



**UNIVERSITY OF IOWA**

**AND**

**ABBOUD CARDIOVASCULAR RESEARCH CENTER**

**PARTICIPATION AT**

**EXPERIMENTAL BIOLOGY**

**ANNUAL SESSIONS**

**2018**

**San Diego Convention Center**

**San Diego, CA**

**April 21-25, 2018**

## Experimental Biology Itinerary

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### ***Special Events and Seminars***

#### **Give a Day of Service at EB 2018 - Friday, April 20, 2018**

Since 2009, Experimental Biology attendees have given a day of volunteer service in the local communities where we convene. Volunteer activities have ranged from home construction to painting, cleaning, stocking, food preparation, and food service.

At EB 2018 on Friday, April 20, 2018, we will spend the day helping the dedicated people at Father Joe's Villages provide assistance to San Diegans in need at St. Vincent de Paul Village whose mission is to prevent and end homelessness.

#### **EB Welcome Reception**

##### **San Diego Convention Center**

**Saturday, April 21, 7:00 pm – 8:30 pm**

Join fellow attendees for our second, inter-disciplinary meet and mingle. Appreciate the power and energy of the EB Meeting as all career levels come together for fun and networking. Light refreshments will be served. Member-attendees receive one complimentary drink ticket when they sign up for the event during EB Meeting registration. Cash bar also available.

#### **APS Walter B. Cannon Award Lecture**

**Sunday, April 22, 2018, 5:30-6:30 p.m. in the San Diego Convention Center-Room 20A.**

**Ole H. Petersen, CBE FRS from Cardiff University, United Kingdom**

**“The Role of Ca<sup>2+</sup> and ATP in Pancreatic Physiology and Pathophysiology”**

The Physiology in Perspective: The Walter B. Cannon Award Lectureship is the most prestigious award that APS bestows, recognizing the lifetime achievement of an outstanding physiological scientist and APS member. Ole H. Petersen of Cardiff University will present this year's lecture, “The Role of Ca<sup>2+</sup> and ATP in Pancreatic Physiology and Pathophysiology,” from 5:30 to 6:30 p.m. in SDCC Room 20A.

#### **Previous University of Iowa Cannon Lecturers**

**Michael J. Welsh (2017),  
François M. Abboud (2009),  
And Gerald F. DiBona (2005)**

**Please See Full Program with Details at <https://plan.core-apps.com/eb2018/customScreen/aboutShow>**

## Presentation Sessions (Saturday- Wednesday)

**Saturday, April 21, 2018**

**Session: Symposium- Development and Disease Physiology Platform**

**Location:** San Diego Convention Center - Room 11A

**Session Start:** 10:30-12:00PM

**Chair:** Joan Richtsmeier

**Presentation Time:** 10:45-11:00AM

**Publication Number:** [15.1]

**Title:** Six2 regulates palate development by inhibiting palatal bone formation during development

**Authors:** Yan Sweat, Mason Sweat, Maurisa Mansaray, Azeez Butali, Brad Amendt, College of Dentistry, Univ. of Iowa.

**Session: Symposium- Deciphering Cell Biology: The Intersection of Metabolism, Force Transmission, and the Actin Cytoskeleton**

**Location:** San Diego Convention Center - Room 11A

**Session Start:** 1:00-3:30PM

**Chair:** Kris DeMali

**Presentation Time:** 2:00-2:30 PM

**Publication Number:** [15.1]

**Title:** Links between Cell-cell Adhesion, Mechanotransduction and Metabolism

**Authors:** Kris DeMali, Univ. of Iowa.

**Session: Award Competition: Trainee Award Finalists and Data Diuresis**

**Location:** San Diego Convention Center - Room 26AB

**Session Start:** 2:15-5:15 PM

**Chair(s):** P. Bie and **Co-Chair:** M. Madhur

**Presentation Time:** 4:15 PM

**Publication Number:** [870.8]

**Title:** Effects of Vagus Nerve Stimulation in a Murine Model of Systemic Lupus Erythematosus

**Authors:** Harald Stauss, Univ. of Iowa.

**Presentation Time:** 4:35 PM

**Publication Number:** [911.6]

**Title:** Reduced Placental Expression of Regulator of G-Protein Signaling-2 (RGS2) and Preeclampsia

**Authors:** Katherine Perschbacher, Guorui Deng, Jeremy Sandgren, Leslie Saenz, Donna Santillan, Eric Devor, Gary Pierce, Mark Santillan, Rory Fisher, Katherine Gibson-Corley, Justin Grobe, Univ. of Iowa.

