

SEX DIFFERENCES IN BRAIN DISORDERS

Emerging Transcriptomic Evidence and
Implications for Therapeutic Development

A Virtual Workshop

September 23, 2020



Hosted by the Forum on Neuroscience and Nervous System Disorders

Please visit the webpage for the agenda and biosketches: <https://bit.ly/3kepaIP>



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 Therapeutics, 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

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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





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12:40pm EDT.

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BRAIN Initiative Cell Census Network – Applications to Understanding Sex Differences

Speaker: John Ngai, National Institutes of Health

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

Part B – Neurodevelopmental and Neurodegenerative Disorders

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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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Session II: Moving Forward – Therapeutic Development and Policy Implications

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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 Pharmaceuticals

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*





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