



## 2020 Meeting of the Organization for the Study of Sex Differences Detailed Program

**Monday May 4<sup>th</sup>**

9:00a-5:00p **Registration Open**

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9:30a-11:00a **WORKSHOP: SABV 101 – CVD, Immune Function and Stroke**

Chair: **Art Arnold**, University of California, Los Angeles

**Louise McCullough**, McGovern Medical School, UT Health Science Center  
*Sex differences in stroke.*

**Jayne Danska**, Hospital for Sick Children and University of Toronto  
*Sex differences in the immune system.*

**Noel Bairey-Merz**, Cedars-Sinai Medical Center  
*Sex and Gender differences in Cardiovascular Health and Disease: Impact on clinical care.*

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11:00a-1:00p **Lunch on your own OR**

11:00a-12:15p **IGH Trainee Career Development Workshop**  
*(Open to all trainees, RSVP required, light refreshments provided)*

12:00p-1:00p **BSD Editorial Board Meeting** *(RSVP requested, lunch provided)*

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1:00p-2:30p **Session 1:**  
**“The Role of the X Chromosome in Sex Differences in Health & Disease”**

Chairs: **Christine Disteche**, University of Washington, **Rhonda Voskuhl**, UCLA

*On the “Nature” of sex and gender research.* **Cara Tannenbaum**, CIHR, CRIUGM

*X chromosome mechanisms shown in immune responses relevant to health and disease.*  
**Rhonda Voskuhl**, UCLA

*X-inactivation escapee variation by cell and tissue type: The role in sex differences in health and disease.* **Christine Disteche**, University of Washington

*Sex Chromosome Dosage Effects on Gene Expression and Chromosome Organization in Humans.* **Armin Raznahan**, NIMH

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2:30p-2:45p **Coffee Break**

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2:45p-4:15p **Session 2:**  
**“Elizabeth Young New Investigator Symposium”**

Chair: **Jaclyn Schwarz**, University of Delaware

Speakers TBD based on submitted abstracts for consideration of this award.



*Dr. Elizabeth Young*

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4:15p-4:30p **Welcome Remarks: Sabra Klein**, Johns Hopkins University, OSSD President

4:30p-5:30p **KEYNOTE ADDRESS** from the  
*Arthur Arnold Distinguished Lecturer*

**Janine Clayton**, NIH, Director ORWH  
*The Ultimate Goal: Advancing Science to Improve the Health of Women*



5:30p-6:00p



**LIGHTNING ROUND I for Poster Session I**



**Six Datablitz slides selected from posters in Session I**

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6:15p-8:00p **POSTER SESSION I with OPENING RECEPTION**

**Tuesday May 5<sup>th</sup>**

8:00a-5:00p **Registration Open**

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7:30a-8:30a **Breakfast**

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8:30a-10:00a **SESSIONS 3 and 4**

**Session 3: “Differences of Sex Development: A window into sex and gender development”**

Chairs: **Natalie Nokoff**, University of Colorado Anschutz Medical Campus and  
**Eric Vilain**, GW Children’s National Medical Center

*Introduction: Understanding Differences of Sex Development. Courtney Finlayson,*  
Northwestern Feinberg School of Medicine, Lurie Children’s Hospital

*Modern Genetic Approaches to DSD. Emmanuèle Délot,* The George Washington University

*Impact of sex steroids on neural stem cells.* **Eric Vilain**, George Washington University, Children's National Medical Center

*Psychosocial outcomes in DSD and the impact of sex steroids on the brain.*  
**David Sandberg**, University of Michigan

#### **Session 4: HOT TOPICS in Sex Difference Research Part I: Cells and Molecules**

Chair: TBN

*Stem Cells & Tissue Engineering-Sex Differences in Musculoskeletal Applications.*  
**Mimi Zumwalt**, Texas Tech University Health Sciences Center

*The Power of Natural Variation: Sex Differences and Mitochondrial Functions.*  
**Karthickeyan Chella Krishnan**, UCLA

*Sex-specific molecular adaptations of the blood-brain barrier promote stress resilience vs depression.* **Caroline Menard**, Universite Laval, Quebec, Canada

*Sex-specific differences in extracellular vesicles and their miRNA cargo in pregnancies complicated by maternal diabetes.* **Karen Forbes**, University of Leeds

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10:00a-10:30a **Coffee Break**

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10:30a-12:00p

#### **SESSIONS 5 and 6**

##### **Session 5: "Multifactorial Determinants and Insights into Sex Differences in the Regulation of Energy Homeostasis"**

Chair: **Edward Wagner**, Western University of Health Sciences

*Sex Differences in, and dietary influences on, cannabinoid regulation of energy homeostasis.*  
**Edward J. Wagner**, Western University of Health Sciences

*Sex differences in progressive motor and metabolic phenotypes in the MeCP2-e1 deficient mouse model.* **Janine LaSalle**, University of California, Davis