**Session: Award Competition: Data NCARNation**

**Location:** San Diego Convention Center - Room 22

**Session Start:** 3:00-5:00 PM

**Chair(s):** Amanda J. Miller **Co-Chair:** Y. Jiang

**Presentation Time:** 4:30 PM

**Publication Number:** [596.6]

**Title:** Epidural Spinal Cord Stimulation Acutely Reduces Efferent Postganglionic Sympathetic Nerve Activity in Humans

**Authors:** Seth Holwerda, Marshall Holland, Chandan Reddy, and Gary Pierce, Univ. of Iowa.

**Session: EB Scientific Highlights-Poster Discussion**  
**Location:** San Diego Convention Center – Sails Pavilion  
**Session Start:** 7:00-8:00 PM  
**Chair(s):** N/A

**Presentation Time:** 7:00 PM

**Publication Number:** [776.13]

**Title:** New in vivo microRNA biotechnology reveals specific roles for the miR-200 family in craniofacial development

**Authors:** Mason Sweat, Wenjie Yu, Steve Eliason, Yan Sweat, Huojun Cao, Liu Hong, and Brad Amendt, University of Iowa College of Dentistry, and Craniofacial Anomalies Research Center-Univ. of Iowa

## Presentations Continued-Sunday, April 22, 2018

**Session: Featured Topic- Translational Physiology Showcase: Bench to Bedside and In Between**

**Location:** San Diego Convention Center - Room 25B

**Session Start:** 8:30-10:00 AM

**Chair:** C. Young

**Presentation Time:** 8:36-8:42 AM

**Publication Number:** [618.26]

**Title:** Suppressed Mitochondrial Respiration in Isolated Muscle Fibers from Type 2 Diabetics

**Authors:** Kristin Turner, Matthew Harris, Ana Kronemberger, Kenichi Ueda, Andrew Feider, Helena Kenny, Ethan Anderson, E. Dale Abel, Darren Casey, Vitor Lira, Fraternal Order of Eagles Diabetes Research Center, Obesity Research and Educational Initiative, and Abboud Cardiovascular Research Center, University of Iowa

**Session: Symposium- Epithelial Dysfunction in Wound Healing and Structural Birth Defects**

**Location:** San Diego Convention Center - Room 9

**Session Start:** 10:30 AM-12:00 PM

**Chair:** I. Saadi

**Presentation Time:** 10:30-10:45 AM

**Publication Number:** [86.1]

**Title:** Novel Regulators of Epithelial Migration and Differentiation

**Authors:** Martine Dunwald, Univ. of Iowa.

**Session: Featured Topic- Environmental and Exercise Physiology Section**

**Location:** San Diego Convention Center - Room 25B

**Session Start:** 1:30-3:00 PM

**Chair:** R. Harris and **Co-Chair:** J. Barnes

**Presentation Time:** 2:15 PM

**Publication Number:** [853.2]

**Title:** Inorganic nitrate supplementation improves exercise tolerance and calf vascular function in patients with peripheral artery disease

**Authors:** Joshua Bock, David Treichler, Kenichi Ueda, William Hughes, Darren Casey, Univ. of Iowa.

**Session: Symposium- Advances in Mitochondrial Biochemistry**

**Location:** San Diego Convention Center - Room 31A

**Session Start:** 2:30-3:45 PM

**Chair:** E.L. Seifert

**Presentation Time:** 3:15-3:30 PM

**Publication Number:** [538.12]

**Title:** The L Type Calcium Channel Cav1.2 Modulates Mitochondrial Calcium Homeostasis and Cell Death

**Authors:** Maria Noterman, Min-Kyoo Shin, Edwin Vazquez-Rosa, Coral Cintron-Perez, Eric Taylor, Andrew Pieper, Univ. of Iowa.

**Session: Featured Topic- Psychological Stress Disorders: Novel Concepts and Mechanisms**

**Location:** San Diego Convention Center - Room 25C

**Session Start:** 3:30-5:00 PM

**Chair:** Rasna Sabharwal and Alan Kim Johnson, University of Iowa

**Session: Kaley Award Featured Topic- Cerebral Vascular Dysfunction and Impaired Cognitive Function**

**Location:** San Diego Convention Center - Room 22

**Session Start:** 3:30-5:00 PM

**Chair:** R. Roman and **Co-Chair:** Z. Ungvari

**Presentation Time:** 4:00-4:15 PM

**Publication Number:** [711.3]

**Title: Elevated Aortic Stiffness is Associated with Weaker Executive Function in Individuals with Lower Cognitive Reserve via Reductions in Frontal Cerebrovascular Reserve**

**Authors:** Lyndsey DuBose, David Moser, Laura Boles-Ponto, Gary Pierce, Univ. of Iowa.

**Presentation Time:** 4:45-5:00 PM

**Publication Number:** [711.13]

**Title: Endogenous Renin-Angiotensin System Activation Causes Accelerated Cerebral Vascular Dysfunction in Mice Expressing Dominant-Negative Mutations in PPAR $\gamma$  in Endothelium**

