

## MONDAY, APRIL 30

11:00 AM – 5:00 PM

**REGISTRATION** (*Mercer Prefunction*)

1:00 PM – 2:45 PM

### PARALLEL SESSIONS 1 and 2

#### SESSION 1 (*Mercer Salon I*)

##### **Sex Differences at the Electrophysiological Level: A Focus on the Limbic System**

*Chair: Lisa Briand, PhD, Temple University*

**Lisa Briand, PhD, Temple University**

Sex differences in nucleus accumbens inputs: Basal differences and influence of stress exposure

**John Meitzen, PhD, North Carolina State University**

Sex differences in medium spiny neuron electrophysiological properties: heterogeneity across striatal regions and evidence for estradiol-dependent sexual differentiation

**Dean Kirson, PhD, The Scripps Research Institute**

Sex differences in oxytocin effects on CeA GABAergic signaling in alcohol-dependent and naive rats.

**Elizabeth Lucas, PhD, North Carolina State University**

Losing Your Inhibition: GABAergic Plasticity in Emotional Learning

#### SESSION 2 (*Mercer Salon G/H*)

##### **Sex Differences in the Pathogenesis of Infectious Diseases**

*Chairs: Andrew Pekosz, PhD, Johns Hopkins Bloomberg School of Public Health and  
Sabra Klein, PhD, Johns Hopkins Bloomberg School of Public Health*

**Theresa Chang, PhD, Rutgers University**

Sex differences in innate immune and microbial response and disease progression in simian HIV-infected rhesus macaques

**Christopher Robinson, PhD, Indiana University**

Sex differences in enteric virus infection

**DeLisa Fairweather, PhD, Mayo Clinic**

Sex differences in viral-induced myocarditis

**Cory Tuescher, PhD, University of Vermont**

Genome-wide physical mapping identifies genetic elements contributing to sex differences in susceptibility to IAV infection

2:45 PM – 3:00 PM

**COFFEE BREAK** (*Mercer Prefunction*)

## MONDAY, APRIL 30

3:00 PM – 4:45 PM

### PARALLEL SESSIONS 3 and 4

#### SESSION 3 (*Mercer Salon I*)

##### **Neurocircuitry and Neuroplasticity over the Lifespan: Sex-specific Trajectories Mean Timing is Everything**

*Chair: Heather Brenhouse, PhD, Northeastern University*

**Jennifer Honeycutt, PhD, Northeastern University**

Too much, too young? Sex-specific differences in corticolimbic innervation following early life stress

**Q.D. Walker, PhD, Duke University**

Neurocircuitry underlying sex differences in eating disorders

**Rebecca Shansky, PhD, Northeastern University**

Experience dependent structural plasticity: interactions of circuit and sex

**Pavel Osten, PhD, Cold Spring Harbor Laboratory**

Brain-wide maps reveal stereotyped cell-type-based cortical architecture and subcortical sexual dimorphism

#### SESSION 4 (*Mercer Salon G/H*)

##### **Sex-specific Outcomes of Environmental Chemical Exposures**

*Chair: John Meitzen, PhD, North Carolina State University*

**Emily Barrett, PhD, Rutgers University**

Prenatal exposure to endocrine disrupting chemicals, sex, and neurodevelopment

**Heather Stapleton, PhD, Duke University**

Sex-Specific Differences in the Accumulation and Thyroid Disrupting Effects of Flame Retardants in the Placenta

**Heather Patisaul, PhD, North Carolina State University**

Endocrine Disruption of Sexually Dimorphic Neuroendocrine Pathways and Behaviors

**Staci Bilbo, PhD, Harvard Medical School**

Sex-specific modulation of microglia by maternal immune factors: Relevance for neurodevelopmental disorders

