

NIDA Genetics Consortium Meeting %

January 8th to 9th, 2018 %

NIDA Headquarters, 6001 Executive Blvd. Rockville, MD 20892 %

Day 1 %

January 8th, 2018

9:00 AM %

Opening Remarks

Amy C. Lossie, PhD, Division of Neuroscience and Behavior, NIDA

9:10 to 10:10 %

Session 1: Finding the Missing Heritability

9:10 !

Trudy Mackay, PhD
William Neal Reynolds Distinguished Professor of Biological Sciences
NC State University
Where is the Missing Heritability Hiding? Lessons from Drosophila

9:25 !

Raymond Walters, PhD,
Postdoctoral Scholar
Stanley Center & Psychiatric Disease, The Broad Institute
Closing the gap on "missing" heritability

9:40 !

Aimee Dudley, PhD,
Associate Investigator
Pacific Northwest Research Institute
High resolution genetic dissection of complex and quantitative traits in yeast

9:55 !

Gregory Carter, PhD,
Associate Professor
The Jackson Laboratory
Modeling Pleiotropy and Epistasis to Understand Genetic Complexity

10:15 to 11:30 %

Poster Session A

11:30 to 12:15 %

Session 2: Human Studies of Substance Use Disorders

11:30 !

Howard Edenberg, PhD
Professor of Biochemistry & Molecular Biology
Indiana University School of Medicine
Updates from the Psychiatric Genomics Consortium

11:45 !

Eric Johnson, PhD
Senior Fellow, Senior Research Scientist
RTI International
Update from the NGC GWAS Study of Opioid Addiction – Wave 1

12:00 !

Thorgeir Thorgeirsson, PhD
deCODE Genetics
Results from the DeCODE GWAS Study on Addiction

12:15 to 1:30 %

Lunch and Poster Session A

1:30 to 2:00 %

Session 3: Identifying Signals in Complex Conditions

1:30 !

Scott Vrieze, PhD
Assistant Professor of Psychology
University of Minnesota
Genetic Associations with Alcohol and Nicotine Use

1:45 !

Christina Markunas, PhD
Epigenetic Epidemiologist
RTI International
Genetically Driven Gene Expression Associated with Nicotine Dependence Across Ten Brain Regions Reveals Novel Genes and Brain Regions

2:00 to 3:15 % **Poster Session B**
3:15 to 4:00 % **Session 4: Epigenetics and Gene Regulation**
3:15 ! Stella Dracheva, PhD
 Research Professor, Psychiatry
 Icahn School of Medicine at Mount Sinai
 Regulatory Signatures in Primate Neurons at Cell Type Resolution

3:30 ! Andreas R. Pfenning, PhD
 Assistant Professor, Computational Biology Department
 Carnegie Mellon University
 Cell Type and Brain Region-Specific Impact of Nicotine Use-Associated Genetic Variation

3:45 ! Schahram Akbarian, MD, PhD
 Professor, Neuroscience
 Icahn School of Medicine at Mount Sinai
 Nuclear Transcriptome and 3D Genome Mapping in Dopaminergic Neurons of Adult Human Midbrain

4:00 to 5:15 % **Poster Session B**
5:15 % **Session 5: Late-Breaking Reports**
 Ditte Demontis, MSc, PhD
 Associate Professor of Biomedicine
 Aarhus University
 Genome-wide association study implicates CHRNA2 in cannabis use disorder

5:30 % **Wrap Up and Adjourn for the Day**
6:00 % **Optional Dinners at Various Nearby Restaurants – Details at the Meeting**

Day 2 % **January 9th, 2018**
9:00 AM % **Opening Remarks**
 Wilson Compton, PhD, Deputy Director, National Institute on Drug Abuse

9:10 to 10:10 % **Session 6: Tools to Integrate Data**
9:10 ! Elissa Chesler, PhD
 Associate Professor
 The Jackson Laboratory
 Heterogeneous functional genomics data integration for addiction biology

9:25 ! J. David Jentsch, PhD
 Professor of Psychology
 Binghamton University
 Heritable variation in reward sensitivity and impulsive action and choice in a genetically diverse inbred mouse panel

9:40 ! Qing Lu, PhD
 Associate Professor of Epidemiology and Biostatistics
 Michigan State University
 A New Artificial Intelligence Tool for Substance Use and Dependence Research

9:55 ! Sidi Chen, PhD
 Assistant Professor
 Department of Genetics & Systems Biology Institute
 Yale University School of Medicine
 Developing direct in vivo genome editing and screening platforms in the mouse brain

10:15 to 11:30 % **Poster Session C**

11:30 to 12:15 % **Session 7: Animal Models and Resources**

11:30 ! Laura Saba, PhD
Assistant Professor, Pharmaceutical Science
University of Colorado Anschutz Medical Campus
Introducing the NIDA Core Center of Excellence in Omics, Systems Genetics, and the Addictome

11:45 ! Olivier George, PhD
Senior Research Associate, Department of Neuroscience
The Scripps Research Institute
Identification of Genetic Variants that Contribute to Compulsive Cocaine and Oxycodone Intake in Rats: Preliminary Data and Establishment of the Cocaine/Oxycodone Biobanks

12:00 ! Elaine Hebda-Bauer, PhD
Department of Neuroscience
The University of Michigan
Genetics of Novelty seeking and Propensity for Drug Abuse in Outbred Rats

12:15 to 1:30 % **Lunch and Poster Session C**

1:30 to 2:00 % **Session 8: Assessing Variation Through Functional Studies**

1:30 ! Jason Bubier, PhD
Associate Research Scientist
The Jackson Laboratory
Detecting genetic variation in morphine LD₅₀ in founder strains of the Collaborative Cross and Diversity Outbred mouse populations

1:45 ! Hannah Cates, PhD
Postdoctoral Scientist, Nestler Lab
Icahn School of Medicine at Mount Sinai
Accumbal E2F3a mediates cocaine behaviors via transcriptome-wide regulation of gene expression and alternative splicing

2:00 to 3:15 % **Poster Session D**

3:15 to 3:30 % **Session 9: Gene Identification**

3:15 ! Dawei Li, PhD
Assistant Professor
Department of Microbiology and Molecular Genetics
University of Vermont
Deletions in the SLC25A18 and ZNF490 Genes Associated with Alcohol Dependence—A Genome-wide Copy Number Variation Screen

3:30 ! Christine Cheng, PhD
Assistant Professor
Department of Biology
Boston University
Massively parallel single-nucleus transcriptomic profiling to identify dysregulated gene regulatory circuitry in opioid addicted human brain

3:30 to 4:15 % **Poster Session D**

4:15 to 5:00 % **Session 10: New Developments in Epigenomics**

4:15 ! Ian Maze, PhD
Assistant Professor
Pharmacological Sciences and Neuroscience
Icahn School of Medicine at Mount Sinai
Aberrant histone dopaminylation in the ventral tegmental area promotes relapse to cocaine

4:45 **Wrap Up and Adjourn**