**Authors:** Anand Nair, Larry Agbor, Masashi Mukohda, Xuebo Liu, Chunyan Hu, Jing Wu, Curt Sigmund, Univ. of Iowa.

**Session: Symposium- Emerging Perspectives on Metabolism and Cell Fate Decision**

**Location:** San Diego Convention Center - Room 30E

**Session Start:** 4:00-5:15 PM

**Chair:** Eric Taylor

**Presentation Time:** 4:00-4:15 PM

**Publication Number:** [125.1]

**Title: Loss of Mitochondrial Pyruvate Carrier Activity Short Circuits Hepatocellular Tumorigenesis**

**Authors:** Eric Taylor, Univ. of Iowa.

**Presentations Continued-Monday, April 23, 2018**

**Session: Symposium- Publishing 101: How to Get Your Work Published and Avoid Ethical Minefields**

**Location:** San Diego Convention Center - Room 28DE

**Session Start:** 8:30-10:00 AM

**Chair:**

**Presentation Time:** 8:30-9:00 AM

**Publication Number:** []

**Title: Preparing Your Work for Publication in APS Journals**

**Authors:** Curt Sigmund, Univ. of Iowa.

**Session: Symposium- Using Stem Cells to Understand and Treat Disease**

**Location:** San Diego Convention Center - Room 9

**Session Start:** 2:00-3:30 PM

**Chair:** Brian Allman

**Presentation Time:** 3:00-3:30 PM

**Publication Number:** [236.1]

**Title: Stem Cell Biology of Airway Submucosal Glands during Development and Disease**

**Authors:** John Engelhardt, Univ. of Iowa.

**Session: Featured Topic-Protective Mechanisms in the Vasculature: Wiggers Award Session**

**Location:** San Diego Convention Center - Room 22

**Session Start:** 3:30-5:00 PM

**Chair:** C. Sigmund

**Presentation Time:** 3:30

**Publication Number:** [336]

**Title:** PPAR $\gamma$ -dependent pathways protect the vasculature

**Authors:** Curt Sigmund, Univ. of Iowa.

**Session: Symposium- Teaching Histology in an Integrated Curriculum: Approaches, Student Outcomes and Lessons Learned**

**Location:** San Diego Convention Center - Room 8

**Session Start:** 4:00-5:30 PM

**Chair:** K. Pinder and J. Eastwood

**Presentation Time:** 5:00-5:30 PM

**Publication Number:** [241.3]

**Title:** Integrated Gross Anatomy and Histology (GRISTO): Benefits and Challenges for Students and Faculty Integrating Anatomical Sciences within a Traditional Curriculum Structure

**Authors:** Nathan Swailes and Darren  $\sqrt$ , College of Dentistry, Univ. of Iowa.

**Session: Symposium- Do You Have an Anatomically-Correct Model for Your Research?**

**Location:** San Diego Convention Center - Room 11B

**Session Start:** 4:00-5:30 PM

**Chair:** K. Pinder and J. Eastwood

**Presentation Time:** 5:00-5:30 PM

**Publication Number:** [238.3]

**Title:** The Porcine Lung in Biomedical Research

**Authors:** David Meyerholz, Univ. of Iowa.

**Presentations Continued-Tuesday, April 24, 2018**

**Session: Symposium- Mechanisms underlying Skeletal Muscle Adaptation in Health and Disease**

**Location:** San Diego Convention Center - Room 22

**Session Start:** 8:30-10:00 AM

**Chair:** C. Lang and P. Molina

**Presentation Time:** 9:00-9:30 AM

**Publication Number:** [438]

**Title:** Life after the Lab: One Thing Leads to Another

**Authors:** Gina Shatteman, Univ. of Iowa.

**Session: Symposium- "Well-preserved" Anatomists – Keeping Life Fun and Productive in Retirement**

**Location:** San Diego Convention Center - Room 11A

**Session Start:** 2:00-3:30 PM

**Chair:** D. and J. Rhodes

**Presentation Time:** 2:20-2:40 PM

**Publication Number:** [368]

**Title:** Proteasomal activation in remodeling muscle during aging and disuse.

**Authors:** Sue Bodine, Univ. of Iowa.

**Session: Symposium- Stem Cells, Tissue Engineering & Regeneration Platform**

**Location:** San Diego Convention Center - Room 9

**Session Start:** 2:00-3:30 PM

**Chair:** K. Kramer

**Presentation Time:** 3:00-3:15 PM

**Publication Number:** [645.9]

**Title:** ARHGAP29 Expression and Localization in Cutaneous Wound Healing

**Authors:** Tanner Reeb and Martine Dunnwald, Univ. of Iowa.

**Session: Featured Topic- Adaptations in Fluid Balance and Blood Pressure Regulation during Pregnancy**

**Location:** San Diego Convention Center – Room 25B

**Session Start:** 3:30-5:00 PM

**Chair:** K. Denton and L. Veiras

**Presentation Time:** 4:45-5:00 PM

**Publication Number:** [911.5]

**Title:** Cardiovascular Effects of Endothelial-Specific Interference with PPAR $\gamma$  Activity in Offspring Born from AVP-induced Preeclamptic Pregnancies

**Authors:** Anand Nair, Masashi Mukohda, Larry Agbor, Ko-Ting Lu, Jing Wu, Jeremy Sandgren, Justin Grobe, and Curt Sigmund, Univ. of Iowa.