*Sex differences in the drinking response to angiotensin II.*  
**Jessica Santollo**, University of Kentucky

*Estradiol Protects Proopiomelanocortin Neurons against Insulin Resistance.*  
**Martin Kelly**, Oregon Health and Science University

##### **Session 6: "Neuroimmune Activity in Adolescence: Are sex differences all about puberty?"**

Chair: **Heather Brenhouse**, Northeastern University

*Is perineuronal net formation during adolescence differentially regulated by microglial activity in males and females?* **Kelsea Gildawie**, Northeastern University

*Sex differences in blood brain barrier activity during adolescence.*  
**Gretchen Neigh**, Virginia Commonwealth University

*Sex-specific impact of immune signaling on dopaminergic signaling during adolescence.*  
**Ashley Kopec**, Albany Medical College

*Probiotic consumption during puberty mitigates LPS-induced immune responses and protects against stress-induced depression- and anxiety-like behaviors in adulthood in a sex-specific manner.* **Nafissa Ismail**, University of Ottawa

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12:00p-2:00p **Lunch on your own OR**

12:00p-2:00p **EDUCATION EVENT ‘Integrating Sex and Gender into Research: Emphasizing approach, novelty and impact’**

*(Open to all trainees, RSVP required, lunch provided)*

Chairs: **Sofia Ahmed**, University of Calgary and **Kristen Zuloaga**, Albany Medical College

Panel:

**Art Arnold**, UCLA

**Michelle Mielke**, Mayo Clinic

**Liisa Galea**, University of British Columbia

**Sarah Richardson**, Harvard University

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2:00p-3:30p **SESSION 7: “Sex Differences in Aging”**

Chair: **Noel Bairey-Merz**, Cedar Sinai Medical Center

**Coming soon...**

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3:30p-4:00p



**LIGHTNING ROUND II for Poster Session II**



**Six Datablitz slides selected from posters in Session II**

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4:15p-6:00p **POSTER SESSION II**

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6:30p-9:00p **Trainee Social Event** *(open to trainees, RSVP requested)*

Organizer: **Jordan Marrocco**, The Rockefeller University

Join us for the **“Sex and Gender in Jeopardy”** game with your host,  
**Jeanette Wolfe**, Baystate Health

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## Wednesday May 6<sup>th</sup>

8:00a-5:00p **Registration Open**

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7:30a-8:30a **Breakfast**

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8:30a-10:00a

### SESSIONS 8 and 9

#### **Session 8: HOT TOPICS in Sex Difference Research Part II: Aging and Physiological Processes**

Chair: TBN

*Sex differences in the rates of cognitive decline associated with in vivo tau burden: Findings from the Harvard Aging Brain Study.* **Rachel Buckley**, Massachusetts General Hospital, Harvard Medical School

*Sex-Specific Role of Neuronal Insulin Signaling on Health Span and Lifespan.*  
**Maarouf Baghdadi**, Max Planck Institute for Biology of Aging, Cologne, Germany

*Sex differences in active-phase sleep amount are partially driven by X chromosome dosage.*  
**India Nichols-Obande**, UCLA

*Investigating the role of Y-chromosome genes in protection against pulmonary hypertension.*  
**Christine M. Cunningham**, UCLA

#### **Session 9: "Estrogen and cognitive brain functions: sex, conflict and complexity"**

Chair: **Tallie Z. Baram**, University of California, Irvine

*Sexually dimorphic synaptic plasticity in hippocampal networks critical for spatial memory.*  
**Christine M. Gall**, UC, Irvine

*Low estradiol protects females from the memory-impairing effects of multiple concurrent acute stresses.* **Tallie Z. Baram**, UC, Irvine

*Beneficial and adverse effects of estrogens on the hippocampus and their importance.*  
**Helen Scharfman**, New York University

*Estrogen and Memory across the Female Lifespan.* **Tracey Shors**, Rutgers University

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10:00a-10:30a **Coffee Break**

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10:30a-12:00p

## SESSIONS 10 and 11

### Session 10: “Overlooked no more: The modulating effect of sex on the transmission, pathogenesis, pharmacotherapy and complications of HIV/AIDS”

Chairs: **Lisa Haddad**, Emory University and **Gretchen Neigh**, Virginia Commonwealth University

*From acute HIV infection to chronic HIV disease: The role of sex hormones in HIV transmission and disease progression in women and men.* **Eric Hunter**, Emory University

*An Uneven Playing field: HIV Biomedical Prevention in Women and Men.*  
**Dawn K. Smith**, Centers for Disease Control and Prevention

*What’s sex got to do with it? Sex differences in the action and efficacy of antiretroviral therapy.* **Mackenzie Leigh Cottrel**, UNC Chapel Hill