5:00 PM – 6:15 PM

#### KEYNOTE LECTURE (*Mercer*)

**Nirao Shah, Ph.D., Stanford University**

*Molecular and Neural Control of Sexually Dimorphic Behaviors*

6:15 PM – 8:15 PM

#### OPENING RECEPTION and POSTER SESSION 1 (*Overlook West*)

## TUESDAY, MAY 1

8:30 AM – 5:00 PM	<b>REGISTRATION</b> ( <i>Mercer Prefunction</i> )
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7:30 AM – 8:30 AM	<b>BREAKFAST</b> ( <i>Mercer Prefunction</i> )
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8:30 AM – 10:15 AM	<p><b>SESSION 5</b> (<i>Mercer Salon I</i>)</p> <p><b>Molecular Mechanisms of Sex-dependent Vulnerability to Stress</b>  <i>Chairs: Kathleen E. Morrison, PhD, and Tracy L. Bale, PhD, University of Maryland School of Medicine</i></p> <p><b>Tanja Jovanovic, PhD, Emory University</b>              Interactions Between ADCYAP1R1 Genotype and Estradiol in Increasing Vulnerability to PTSD</p> <p><b>Kevin Bath, PhD, Brown University</b>              Mouse model of sex differences in cognitive outcomes following early life stress</p> <p><b>Georgia E. Hodes, PhD, Virginia Tech</b>              Elucidating the contribution of sex differences in the peripheral immune system to stress susceptibility and depression</p> <p><b>Kathleen E. Morrison, PhD, University of Maryland School of Medicine</b>              Pubertal stress reprograms the periventricular nucleus and HPA axis responsiveness in a sex-specific manner</p>
	<p><b>SESSION 6</b> (<i>Mercer Salon G/H</i>)</p> <p><b>Implications of Sex and Gender in Clinical Care</b>  <i>Chair: Bruce Becker, MD, MPH, FACEP, Brown University</i></p> <p><b>Bruce Becker, MD, MPH, FACEP, Brown University</b>              Women and Men in Pain - sex and gender differences in the presentation and treatment of pain from cradle to grave</p> <p><b>Lauren Walter, MD, University of Alabama at Birmingham</b>              Making Medical Education Sex-y: Incorporating Sex and Gender into Acute Care Medicine Curriculum for UME and GME learners</p> <p><b>Charles R. Wira III, MD, Yale University</b>              Sex and Gender considerations in the ED for neurovascular emergencies</p>

10:15 PM – 10:30 AM	<b>COFFEE BREAK</b> ( <i>Mercer Prefunction</i> )
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10:30 AM – 12:15 PM	<p><b>SESSION 7</b> (<i>Mercer Salon I</i>)</p> <p><b>Hormonal Regulation of Behavior and Physiology Across Diverse Species</b>  <i>Chair: Nirao Shah, PhD, Stanford University</i></p> <p><b>Deborah Kurrasch, PhD, University of Calgary</b>              Role of hormones in zebrafish and mouse brain development: what does sex have to do with it?</p> <p><b>Jing Wang, PhD, University of California, San Diego</b>              Molecular mechanisms of sexually dimorphic sensory neurophysiology in <i>Drosophila</i></p>
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## TUESDAY, MAY 1

