E. Michele. Univ. of Michigan. (1038.8)
12:15 The LMNA Mutation R321X Associated with Dilated Cardiomyopathy Leads to Reorganization of the Endoplasmic Reticulum and Aberrant Ca²⁺ Signaling in HEK 293 Cells A. Gerbino, M. Carmosino, F.R. Del Vecchio, S. Torretta, G. Schena, G. Procino and M. Svelto. Univ. of Bari Aldo Moro. (1038.7)

531. NEONATAL LUNG DEVELOPMENT AND ADULT LUNG HOMEOSTASIS: COMMON MOLECULAR MECHANISMS IN LUNG DISEASE

Symposium
(Sponsored by: Respiration Section)

Wed. 10:30 am—Boston Convention & Exhibition Center, Room 208

CHAIR: L. Nelin and S. Abman

11:00 Neonatal RAGE Biology and the Foreshadowing of Lung Disease P. Reynolds. Brigham Young Univ.
11:30 Progenitor Cell-Mediated Angiogenesis in Lung Development C. Baker. Univ. of Colorado Sch. of Med. and Children's Hosp, Colorado

532. NEUROPLASTICITY IN SPACE: REFLECTIONS FROM THE STS-90 NEUROLAB SPACE SHUTTLE CREW

Symposium
(Sponsored by: History of Physiology Group)

Wed. 10:30 am—Boston Convention & Exhibition Center, Room 210A

CHAIR: J. Dean

Neurobiology


533. REFRESHING PERSPECTIVES ON THE ROLE OF THE CHEMOREFLEXES IN THE CONTROL OF CARIORESPIRATORY FUNCTIONS: NEW PATHWAYS AND PLAYERS

Featured Topic
(Sponsored by: Neural Control and Autonomic Regulation)

Wed. 10:30 am—Boston Convention & Exhibition Center, Room 205B

CHAIR: N. Marcus

10:30 Cardiorespiratory Imbalance in Low Vs High Output Heart Failure: the Role of the Chemoreflex Pathway R. Del Rio. Autonomous Univ. of Chile.
11:00 Impact of Erythropoietin in the Carotid Body Response to Hypoxia and Hypercapnia J. Soliz. Laval Univ., Canada.
11:30 Chronic Phenytoin Treatment Reduces Hypoxic Ventilatory Responses in Rats J. Alcayaga, M.P. Oyarce and R. Iturriaga. Univ. of Chile Fac. of Sci. and Univ. of Chile Fac. of Biol. Sci. (1060.6)
11:45 Role of the Peripheral Chemoreceptor Reflex on Cardiovascular and Sympathetic Responses to Obstructive Sleep Apnea in Rats K. Miki, M. Yoshimoto, C. Kajiha and Y. Mizukami. Nara Women's Univ., Japan. (1060.3)
12:00 Carotid Chemoreceptor Desensitization Improves Baroreflex Control of Blood Pressure during Hypoxia in Humans M.T. Mozer, M.J. Joyner, T.B. Curry and J.K. Limberg. Mayo Clin. (1060.4)
12:15 P2X3 Receptor Antagonism Reduces Peripheral Chemoreceptor Reflex Hypersensitivity and Blood Pressure in the Spontaneously Hypertensive Rat W. Pijacka, A.P. Ford and J.F.R. Paton. Univ. of Bristol and Afferent Pharmaceut., CA. (1060.1)
534. SCIENTISTS AS SUPERVISORS: HIRING, FIRING, AND BEYOND

Symposium
(Sponsored by: Trainee Advisory Committee)

WED. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 206A

CHAIR: C.T. BANEK AND J. STEINER

Career Development

10:30 Hiring and Firing: Finding the Right Employees
M.B. Reid. Univ. of Florida.

11:00 Effectively Managing People and Resources
K. Barrett. UCSD.

11:30 Dealing With Difficult Situations and People
F. Montemurro. Boston Univ.

12:00 Panel Discussion.

535. SYMPATHETIC CONTROL OF THE VASCULATURE IN CLINICAL POPULATIONS

Featured Topic
(Sponsored by: Environmental and Exercise Physiology Section)

WED. 10:30 AM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 207

CHAIR: L. ALEXANDER AND J. GREANEY

Regulation of Epithelial Function

Neurobiology

10:30 Sympathetic Control of the Cutaneous Microcirculation in Hypertension J. Greaney. Penn State.


11:15 Effect of Pregnancy on Sympathetic and Peripheral Vascular Responses to the Cold Pressor Test P.K. Wakefield, C.W. Usselman, M.K. Stickland, R.S. Chari, C.G. Julian, M.H. Davenport and C.D. Steinback. Univ. of Alberta and Univ. of Colorado Boulder. (1053.5)


11:45 Augmentation of Endothelium-Dependent Vasodilatory Signaling Improves Functional Sympatholysis in Contracting Muscle of Older Adults C.M. Hearon, Jr., M.L. Racine, J.C. Richards, G.J. Luckasen, D.G. Larson and F.A. Dinenno. Colorado State Univ. and PVHS, Loveland, CO. (1053.3)

12:00 Sympathetic Vascular Transduction in Type 2 Diabetes Mellitus P.J. Fadel. Univ. of Missouri-Columbia.