**Presentations Continued-Wednesday, April 25, 2018**

**Session: Featured Topic- Post-Translational Modifications in Cardiovascular Disease**

**Location:** San Diego Convention Center – Room 25B

**Session Start:** 8:30-10:00 AM

**Chair:** I. Scott and J. Kohr

**Presentation Time:** 9:15-9:30 AM

**Publication Number:** [900.1]

**Title:** Endothelial Cullin3 Mutation Causes Vascular Dysfunction, Arterial Stiffening, and Hypertension

**Authors:** Jing Wu, Shi Fang, Chunyan Hu, Adokole Otanwa, Larry Agbor, Ko-Ting Lu, Xuebo Liu, Masashi Mukohda, Anand Nair, and Curt Sigmund, Univ. of Iowa.

**Session: Symposium- Enzyme Dynamics in Catalysis, Spectroscopy and Theory**

**Location:** San Diego Convention Center - Room 1A

**Session Start:** 9:30-11:30 AM

**Chair:** S. Hammes-Schiffer

**Presentation Time:** 11:00-11:30 PM

**Publication Number:** [475.4]

**Title:** Picosecond Active-Site Dynamics Correlate with the Temperature Dependence of KIEs in Enzyme-Catalyzed Hydride Transfer

**Authors:** Christopher Cheatum, Univ. of Iowa.

# Experimental Biology Itinerary

## Poster Sessions (Sunday-Wednesday)

**Sunday, April 22, 2018**

**Session: Poster- Interrogating Neuronal Circuits Mediating Body Fluid Homeostasis**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [598.2]

**Title:** Aldosterone-sensitive HSD2 neurons in the nucleus of the solitary tract: gene expression and axonal projections in mice

**Authors:** Joel Geerling, Lila Peltekian, and Sowmya Narayan, Univ. of Iowa.

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [598.3]

**Title:** AT1A Receptors on Vasopressin-Producing Cells are Important for Vasopressin Secretion but not Blood Pressure Responses to Chronic Intracerebroventricular Angiotensin in Mice

**Authors:** Shao Zhang, Jeremy Sandgren, Danny Linggonegoro, Andrew Usachev, Nicole Pearson, and Justin Grobe, Univ. of Iowa.

**Session: Poster- NCAR Section Young Investigator Poster Presentations**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [591.4]

**Title:** Chemosensitive Cardiac Afferent Reflexes in Mice: Are they Altered in Hypertrophic Cardiomyopathy?

**Authors:** Robert Larson and Mark Chapleau, Univ. of Iowa and Iowa City VA Medical Center.

**Session: Poster- Innovations in Physiology Education I**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [629.13]

**Title:** Current State of Physiology Undergraduate Degree Programs and Curricula: Survey Results from the Physiology Majors Interest Group Inaugural Meeting

**Authors:** Jennifer Rogers, Univ. of Iowa.

**Session: Poster- Sympathetic and Parasympathetic Regulation in Disease**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [596.6]

**Title:** Epidural Spinal Cord Stimulation Acutely Reduces Efferent Postganglionic Sympathetic Nerve Activity in Humans

**Authors:** Seth Holwerda, Marshall Holland, Chandan Reddy, and Gary Pierce, Univ. of Iowa.



**Session: Poster- Adipocyte Function and Metabolism**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [605.8]

**Title:** Hydroxylated Metabolites of Common Airborne Polychlorinated Biphenyls and Their Potential for Disrupting Estrogen Homeostasis and Adipogenesis

**Authors:** Victoria Parker, Edwin Squirewell, Hans Joachim-Lehmler, Larry Robertson, Aloysius Klingelhutz, and Michael Duffel, Univ. of Iowa.

**Session: Poster- Renal Ion Transport, Transporter Regulation and Trafficking**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [620.22]

**Title:** KS-WNK1 Expands the Dynamic Range of NCC Regulation by Dietary Potassium

**Authors:** Chou-Long Huang, Univ. of Iowa.

**Session: Poster- Autonomic Circuitry in Thermoregulation or Metabolism**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [592.2]

**Title:** Mechanisms of Cross-Talk between Leptin and Angiotensin within the Arcuate Nucleus for the Control of Metabolic Rate

**Authors:** Sarah Sapouckey, Guorui Deng, Katherine Gibson-Corley, Huxing Cui, Julien Sebag, and Justin Grobe, Univ. of Iowa.

**Session: Poster- Diabetes, Insulin Resistance and Obesity I**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [603.15]

**Title:** Omega-3-Fatty Acids Prevent Mechanical Hypersensitivity but Do Not Alter Nerve Fiber Density in a High Fat-Fed Murine Model of Prediabetic Neuropathy

**Authors:** Matthew Harris, Univ. of Iowa

**Session: Poster- Obesity and Satiety**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [604.6]

**Title:** Sexually Dimorphic An<sub>o</sub>2 Expression in Nodose Neurons Determines CCK-mediated Satiety and Obesity in Heterozygote Male Mice

**Authors:** Yongjun Lu, Runping Wang, Michael Cicha, Mark Chapleau, and François Abboud, Abboud Cardiovascular Research Center, Univ. of Iowa and Iowa City VA Medical Center.