	<p><b>Kim Huhman, PhD, Georgia State University</b> Sex differences in hypothalamic, pituitary, and gonadal control of agonistic behavior in Syrian hamsters</p> <p><b>Kim Wallen, PhD, Emory University</b> Sex differences in neural and cognitive responses to sexual stimuli: Possible modulation by androgens</p> <p><b>SESSION 8</b> (<i>Mercer Salon G/H</i>) <b><i>In Silico Models and Clinical Trials: Innovative Research and Sex and Gender Implications</i></b> <i>Chair: Marjorie Jenkins, MD, MEdHP, FACP, U.S. Food and Drug Administration</i></p> <p><b>Marjorie Jenkins, MD, MEdHP, FACP, U.S. Food and Drug Administration</b> In Silico Modeling and Virtual Clinical Trials: Opportunities for Advancing Sex Differences and Women's Health</p> <p><b>Tina Morrison, PhD, U.S. Food and Drug Administration</b> Understanding the Potential for In Silico Methods to Advance the Study of Sex Differences</p> <p><b>Wendy Wu, PhD, U.S. Food and Drug Administration</b> Research effort to develop sex-specific in silico models for assessing cardiac safety of new drugs</p> <p><b>Aldo Badano, PhD, U.S. Food and Drug Administration</b> Considerations for using in silico clinical studies for the regulatory evaluation of new imaging products</p>
<p>12:15 PM – 1:30 PM</p>	<p><b>WORKSHOP LUNCH</b> (<i>Mercer</i>) Aaron Wolen, Ph.D., Virginia Commonwealth University <b>Efficient and Reproducible Research: An Introduction to the Open Science Framework</b></p>
<p>1:45 PM – 3:30 PM</p> <p><b>PARALLEL SESSIONS 9 and 10</b></p>	<p><b>SESSION 9</b> (<i>Mercer Salon I</i>) <b>Nuclear Structure and Sex Differences</b> <i>Chairs: Christine Disteche, PhD, University of Washington, and Carolyn Brown, PhD, University of British Columbia</i></p> <p><b>Xinxian Deng, PhD, University of Washington</b> Orientation-dependent Dxz4 contacts shape the 3D structure of the inactive X chromosome</p> <p><b>Schahram Akbarian, MD, PhD, Mount Sinai School of Medicine</b> Neuronal and non-neuronal chromosomal connectomes and epigenomes in adult male and female mouse and human cerebral cortex</p> <p><b>Linda Zhou, University of Pennsylvania</b> 3D-genome reconfiguration in X-linked brain diseases</p> <p><b>Andrew Lane, MD, PhD, Dana-Farber Cancer Institute</b> Why do men get more cancer? Escape from X Inactivation Tumor Suppressor (EXITS) genes in the sex bias of malignancy</p>

## TUESDAY, MAY 1

	<p><b>SESSION 10</b> (<i>Mercer Salon G/H</i>)</p> <p><b>Sex Differences in Cerebrovascular Disease: Epidemiology to Epigenetics</b></p> <p><i>Chairs: Louise McCullough, MD, PhD, UTHealth McGovern Medical School, and Mat Reeves, PhD, Michigan State University</i></p> <p><b>Virginia Howard, PhD, University of Alabama at Birmingham</b> What the numbers say: a comparative analysis of stroke epidemiology in women compared to men</p> <p><b>Tracy Madsen, MD, Brown University</b> The Aftermath: Access to Rehabilitation and Sex differences in Stroke Recovery</p> <p><b>Stacie Demel, DO, PhD, Michigan State University</b> Epigenetics and the Second X Chromosome: Back to the Basics of Sex Differences</p> <p><b>Mollie McDermott, MD, MS, University of Michigan</b> Transgender Medicine and Ischemic Stroke</p>
3:30 PM – 3:45 PM	<b>COFFEE BREAK</b> ( <i>Mercer Prefunction</i> )
3:45 PM – 4:45 PM	<p><b>PANEL DISCUSSION</b> (<i>Mercer</i>)</p> <p><b>Sex Differences and the Google Memo</b></p> <p><i>Moderator: Lise Eliot, Ph.D., Rosalind Franklin University</i></p> <p><b>Panelists:</b></p> <p>Jill Becker, PhD, University of Michigan Lise Eliot, PhD, Rosalind Franklin University Margaret McCarthy, PhD, University of Maryland Deboleena Roy, PhD, Emory University</p>
4:45 PM – 6:45 PM	<b>POSTER SESSION 2</b> ( <i>Overlook West</i> )
7:00 PM	<b>TRAINEE SOCIAL</b> ( <i>Foxtrot, 45 13th St. NE</i> )