*Sex differences in HIV-host pathogen interactions – a driving force behind the disparity in HIV-associated end-organ damage in women and men.* **Igho Ofotokun**, Emory University

### Session 11: “Sex and Gender Differences in E-cigarette Use and Toxicity”

Chairs: **Meghan E. Rebuli**, University of North Carolina, Chapel Hill and **Patricia Silveyra**, UNC Chapel Hill

*Gender differences in perceived stress and e-cigarette use across adolescence.*  
**Jessica L. Barrington-Trimis**, USC Keck School of Medicine

*LGBT E-cigarette use and exposure to advertisements on traditional and social media.*  
**Kristen Emory**, San Diego State University

*Sex-Specific Effects of Nicotine Exposure: Differences between e-cigarette vapor inhalation and intravenous nicotine self-administration.* **Valeria Lallai**, University of California, Irvine

*Sex-dependent effects of E-cigarette in combination with other tobacco use on sleep quality.*  
**Laura Crotty Alexander**, UC San Diego School of Medicine

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12:00p-2:00p **Lunch on your own OR**

12:00p-2:00p **Trainee-Mentor LUNCH**  
(Open to all trainees, RSVP required, lunch provided)

Organizer: **Jordan Marrocco**, The Rockefeller University

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2:00p-3:30p **SESSION 12 “Cardiovascular Health Across the Lifespan in the Transgender Person”**

Chair: **Sofia Ahmed**, Libin Cardiovascular Institute of Alberta and University of Calgary

**Coming soon...**

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3:30p-3:45p **Brief Break / Intermission**

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4:00p-5:15p **Introduction to the...**

## CAPSTONE LECTURE

**Doris Taylor**, Director of Regenerative Medicine Research and Director for Cell and Organ Biotechnology at the Texas Heart Institute

*Sex Differences in Cardiovascular Disease: From Hearts to Heart Failure*



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5:30p-6:00p **General OSSD Membership and Business Meeting** (Open to All)

Sabra Klein, Johns Hopkins University, OSSD President

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6:30p-10:00p **AWARDS RECEPTION and BANQUET DINNER**

**Thursday May 7<sup>th</sup>**

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8:00a-12:00p **Registration Open**

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7:30a-8:30a **Breakfast**

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8:30a-10:00a **SESSIONS 13 and 14**

### **Session 13: "Sex differences in cancer risk, biology and treatment outcomes"**

Chairs: **Dorothea Wagner**, Lausanne University Hospital and **Berna C. Ozdemir**, Lausanne University Hospital

**Coming soon...**

### **Session 14: "Sex Differences in the Neurobiology of Addictive Disorders: Clinical Implications"**

Chair: **Aimee McRae-Clark**, Medical University of South Carolina

*Targeting stress for treatment development for women with alcohol use disorders.*  
**Sherry McKee**, Yale University

*Stress, gender and opioid use disorders.* **Kathleen Brady**, Medical University of South Carolina

*Women and cannabis: Do sex and gender matter?* **Aimee McRae-Clark**, Medical University of South Carolina

*Sex Differences in the Incubation of Cocaine Craving: Role of Ovarian Hormones.*

Sunila Nair, University of Washington

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10:00a-10:30a **Coffee Break**

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10:30a-12:00p

## **SESSIONS 15 and 16**

### **Session 15: HOT TOPICS in Sex Difference Research Part III: Genetics and Important Data Sets**

Chair: TBN

*Big data approaches to detect and understand sex/gender differences in health.*

**Francisco Garcia-Garcia**, Prince Felipe Research Center, Spain

*The developmental origins of sex-biased expression in cardiac development.*

**Nora Engel**, Temple University School of Medicine

*(Re)Designing Women: How Technology Fails Women and What We Can Do About It.*

**Lori Andrews**, Chicago-Kent College of Law

*Neonatal Nutrition and Growth-Does Sex Matter?* **Pradeep Alur**, University of Mississippi Medical Center

### **Session 16: “Sex differences in mitochondria in health and disease”**

Chairs: **DeLisa Fairweather**, Mayo Clinic and **Michael Coronado**, Whitman College

*Sex differences in mitochondrial function- an overview.* **Renee Ventura-Clapier**, Université Paris-Sud, Châtenay-Malabry, France

*Maternal vs. paternal inheritance of mitochondria.* **Paldeep Atwal**, The Atwal Clinic, Jacksonville, FL

*Sex differences in mitochondrial function and dynamics in cardiac muscle during exercise.*

**Michael Coronado**, Whitman College

*Differential, Sex-Related Response to High-fat Diet in Mice Impairs Cardiac Autophagy and Mitophagy.* **Roberta Gottlieb**, Cedar Sinai Medical Center

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End of OSSD 2020 Meeting. See you at OSSD 2021!

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12:15p-3:00p

## **OSSD COUNCIL MEETING**

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