**Session: Poster- Arterial Baroreflex Function and Blood Pressure Regulation**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [595.6]

**Title:** Sympathetic Baroreflex Sensitivity during Mental Stress in Humans with Chronic Anxiety

**Authors:** Seth Holwerda, Allene Gremaud, Rachel Luehrs, Jess Fiedorowicz, François Abboud, and Gary Pierce, Abboud Cardiovascular Research Center, Univ. of Iowa

**Session: Poster- Arterial Baroreflex Function and Blood Pressure Regulation (continued)**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [595.8]

**Title: Spontaneous Baroreflex Control of Muscle Sympathetic Nerve Activity in Humans: Standardizing Analysis Procedures**

**Authors:** Seth Holwerda and Gary Pierce, Univ. of Iowa

**Session: Poster- Oxidative Stress, Mitochondrial Metabolism and Redox Changes in Health and Disease**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [618.26]

**Title: Suppressed Mitochondrial Respiration in Isolated Muscle Fibers from Type 2 Diabetics**

**Authors:** Kristin Turner, Matthew Harris, Ana Kronemberger, Kenichi Ueda, Andrew Feider, Helena Kenny, Ethan Anderson, E. Dale Abel, Darren Casey, Vitor Lira, Fraternal Order of Eagles Diabetes Research Center, Obesity Research and Educational Initiative, and Abboud Cardiovascular Research Center, University of Iowa

**Session: Poster- Stem Cells, Cell Growth, Development, Differentiation, and Autophagy**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [615.1]

**Title: ULK2 Regulates p62- and NBR1-Dependent Selective Autophagy in Skeletal Muscle**

**Authors:** Jordan Fuqua, Caleb Mere, Jay Bloome, Vitor Melo, Estevao Scudese, Dam Bae, Kristen Turner, Ana Kronemberger, and Vitor Lira, Univ. of Iowa.

**Session: Poster- Cardiovascular Biology: Dysfunction; Disease; Genetic Disorders**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 12:00-2:00 PM

**Publication Number:** [517.4]

**Title: Long-term dietary nitrite supplementation is effective in reducing cardiovascular disease risk factors in older, obese rats**

**Authors:** Jacob Kadel, G Schaeffer, Melissa Bates, and Amy Sindler Univ. of Iowa.

**Session: Poster- Oxidative Stress and Reactive Oxygen**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 12:45-1:30 PM

**Publication Number:** [517.4]

**Title: The L Type Calcium Channel Cav1.2 Modulates Mitochondrial Calcium Homeostasis and Cell Death**

**Authors:** Maria Noterman, Min-Kyoo Shin, Edwin Vazquez-Rosa, Coral Cintrón-Pérez, Eric Taylor, and Andrew Pieper, Univ. of Iowa.

**Session: Poster- Signal Transduction - G Proteins**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 12:30-2:30 PM

**Publication Number:** [557.4]

**Title: Molecular Cloning of a Novel Brain-specific RGS6 Isoform Preferentially Expressed in the Substantia Nigra of Humans with Parkinson's Disease**

**Authors:** Katelin Ahlers-Dannen, Jianqi Yang, John Koland, and Rory Fisher, Univ. of Iowa.

## Posters Continued-Monday, April 23, 2018

### **Session: Poster- Hypertension I**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [715.13]

**Title: Arterial stiffness but not physical activity levels and vascular endothelial function are altered in early/mid pregnancy in women who develop preeclampsia**

**Authors:** Rumbidzai Magee, Mark Santillan, Alexandria Betz, Lyndsey DuBose, Allison O'Deen, Seth Holwerda, Amy Stroud, Debra Brandt, Nicholas Jensen, Rachel Luehrs, Donna Santillan, Justin Grobe, Curt Sigmund, and Gary Pierce, Univ. of Iowa

### **Session: Poster- Central Regulation of Autonomic Control: Hypothalamus**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [732.1]

**Title: Blockade of glutamate receptors abolishes the sensitization of the angiotensin II-elicited hypertensive response in rats**

**Authors:** Baojian Xue, Terry Beltz, Fang Guo and Alan Johnson, Univ. of Iowa

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [732.3]

**Title: Epidermal Growth Factor Receptor in the Hypothalamic Paraventricular Nucleus Contributes to Tumor Necrosis Factor- $\alpha$ -Induced Sympathetic Excitation in Rat**

**Authors:** Shunguang Wei, Yang Yu, and Robert Felder, Univ. of Iowa and the Iowa City VA Medical Center.

### **Session: Poster- Central Regulation of Autonomic Control: CNS**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [0]

