

# SEX AS A BIOLOGICAL VARIABLE

October 26-27, 2017

Workshop



National Institutes of Health  
Main Campus  
John Edward Porter Neuroscience Research Center  
Building 35, Rooms 610/620/630 (and the Atrium)  
35 Convent Drive, Bethesda, MD 20892

## AGENDA

### DAY 1: Thursday, October 26, 2017

Please click the following link to participate virtually on Day 1: <https://videocast.nih.gov/summary.asp?live=26050&bhcp=1>

8:00 AM

**Registration Check-In**

8:30 AM - 8:45 AM

**Introduction**

*Janine A. Clayton, MD*, Director, Office of Research on Women's Health (ORWH), NIH  
*Elizabeth (Betsy) Wilder, PhD*, Director, Office of Strategic Coordination (OSC)—The Common Fund, NIH

8:45 AM - 9:30 AM

**Keynote Address: Sex-Specific Risk for Cardiovascular Dysfunction and Cognitive Decline**

Keynote Presenter: *Virginia M. Miller, PhD*, Mayo Clinic, Rochester, MN

9:30 AM - 11:00 AM

**SESSION 1: Sex Differences in Brain Function and Behavior**

Moderator: *Paul Barrett, PhD*, OSC, NIH

9:35 AM - 9:55 AM

**The Influence of Metabolic Syndrome and Sex on the DNA Methylome in Schizophrenia**

Presenter: *Kyle J. Burghardt, PharmD*, Wayne State University, Detroit, MI

9:55 AM - 10:15 AM

**Sex-Specific Metabolic and Epigenetic Changes in Primary Fibroblasts from Patients with Alzheimer's Disease**

Presenter: *Eugenia Trushina, PhD*, Mayo Clinic, Rochester, MN

10:15 AM - 10:35 AM

**Sex Differences in Brain Gut Interactions**

Presenter: *Emeran A. Mayer, MD*, University of California, Los Angeles, CA

10:35 AM - 10:55 AM

**Incorporating Sex as a Biological Variable in Understanding Brain Development**

Presenter: *Margaret McCarthy, PhD*, University of Maryland School of Medicine, Baltimore, MD

10:55 AM - 11:15 AM

**Networking Break**

## 11:15 AM - 12:45 PM **SESSION 2: How Sex Impacts Our Interaction with External Influences**

Moderator: *Jennifer L. Troyer, PhD*, National Human Genome Research Institute (NHGRI), NIH

11:20 AM - 11:40 AM **Sex Stratification for Obesity and Related Traits in African Populations—H3Africa AWI-Gen Study**

Presenter: *Michèle Ramsay, PhD*, University of the Witwatersrand, Johannesburg

11:40 AM - 12:00 PM **Sex Differences in Pain Management**

Presenter: *Anne Z. Murphy, PhD*, Georgia State University, Atlanta, GA

12:00 PM - 12:20 PM **Sex Differences in Vaccine-Induced Immune Responses**

Presenter: *Nicole E. Basta, PhD*, University of Minnesota, Minneapolis, MN

12:20 PM - 12:35 PM **\*Sex Differences in the Endocannabinoid System Determines Differences in Juvenile Rough-and-Tumble Play Behavior and Correlating Differences in Phagoptosis by Microglia in the Developing Amygdala**

*Kathryn J. Argue, PhD*, University of Maryland School of Medicine, Baltimore, MD

12:35 PM - 1:35 PM

**Networking Lunch Break**

(NIH will not provide any food or drinks, please make your own arrangements.)

## 1:45 AM - 3:00 PM **SESSION 3: Sex Differences in Animal Models**

Moderator: *Colin Fletcher, PhD*, NHGRI, NIH

1:50 PM - 2:10 PM **Sex in Perinatal Brain Damage: Why Can't Boys be More like Girls?**

Presenter: *Anna Penn, MD, PhD*, Children's National Medical Center, Washington, DC

2:10 PM - 2:30 PM **Control of Autoimmunity by Genes, Sex and the Microbiome**

Presenter: *Jayne Danska, PhD*, The Hospital for Sick Children, Toronto

2:30 PM - 2:50 PM **Sex and Mouse Brain Anatomy during Health and Treatment**

Presenter: *Brian Nieman, PhD*, The Hospital for Sick Children, Toronto

2:50 PM - 3:05 PM **\*Estrogen Contributes to Sex Differences in M2-Polarization during Asthma**

Presenter: *Aleksander Keselman, PhD*, Johns Hopkins University, Baltimore, MD

3:05 PM - 3:15 PM

**Group Photo of Speakers with the Workshop Organizers**

3:05 PM - 3:30 PM

**Networking Break**

(Poster presenters finalize set-up for Poster Session)

## 3:30 PM - 5:30 PM **SESSION 4: Poster Session**

Moderators: *Rajeev K. Agarwal, PhD*, ORWH, NIH, and *Paul Barrett, PhD*, OSC, NIH

5:30 PM

**Day 1 of the Workshop Adjourns**

\*Abstracts selected for both Oral and Poster Presentation

## DAY 2: Friday, October 27, 2017

Please click the following link to participate virtually on Day 2: <https://videocast.nih.gov/summary.asp?live=26054&bhcp=1>

- 8:00 AM **Registration Check-In**
- 8:30 AM - 10:00 AM** **SESSION 5: Sex Differences in Gene Expression**  
Moderator: *Rajeev K. Agarwal, PhD*, ORWH, NIH
- 8:35 AM - 8:55 AM **UTI Complexity Results from Diversity at the Bacterial-Host Interface**  
Presenter: *Scott Hultgren, PhD*, Washington University School of Medicine, St. Louis, MO
- 8:55 AM - 9:15 AM **Sex Differences in Pathogenesis of Urinary Tract Infection**  
Presenter: *David A. Hunstad, MD*, Washington University School of Medicine, St. Louis, MO
- 9:15 AM - 9:35 AM **X, Drugs, Rock, an' Roles...**  
Presenter: *Lauren A. Weiss, PhD*, University of California, San Francisco, CA
- 9:35 AM - 9:55 AM **Sex-Specific Genetic Architecture of the Human Transcriptome**  
Presenter: *Barbara Stranger, PhD*, University of Chicago, Chicago, IL
- 9:55 AM - 10:15 AM **Networking Break**
- 10:15 AM - 11:00 AM** **SESSION 6: Panel Discussion on the Lessons Learned from Accounting for SABV**  
Moderator: *Judy Hewitt, PhD*, National Institute of Allergy and Infectious Diseases (NIAID), NIH
- Panel Members:  
*Emeran A. Mayer, MD*, University of California, Los Angeles, CA  
*Margaret M. McCarthy, PhD*, University of Maryland School of Medicine, Baltimore, MD  
*Virginia M. Miller, PhD*, Mayo Clinic, Rochester, MN  
*Brian Nieman, PhD*, The Hospital for Sick Children, Toronto  
*Michèle Ramsay, PhD*, University of the Witwatersrand, Johannesburg
- 11:15 AM - 11:30 AM **Closing Remarks**  
*James (Jim) M. Anderson, MD, PhD*, Director, Division of Program Coordination, Planning, and Strategic Initiatives, Office of the Director (OD), NIH
- 11:30 AM **2017 SABV Workshop Adjourns**
- 11:45 AM - 12:30 PM **Round Table Discussion with Speakers [CLOSED SESSION—Open only to Invited Speakers, Moderators, NIH Leadership, and staff members of OSC and ORWH]**
- Interesting topics
  - Future of the field/needs
  - White paper plans to highlight symposium