## WEDNESDAY, MAY 2

8:30 AM – 5:00 PM	REGISTRATION <i>(Mercer Prefunction)</i>
7:30 AM – 8:30 AM	BREAKFAST <i>(Mercer Prefunction)</i>
8:00 AM – 8:30 AM	OSSD BUSINESS MTG <i>(Mercer I)</i>
8:30 AM – 10:15 AM  <b>PARALLEL SESSIONS 11 and 12</b>	<p><b>SESSION 11</b> <i>(Mercer Salon I)</i>  <b>Sex Steroids, Puberty, and Adolescent Brain Development: A Translational Approach to Understanding Peak Vulnerability to Psychopathology in Adolescence</b>  <i>Chairs: Marianne Seney, PhD, and Cecile Ladouceur, PhD, University of Pittsburgh</i></p> <p><b>Marianne Seney, PhD, University of Pittsburgh</b>  Developmental origins of sex differences in adult mood</p> <p><b>Cecile Ladouceur, PhD, University of Pittsburgh</b>  Sex steroid influences on striatal activation to reward cues in adolescence</p> <p><b>Cheryl Sisk, PhD, Michigan State University</b>  Pubertal testosterone programs experience-dependent prefrontal FosB expression and social competence in adulthood</p> <p><b>Monique Ernst, MD, PhD, NIMH</b>  Pubertal maturation: intrinsic functional connectivity increased in boys, but decreased in girls, a risk for depression?</p> <p><b>SESSION 12</b> <i>(Mercer Salon G/H)</i>  <b>Statistical Methodologies on Sex Chromosome Association</b>  <i>Chairs: Wei Xu, PhD, Princess Margaret Cancer Centre, and Lei Sun, PhD, University of Toronto</i></p> <p><b>Lei Sun, PhD, University of Toronto</b>  Statistical insights on the association analyses of X chromosome: X-inactivation, confounding, interaction and beyond</p> <p><b>Wei Xu, PhD, Princess Margaret Cancer Centre</b>  A unified partial likelihood approach for X-chromosome association on time to event outcomes</p> <p><b>Stacey Winham, PhD, Mayo Clinic</b>  An integrative approach to assess X-chromosome inactivation with applications to epithelial ovarian cancer</p> <p><b>Oswaldo Espin-Garcia, University of Toronto</b>  X-chromosome Association in Microbiome data</p>
10:15 PM – 10:30 AM	COFFEE BREAK <i>(Mercer Prefunction)</i>

## WEDNESDAY, MAY 2

10:30 AM – 12:15 PM

### PARALLEL SESSIONS 13 and 14

#### SESSION 13 (Mercer Salon I)

##### **Sex Differences in Learning and Plasticity**

*Chairs: Debra Bangasser, PhD, Temple University, and Nicola Grissom, PhD, University of Minnesota*

**Debra Bangasser, PhD, Temple University**

Sex differences in stress regulation of cognition

Nicola Grissom, PhD, University of Minnesota

**Mechanisms of female resilience to autism-associated genotypes**

Erin Calipari, PhD, Vanderbilt University

**Enhanced Dopaminergic Function During Estrus Drives Increased Addiction Vulnerability in Females**

Mohamed Kabbaj, PhD, Florida State University

**Sex differences in ketamine's antidepressant effects**

#### SESSION 14 (Mercer Salon G/H)

##### **Gender, Sex Hormones, and Lung Inflammation**

*Chair: Patricia Silveyra, PhD, Penn State College of Medicine*

**Patricia Silveyra, PhD, Penn State College of Medicine**

Sex Differences in Lung Response to Environmental Agents

**Y.S. Prakash, MD, PhD, Mayo Clinic**

Sex Steroid Signaling in the Airway

**Dawn Newcomb, PhD, Vanderbilt University**

Sex, Gender, and Asthma

**Nathalie Fuentes, Penn State College of Medicine**

Circulating Sex Hormones as Critical Regulators of the Lung Immune Response

12:15 PM – 1:30 PM

#### TRAINEE LUNCH (Ravinia)

– or, enjoy Atlanta with lunch on your own

1:45 PM – 3:30 PM

### PARALLEL SESSIONS 15 and 16

#### SESSION 15 (Mercer Salon I)

##### **Current Topics in Sex Differences Research I: Genetics and Neuroscience**

*Chair: Douglas Portman, PhD, University of Rochester*

**Erica Glasper, PhD, University of Maryland**

Neonatal paternal deprivation and stress alter neuroendocrine responses in adult California mice (*Peromyscus californicus*)