**Title: Identifying Brain Networks Controlling Micturition and Continence in Mouse'**

**Authors:** Joel Geerling, Univ. of Iowa

### **Session: Poster- Psychological Stress Disorders: Novel Concepts and Mechanisms**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [737.2]

**Title: Centrally administered Ang-(1-7) via Mas receptors reverses psychosocial stress-induced cardiovascular responses in mice with muscular dystrophy**

**Authors:** Liping Yang, Nandakumar Narayanan, Robert Weiss, and Rasna Sabharwal, Univ. of Iowa

### **Session: Poster- Kaley Award Featured Topic: Cerebral Vascular Dysfunction and Impaired Cognitive Function**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Sponsored by:** Cardiovascular Section and The Microcirculatory Society

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [711.3]

**Title: Elevated Aortic Stiffness is Associated with Weaker Executive Function in Individuals with Lower Cognitive Reserve via Reductions in Frontal Cerebrovascular Reserve**

**Authors:** Lyndsey DuBose, David Mosher, Laura Boles Ponto, and Gary Pierce, Univ. of Iowa

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [711.13]

**Title:** Endogenous Renin-Angiotensin System Activation Causes Accelerated Cerebral Vascular Dysfunction in Mice Expressing Dominant-Negative Mutations in PPAR $\gamma$  in Endothelium

**Authors:** Anand Nair, Larry Agbor, Masashi Mukohda, Xuebo Liu, Chunyan Hu, Jing Wu, Curt Sigmund, Univ. of Iowa.

**Session: Poster- Regulation of Blood Flow in Health and Disease**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [713.4]

**Title:** Hypercapnia-induced Shear-mediated Dilation in the Internal Carotid Arteries Is Blunted in Healthy Older Adults

**Authors:** Erika Iwamoto, Joshua Bock, and Darren Casey, Univ. of Iowa

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [713.2]

**Title:** Smooth Muscle PPAR $\gamma$  Mutation Causes Impaired Renal Blood Flow and Salt-Sensitive Hypertension

**Authors:** Jing Wu, Larry Agbor, Masashi Mukohda, Anand Nair, Pablo Nakagawa, Donald Morgan, Kamal Rahmouni, Robert Weiss, and Curt Sigmund, Univ. of Iowa.

**Session: Poster- Getting Blood to Where it Needs to Go: Emerging Mechanisms Regulating Skeletal Muscle Blood Flow in Health and Disease**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [726.8]

**Title:** Prolonged Leg Vasodilator Kinetics across an Exercise Transient in Older Adults

**Authors:** William Hughes, Nicholas Kruse, and Darren Casey, Univ. of Iowa

**Session: Poster- Exercise, Muscle and Bone Metabolism**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [768.4]

**Title:** Testosterone Supplementation Does Not Affect Skeletal Muscle Growth When Administered Alone in Either Sex and Requires an Additional Anabolic Stimulus to Exert Its Effects in Female Mice

**Authors:** Sue Bodine, Univ. of Iowa

**Session: Poster- Stem Cells, Tissue Engineering & Regeneration Platform**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00AM-4:00PM

**Poster Manning Time:** 10:00AM-12:00PM

**Publication Number:** [645.9]

**Title:** ARHGAP29 Expression and Localization in Cutaneous Wound Healing

**Authors:** Tanner Reeb and Martine Dunnwald, Univ. of Iowa.

**Session: Poster- Vascular Biology and Pathology: From A (Atherosclerosis) to Z (Lines of Zahn)**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 11:45 AM-12:45 PM

**Publication Number:** [676.11]

**Title:** Vasopressin infusion throughout pregnancy causes placental pathology in mice consistent with preeclampsia

**Authors:** Katherine Gibson-Corley, Jeremy Sandgren, Katherine Perschbacher, Shao Zhang, Guorui Deng, Donna Santillan, Mark Santillan, and Justin Grobe, Univ. of Iowa

**Session: Poster- Bones, Cartilage & Teeth: Craniofacial**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 12:00-2:00PM

**Publication Number:** [639.10]

**Title:** Climatic Adaptation in Human Inferior Nasal Turbinate Morphology: A Preliminary Investigation in Arctic and Equatorial Populations

**Authors:** Tarah Marks and Robert Franciscus, Univ. of Iowa

**Poster Manning Time:** 12:00-2:00PM

**Publication Number:** [639.2]

**Title:** Longitudinal Changes in Facial and Basicranial Integration in the Mediolateral Axis

**Authors:** Andrew Welling and Nathan Holton, Univ. of Iowa

**Session: Poster- Anatomy Education: Lab Teaching Strategies**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 12:00-2:00PM

**Publication Number:** [633.5]

**Title:** EXPERT – EXercise for PEer Led Review and Teaching

**Authors:** Mark Pizzimenti, Carver College of Medicine, Univ. of Iowa

**Session: Poster- Anatomy Education: Technology-assisted Learning**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 12:00-2:00PM

