SEX DIFFERENCES IN BRAIN DISORDERS

Emerging Transcriptomic Evidence and Implications for Therapeutic Development

A Virtual Workshop

September 23, 2020

The National Academies of SCIENCES ENGINEERING MEDICINE



Hosted by the Forum on Neuroscience and Nervous System Disorders

Please visit the webpage for the agenda and biosketches: https://bit.ly/3kepalP

Workshop Planning Committee

Eric Nestler, Icahn School of Medicine at Mount Sinai, Chair

Li Gan, Weill Cornell Medical College

John Krystal, Yale University

Heather Snyder, Alzheimer's Association

Rita Valentino, National Institute on Drug Abuse

Donna Werling, University of Wisconsin-Madison

Stevin Zorn, MindImmune Therapuetics, Inc.

Workshop Objectives

- Review the landscape of emerging evidence regarding sex differences in transcriptomic abnormalities in a variety of brain disorders, and discuss how this can be used to advance understanding of brain disorder pathophysiology.
- Explore ramifications for therapeutic development for these disorders, including identification of new targets, implications for preclinical and clinical study design, regulatory considerations, and potential sex-specific treatments.
- Discuss open research questions and opportunities to move the field forward.

Workshop Overview

Opening talk

Session I (Part A) Current Landscape of Emerging

Transcriptomic Evidence –

Stress and Reward-Related Disorders

Lunchtime Talk BRAIN Initiative Cell Census Network

Session I (Part B) Current Landscape of Emerging

Transcriptomic Evidence -

Neurodevelopmental and Neurodegenerative

Disorders

Session II Moving Forward

Session I: Current Landscape of Emerging Transcriptomic Evidence for Sex Differences in Brain Disorders

Part A – Stress- and Reward-Related Disorders



Session I: Current Landscape of Emerging Transcriptomic Evidence for Sex Differences in Brain Disorders

Part A – Stress- and Reward-Related Disorders

Session Overview

Rita Valentino, National Institute on Drug Abuse, Session co-moderator

Speakers

Marianne Seney, University of Pittsburg

Matthew Girgenti, Yale School of Medicine

Deena Walker, Oregon Health & Science University

Theodore Price, The University of Texas at Dallas

Panel Discussion—The speakers above will be joined by:

Farah Lubin, The University of Alabama at Birmingham

Orna Issler, Icahn School of Medicine at Mount Sinai

Rohan Palmer, Emory University



The National



The workshop is currently on break and will reconvene at 12:40pm EDT.

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BRAIN Initiative Cell Census Network – Applications to Understanding Sex Differences

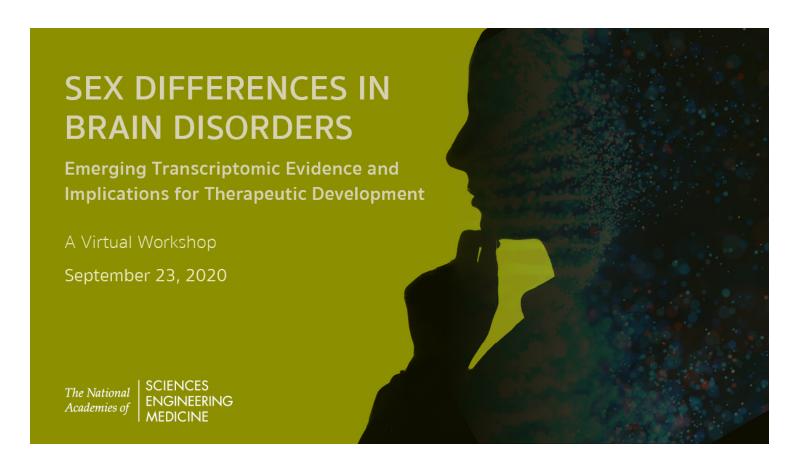
Speaker: John Ngai, National Institutes of Health



Session I: Current Landscape of Emerging Transcriptomic

Part B – Neurodevelopmental and Neurodegenerative Disorders

Evidence for Sex Differences in Brain Disorders



Session I: Current Landscape of Emerging Transcriptomic Evidence for Sex Differences in Brain Disorders

Part B – Neurodevelopmental and Neurodegenerative Disorders

Session Overview

Li Gan, Weill Cornell Medical College, Session co-moderator

Speakers

Donna Werling, University of Wisconsin

Panos Roussos, Icahn School of Medicine at Mount Sinai

Timothy Hohman, Vanderbilt University

Li Gan, Weill Cornell Medical College

Panel Discussion—The speakers above will be joined by:

Barbara Stranger, Northeastern Feinberg School of Medicine

Beth Stevens, Harvard University

Nilüfer Ertekin-Taner, Mayo Clinic



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The workshop is currently on break and will reconvene at **3:00pm EDT**.

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ENGINEERING MEDICINE

Session II: Moving Forward – Therapeutic Development and Policy Implications



Session II: Moving Forward – Therapeutic Development and Policy Implications

Session Overview

Stevin Zorn, MindImmune Therapeutics, Inc., Session Moderator

Speakers

Janine Clayton, National Institutes of Health

Kaveeta Vasisht, Food and Drug Administration

David Michelson, Regenacy Pharmaeuticals

Melissa Laitner, Society for Women's Health Research

Panel & General Discussion

Synthesis of Key Workshop Themes and Future Directions

Eric Nestler, Icahn School of Medicine at Mount Sinai, Workshop Chair