**Susan Sangha, PhD, Purdue University**

Increased reward seeking and lack of conditioned inhibition of fear and fear extinction in female rats

## WEDNESDAY, MAY 2

	<p><b>Nora Engel, PhD, Temple University</b> Vive la difference: zooming in on sex-specific differences in mouse embryonic stem cells</p> <p><b>Kristen Pleil, PhD, Cornell University</b> Sex differences in the function of a limbic circuit driving alcohol drinking and anxiety</p> <p><b>SESSION 16</b> (<i>Mercer Salon G/H</i>)  <b>Current Topics in Sex Diff. Research II: Immunology, Physiology, and Metabolism</b>  <i>Chair: Adam Moeser, DVM MS PhD, Michigan State University</i></p> <p><b>Suresh Mishra, PhD, University of Manitoba</b> Prohibitin: An unexpected role in sex differences in adipose and immune functions</p> <p><b>Benoit Chassaing, PhD, Georgia State University</b> Diet-mediated alterations of the intestinal microbiota: impact on inflammation and behavior</p> <p><b>Kristen Zuloaga, PhD, Albany Medical College</b> Sex Differences in Metabolic, Vascular, and Cognitive Effects of a High Fat Diet</p> <p><b>Katelyn Bruno, PhD, Mayo Clinic</b> Sex Differences in Vitamin D and Urinary Stone Disease</p> <p><b>Annie Newell-Fugate, PhD, Texas A&amp;M University</b> Sexually dimorphic effects of androgens on insulin signaling in white adipose tissue adipocytes</p>
3:30 PM – 3:45 PM	<p><b>COFFEE BREAK</b> (<i>Mercer Prefunction</i>)</p>
3:45 PM – 5:15 PM	<p><b>ELIZABETH YOUNG NEW INVESTIGATORS SYMPOSIUM</b> (<i>Mercer</i>)</p> <p><b>Soumya Turaga, PhD student, Cleveland State University</b> <i>Junction adhesion molecule-A (JAM-A) deficiency drives sex-specific differences in glioblastoma progression via differential responses in the tumor microenvironment</i></p> <p><b>Jonathan VanRyzin, PhD student, University of Maryland School of Medicine</b> <i>Endocannabinoids program sex differences by inducing microglia phagoptosis of newborn cells in the neonatal rat amygdala</i></p> <p><b>Hilda Ahnstedt, PhD, Postdoc, UT Health</b> <i>Sex differences in neutrophil-T cell Immune responses, gut integrity and outcome after ischemic stroke in aged mice</i></p> <p><b>Valeria Raparelli, PhD, Postdoc, Sapienza University of Rome</b> <i>Impact of sex and gender-related factors on percutaneous coronary intervention in patients with ischemic heart disease: analysis from the EVA study</i></p>
5:00 PM – 6:15 PM	<p><b>CAPSTONE LECTURE</b> (<i>Mercer</i>)  <b>Londa Schiebinger, Ph.D., Stanford University</b>  <i>Gendered Innovations in Health Research, Machine Learning, and Robotics</i></p>
6:15 PM – 8:15 PM	<p><b>AWARDS RECEPTION</b> (<i>Overlook West</i>) – “Heavy hors d’oeuvres” will be served</p>