**Publication Number:** [635.25]

**Title:** Social media for education: a histology quiz tool with global reach

**Authors:** Nathan Swailes, Univ. of Iowa

**Session: Poster- Neurotoxicology**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 12:30-2:30PM

**Publication Number:** [691.1]

**Title:** 3,3'-Dichlorodiphenyl (PCB 11) Promotes Dendritic Arborization in Primary Neurons via CREB-Dependent Mechanisms

**Authors:** Xueshu Li and Hans-Joachim Lehmler, Univ. of Iowa

## Posters Continued-Tuesday, April 24, 2018

### **Session: Poster- Hot Topics in Autonomic Regulation**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [885.16]

**Title:** mTORC1 in leptin receptor-containing neurons mediates an obesity-induced increase in sympathetic tone and blood pressure

**Authors:** Balyssa Bell, Donald Morgan, and Kamal Rahmouni, Univ. of Iowa

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [885.20]

**Title:** Renal Denervation Attenuates Nicotine-Induced Increase in Thiazide-Sensitive Na<sup>+</sup>/Cl<sup>-</sup> Cotransporter in the Young Pre-Hypertensive Spontaneously Hypertensive Rat

**Authors:** Nandita Raikwar, Alan Ryan, Peter Snyder, François Abboud, and Sailesh Harwani, Univ. of Iowa

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [885.3]

**Title:** Effect of Chronic Vagal Nerve Stimulation on Glucose Tolerance in Conscious Rats

**Authors:** Harald Stauss, Univ. of Iowa

### **Session: Poster- Immune Modulation of Blood Pressure and Vice Versa**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [870.8]

**Title:** Effects of Vagus Nerve Stimulation in a Murine Model of Systemic Lupus Erythematosus

**Authors:** Harald Stauss, Univ. of Iowa

### **Session: Poster- Exploring Novel Mechanisms to Improve Exercise Tolerance in Health and Disease**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [853.2]

**Title:** Inorganic nitrate supplementation improves exercise tolerance and calf vascular function in patients with peripheral artery disease

**Authors:** Joshua Bock, David Treichler, Kenichi Ueda, William Hughes, and Darren Casey, Univ. of Iowa

### **Session: Poster- Novel Discoveries in Vascular Physiology**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [843.13]

**Title:** mTORC1 signaling regulates vascular endothelial function via reactive oxygen species and NFκB signaling

**Authors:** John Reho, Den-Fu Guo, Andrew Olson, and Kamal Rahmouni, Univ. of Iowa

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [843.14]

**Title:** Long-Acting Beta-Agonist Use is Associated with Lower Carotid Artery Stiffness and Greater Carotid Artery Compliance in Individuals with Chronic Obstructive Pulmonary Disease

**Authors:** Rachel Luehrs, Alejandro Comellas, Karin Hoth, and Gary Pierce, Univ. of Iowa

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [843.15]

**Title:** Smooth Muscle Cullin-3 Deficiency Causes Vascular Dysfunction, Arterial Stiffness and Severe Hypertension

**Authors:** Larry Agbor, Anand Nair, Jing Wu Deborah Davis, Henry Keen, Ko-Ting Lu, Fredrick Quelle, and Curt Sigmund, Univ. of Iowa.

**Session: Poster- Novel Approaches, Techniques and Models in Water and Electrolyte Research**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [844.3]

**Title:** Measurement of Electrolytes, Including Acetate in Various Physiological Samples Using Ion Chromatography

**Authors:** Robert Larson, Univ. of Iowa

**Session: Poster- Cell Signaling: Proteins, Pathways, and Mechanisms**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [864.11]

**Title:** TXLNB is a Novel Regulator of Cardiac Proteostasis

**Authors:** Jared McLendon, Xiaoming Zhang, Colleen Stein, Gabrielle Abouassaly, Nathan Witmer, and Ryan Boudreau, Univ. of Iowa.

**Session: Poster- Cell Death, Injury, and Repair: What Doesn't Kill You, (Potentially) Makes You Stronger**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 11:45 AM-12:45 PM

**Publication Number:** [816.12]

**Title:** Human Retinal Engineering using 3D PCL Scaffolds

**Authors:** Katherine Gibson-Corley, Jessica Thompson, Kristan Worthington, Emily Kaalberg, Robert Mullins, Edwin Stone, Ian Han, Elliott Sohn and Budd Tucker, Univ. of Iowa

**Session: Poster- Development & Growth: Craniofacial**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 12:00-2:00PM

**Publication Number:** [776.13]

**Title:** New in vivo microRNA biotechnology reveals specific roles for the miR-200 family in craniofacial development

**Authors:** Mason Sweat, Wenjie Yu, Steven Eliason, Yan Sweat, Huojun Cao, Liu Hong, and Brad Amendt, University of Iowa College of Dentistry, Craniofacial Anomalies Research Center, Univ. of Iowa.