536. AUTOPHAGY AND MiRNA IN DIABETIC HEART FAILURE

Featured Topic
(Sponsored by: Cardiovascular Section)

WED. 2:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 208

CHAIR: P.K. MISHRA

2:30 FoxO and Diabetic Cardiomyopathy J.A. Hill. Univ. of Texas Southwestern Med. Ctr.

3:00 Role of miRNAs in Diabetic Cardiomyopathy S. Chakrabarti. Western Univ. Schulich Sch. of Med. and Dent., Canada.

3:30 MiR-133a Mitigates Mitophagy in Ins2−/− Diabetic Heart S.S. Nandi and P.K. Mishra. Univ. of Nebraska Med. Ctr. (1040.1)


4:00 Incretin Ameliorates Diabetic Microangiopathy in Heart by Activation of Autophagy via PKA/AMPK Axis Y.K. Bando and A. Monji. Nagoya Univ., Japan. (1040.3)


537. AUTOPHAGY IN MUSCLE

Featured Topic
(Sponsored by: Environmental and Exercise Physiology Section)

WED. 2:30 PM—BOSTON CONVENTION & EXHIBITION CENTER, ROOM 207

CHAIR: D. HOOD

2:30 Autophagy Activation During Chronic Muscle Disuse M. Sandri. Univ. of Padova.

3:00 Exercise Adaptations Depend on Autophagy Pathways Z. Yan. Univ. of Virginia Sch. of Med.

3:30 Acute Exercise-Induced Mitophagy Is Mediated in Part by PGC-1α A. Vainshtein, L.D. Tryon, M. Pauly and D.A. Hood. Sch. of Kinesiol. and Hlth. Sci., York Univ., Canada. (821.4)


538. EMERGING CONCEPTS IN HYPOXIA-RELATED DISEASE SIGNALING

Symposium

(Sponsored by: American Federation for Medical Research)

Wed. 2:30 pm—Boston Convention & Exhibition Center, Room 211

CHAIR: N. Rasouli and S.P. Colgan

Translational Physiology

2:30 Impact of Adipose Tissue Hypoxia on Insulin Resistance in Obesity N. Rasouli, Univ. of Colorado Denver, Aurora.

3:00 Hypoxic Signaling in Intestinal Injury and Recovery S.P. Colgan, Univ. of Colorado Denver, Aurora.

3:30 Hypoxia and Transcriptional Regulation of Key Genes in Inflammation C.T. Taylor, University Col. Dublin.

4:00 Targeting HIFs for the Treatment of Cardiovascular Disease G.L. Semenza, Johns Hopkins Univ. Sch. of Med.

539. SYSTEMIC AND PULMONARY VASCULAR FUNCTION AT HIGH ALTITUDE/HYPOXIA: LEARNING FROM MALADAPTATIONS

Featured Topic

(Sponsored by: Cardiovascular Section)

Wed. 2:30 pm—Boston Convention & Exhibition Center, Room 206B

CHAIR: U. Scherrer

Oxidative Stress


3:00 Redox-Regulation of Vascular Endothelial Function in Hypoxia; from Adaptation to Maladaptation D.M. Bailey, Univ. of South Wales.

3:30 High Altitude Gestation and Prenatal Programming of Bradykinin Induced Pulmonary Endothelial Ca2+ Responses and Arterial Vasorelaxation in Fetal and Newborn Lamb A. Brunelle, C. Blum-Johnston, C. Wee, Q. Blood, R. Wilson, M.R. Romero, M. Francis, M.S. Taylor, L.D. Longo and S.M. Wilson. Loma Linda Univ. Sch. of Med. and Univ. of South Alabama Col. of Med. (1051.1)

3:45 Hypocapnic Hypoxia Silences the Retrotrapezoid Nucleus T.M. Basting, P.G.R. Burke, D. Stornetta, R.L. Stornetta and P.G. Guyenet. Univ. of Virginia. (1051.2)


540. VASCULAR BIOENGINEERING

Symposium

(Sponsored by: Biomedical Engineering Society)

Wed. 2:30 pm—Boston Convention & Exhibition Center, Room 212

CHAIR: G. Dai and J. Tien

2:30 An Integrated in Vivo Model of Vascularized Tumor and Cardiac Tissue S. George. Washington Univ. in St. Louis.

3:00 Manipulating the Microvasculature and Its Environments J. Hoying. Univ. of Louisville.


Poster Presenters: Upload Your Poster

Where: E-Poster Counter, Lobby D
Deadline: Wed., April 1, 3:00 PM

Uploaded posters will be available online to all registered attendees following the meeting at www.experimentalbiology.org