## THURSDAY, MAY 3

7:30 AM – 8:30 AM

**BREAKFAST** (*Mercer Prefunction*)

8:30 AM – 10:15 AM

### PARALLEL SESSIONS 17 and 18

#### SESSION 17 (*Mercer Salon I*)

##### **Sex Differences in Pain from the Sensory Nerves to the Brain**

*Chair: Dayna Loyd Averitt, PhD, Texas Woman's University*

**Dayna Loyd Averitt, PhD, Texas Woman's University**

The "Painful" Role of Peripheral Serotonin in Females

**Greg Dussor, PhD, University of Texas at Dallas**

CGRP and prolactin signaling in the meninges produces female-specific migraine-related behavior in rodents

**Loren Martin, PhD, University of Toronto**

Male-specific conditioned pain sensitivity in mice and humans

**Arbi Nazarian, PhD, Western University of Health Sciences**

Sexually dimorphic morphine antinociception in the sensory and affective components of pain in rats

#### SESSION 18 (*Mercer Salon G/H*)

##### **Defining and Measuring Sex and Gender in Clinical Research**

*Chairs: Louise Pilote, MD, MPH, PhD, FRCPC, McGill University and Rachel Dreyer, PhD, Yale University*

**Londa Schiebinger, PhD**

Gender as a cultural variable across the lifespan

**Valeria Raparelli, PhD, Sapienza University of Rome**

European physicians' awareness of the difference between sex and gender: the IMAGINE survey

**Louise Pilote, MD MPH PhD FRCPC, McGill University**

Measuring Gender in a Cohort of Patients with Premature Acute Coronary Syndrome

**Rachel Dreyer, PhD, Yale University**

The VIRGO Cohort on Premature Acute Myocardial Infarction. Measuring Sex and Gender: Lessons Learned

**Vera Regitz-Zagrosek, MD, PhD, Institute of Gender Medicine**

Gender in coronary artery disease and gender in the aging population

10:15 PM – 10:30 AM

**COFFEE BREAK** (*Mercer Prefunction*)

## THURSDAY, MAY 3

10:30 AM – 12:15 PM

### PARALLEL SESSIONS 19 and 20

#### SESSION 19 (Mercer Salon I)

##### **Endocrine Disruptors: Sex Differences in their Effects During Development**

*Chair: Janice Juraska, PhD, University of Illinois*

**Janice Juraska, PhD, University of Illinois**

Endocrine disruptor effects during early development and during adolescence on neural structure and cognitive behavior

**Jodi Flaws, PhD, University of Illinois**

Sex differences in the effects of phthalate exposure on reproduction

**Emilie Rissman, PhD, North Carolina State University**

Paternal endocrine disruptor exposure influences behavior in offspring

**Rita Strakovsky, PhD, Michigan State University**

Sex-specific effects of developmental bisphenol A (BPA) exposure in rats on adiposity and adipose tissue microRNA (miR) expression

#### SESSION 20 (Mercer Salon G/H)

##### **Women and Alzheimer's Disease: A Scientific Update from the SWHR Interdisciplinary Panel on Alzheimer's Disease**

*Chair: Pauline Maki, PhD, University of Illinois at Chicago*

**Michelle M. Mielke, PhD, Mayo Clinic**

Understanding sex differences in the prevalence, incidence, and risk factors of Alzheimer's disease

**Kejal Kantarci, MD, MS, Mayo Clinic**

What AD biomarker studies tell us about sex differences in AD

**Pauline Maki, PhD, University of Illinois at Chicago**

Women, Menopause, and AD: New insights into the intersection between reproductive aging and brain aging

**MaryJo LaDu, PhD, University of Illinois at Chicago**

Modeling the effect of sex on APOE4-induced AD Risk in transgenic mice

12:15 PM – 12:30 PM

#### CLOSING REMARKS (Mercer)

### END OF MEETING

Join us next year for the  
2nd Joint OSSD/IGM Meeting  
Washington Marriott Georgetown  
Washington, DC  
May 5-8, 2019

12:30 PM – 3:00 PM

#### OSSD COUNCIL MEETING (Ravinia)