**Poster Manning Time:** 12:00-2:00PM

**Publication Number:** [776.6]

**Title:** Patient-derived MAFB Missense Mutation Is Associated with Cleft Palate in Mice

**Authors:** Brian Paul, Crystal Padilla, and Martine Dunnwald, Univ. of Iowa.

**Session: Poster- Medicinal Chemistry/Drug Delivery**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 12:30-2:30PM

**Publication Number:** [830.2]

**Title:** PEG-peptide Scavenger Receptor Inhibitors for Non-viral Gene

**Authors:** Rondine Allen, Kevin Rice, and Basil Mathew, Univ. of Iowa.

**Session: Poster Signal Transduction - Dopamine Signaling**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 12:30-2:30PM

**Publication Number:** [827.9]

**Title:** Regulator of G-protein Signaling 6 (RGS6) Modulates Dopamine D2 Autoreceptor Function in Mice

**Authors:** Zili Luo, Katelin Ahlers-Dannen, Jianqi Yang, Hanna Stevens, Nandakumar Narayanan, and Rory Fisher, Univ. of Iowa.

**Session: Poster- Targeted Therapies and New Targets for Drug Discovery**

**Location:** San Diego Convention Center – Exhibit Halls A-D

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 12:45-1:30PM

**Publication Number:** [807.13]

**Title:** New in vivo microRNA biotechnology reveals specific roles for the miR-200 family in craniofacial development

**Authors:** Brad Amendt, Steven Eliason, Adil Akkouch, Huojun Cao, and Liu Hong, Univ. of Iowa.

**Posters Continued-Wednesday, April 25, 2018**

**Session: Poster- Post-Translational Modifications in Cardiovascular Disease**

**Location:** San Diego Convention Center – Sails Pavilion

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [900.1]

**Title:** Endothelial Cullin3 Mutation Causes Vascular Dysfunction, Arterial Stiffening, and Hypertension

**Authors:** Jing Wu, Shi Fang, Chunyan Hu, Adokole Otanwa, Larry Agbor, Ko-Ting Lu, Xuebo Liu, Masashi Mukohda, Anand Nair, and Curt Sigmund, Univ. of Iowa

**Session: Poster- Fluid Balance and Blood Pressure Regulation during Pregnancy**

**Location:** San Diego Convention Center – Sails Pavilion

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [911.4]

**Title:** Arginine Vasopressin Infusion In C57BL/6J Mice Induces Changes In The Placenta Transcriptome That Parallel Changes Observed In Placenta From Human Preeclampsia

**Authors:** Guorui Deng, Jeremy Sandgren, Henry Keen, Katherine Perschbacher, Shao Zhang, Donna Santillan, Gary Pierce, Katherine Gibson-Corley, Mark Santillan, Curt Sigmund, and Justin Grobe, Univ. of Iowa

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [911.5]

**Title:** Cardiovascular Effects of Endothelial-Specific Interference with PPAR $\gamma$  Activity in Offspring Born from AVP-induced Preeclamptic Pregnancies

**Authors:** Anand Nair, Masashi Mukohda, Larry Agbor, Ko-Ting Lu, Jing Wu, Jeremy Sandgren, Justin Grobe, and Curt Sigmund, Univ. of Iowa



**Session: Poster- Fluid Balance and Blood Pressure Regulation during Pregnancy (Continued)**

**Location:** San Diego Convention Center – Sails Pavilion

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [911.6]

**Title: Reduced Placental Expression of Regulator of G-Protein Signaling-2 (RGS2) and Preeclampsia**

**Authors:** Katherine Perschbacher, Guorui Deng, Jeremy Sandgren, Leslie Saenz, Donna Santillan, Eric Devor, Gary Pierce, Mark Santillan, Rory Fisher, Katherine Gibson-Corley, and Justin Grobe, Univ. of Iowa

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [911.9]

**Title: Altered Glomerular Function is Associated with Spontaneous Gestational Hypertension in African Green Monkeys**

**Authors:** Justin Grobe and Mark Santillan, Univ. of Iowa

**Session: Poster- Late Breaking-Cell and Molecular Physiology**

**Location:** San Diego Convention Center – Sails Pavilion

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [LB418]

**Title: Behavioral Assessment of Mice with Mitochondrial CaMKII Inhibition**

**Authors:** Mei-ling Joiner, Univ. of Iowa

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [LB442]

**Title: Defining Chronic Angiotensin II Induced Mitochondrial Injury Using a Transcriptomics Approach**

**Authors:** Madhu Singh, Michael Cicha, Ramakrishna Somapallae, Mark Chappelle, and François Abboud, Abboud Cardiovascular Research Center, Univ. of Iowa and Iowa City VA Medical Center

**Session: Poster- Late Breaking- Environmental and Exercise Physiology**

**Location:** San Diego Convention Center – Sails Pavilion

**Session Start:** 9:00 AM - 4:00 PM

**Poster Manning Time:** 10:00AM-12:00 PM

**Publication Number:** [LB253]

**Title: Effect of Age and Acute Exercise on Circulating Endostatin**

**Authors:** Erika Iwamoto, Joshua Bock, and Darren Casey, Univ. of Iowa