

2018, 20th - 23rd June

48th Behavior Genetics Annual Meeting

 Conference Programme

Wednesday, 20th June

Wednesday
15:00 - 18:00

Executive Committee Meeting
Venue Board Room

Wednesday
18:00 - 20:00

Welcome Reception
Venue Broad Lobby

Thursday, 21st June

Thursday
08:45 - 09:00

OP Opening Remarks

08:45

Opening Remarks
» Jenae Neiderhiser Penn State University

Thursday
09:00 - 10:00

KN-1 Keynote
Venue Auditorium

09:00

Dobzhansky Lecture I
» William G. Iacono University of Minnesota

Thursday
10:00 - 10:30

Coffee Break

Thursday
10:30 - 12:15

OS-1A Aggression/Behavioral Inhibition/Neurodevelopment
Venue Auditorium

10:30

Genetic and environmental contributions to overt aggression harmonized across multiple studies, nations, and raters in the ACTION Consortium
» Justin Luningham (University of Notre Dame), Meike Bartels (Vrije Universiteit Amsterdam), Dorret Boomsma (Vrije Universiteit Amsterdam), Gitta Lubke (University of Notre Dame), NA ACTION (NA)

10:45

A Meta-Analysis of the Association of Oxytocin Receptor Gene (OXTR) Polymorphisms with Aggression and Antisocial Behavior
» Holly Poore (Emory University), Irwin Waldman (Emory University)

11:00

Comparing the Genetic Architecture of Childhood Aggression Across Socioeconomic Strata in the Netherlands and the United Kingdom
» Anne Hendriks (Vrije Universiteit Amsterdam)

11:15 **Etiologic Contributions to Callous-Unemotional Traits and Emotion Recognition in Children, Adolescents, and Young Adults**
» *Ashlee Moore* (Virginia Commonwealth University), *Lance Rappaport* (Virginia Commonwealth University), *James Blair* (Boystown National Research Hospital), *Daniel Pine* (National Institutes of Health), *Ellen Leibenluft* (National Institutes of Health), *Melissa Brotman* (National Institutes of Health), *John Hettema* (Virginia Commonwealth University), *Roxann Roberson-Nay* (Virginia Commonwealth University)

11:30 **Measurement Invariance and Predictive Validity of Behavioral Disinhibition in Two Twin Samples**
» *Stephanie Zellers* (University of Minnesota Twin Cities), *Robin Corley* (University of Colorado Boulder, Institute for Behavioral Genetics), *Eric Thibodeau* (University of Minnesota Twin Cities), *Bill Iacono* (University of Minnesota Twin Cities), *Christian Hopfer* (University of Colorado Denver), *John Hewitt* (University of Colorado Boulder, Institute for Behavioral Genetics), *Matt McGue* (University of Minnesota Twin Cities), *Scott Vrieze* (University of Minnesota Twin Cities)

11:45 **Harmonized phenotypes for internalizing problems and ADHD**
» *Kratika Agarwal* (university of twente), *Andrew Whitehouse* (University of Western Australia), *Stéphanie M. Van Den Berg* (university of twente)

12:00 **Common genetic influences on autism spectrum disorders and sleep disturbances: evidence from a nationwide twin sample**
» *Mark Taylor* (Karolinska Institutet), *Agnieszka Butwicka* (Karolinska Institutet), *Sebastian Lundström* (University of Gothenburg), *Henrik Larsson* (Karolinska Institutet), *Paul Lichtenstein* (Karolinska Institutet)

Thursday
10:30 - 12:35
SY-1B GE-Interplay in potentially modifiable factors for health outcomes
Chair Nancy Pedersen
Venue Yellowstone

10:30 - 10:46 **The relationship between loneliness, social isolation and mortality in two large cohorts of older twins**
» *Miriam Mosing* (Karolinska Institutet), *Victor Dahlström* (Karolinska Institutet), *Kelli Lehto* (Karolinska Institutet), *Nancy Pedersen* (Karolinska Institute), *The IGEMS Consortium* (University of Southern California)

10:47 - 11:03 **Financial Strain Moderates Genetic Influences on Self-Reported Health: Support for Social Compensation Model**
» *Deborah Finkel* (Indiana University Southeast), *Nancy Pedersen* (University of Southern California)

11:04 - 11:20 **The Genetic and Environmental Contributions between Smoking Behaviors, Socioeconomic Status, and Cognitive Functioning in Mid- and Late-Life**
» *shandell pahlen* (University of California- Riverside), *Chandra Reynolds* (University of California- Riverside), *IGEMS Consortium* (University of Southern California)

11:21 - 11:37 **Life Event Severity Moderates Genetic Influences on Cognitive Function**
» *Elizabeth Munoz* (University of California- Riverside), *Chandra Reynolds* (University of California- Riverside), *The IGEMS Consortium* (University of Southern California)

11:38 - 11:54 **Interplay of a Country's Income Inequality in Childhood and Adult Depressive Symptoms**
» *Margaret Gatz* (University of Southern California), *Brian Finch* (University of Southern California), *Christopher Beam* (University of Southern California), *Kyla Thomas* (University of Southern California), *The IGEMS Consortium* (University of Southern California)

11:55 - 12:11 **Discussion**
» *Nancy Pedersen* (Karolinska Institute)

Thursday

10:30 - 12:15 **SY-1C Animal models of behavior genetics in memory of Irving Gottesman**
Chair Yong-Kyu Kim
Venue Monadnock

10:30 - 10:46 **How genes and the environment influence executive cognitive functions in inbred strains of mice**

» *Claudia Schmauss (Columbia University)*

10:47 - 11:03 **Behavior, Epigenetics, and the Inescapable Problem of Animal Constraint**

» *Garet Lahvis (Oregon Health & Science University)*

11:04 - 11:20 **Behavioral approaches to probe value-based choice in genetic mouse models for neuropsychiatric disease**

» *Marc Fuccillo (University of Pennsylvania), Opeyemi Alabi (University of Pennsylvania)*

11:21 - 11:37 **Animal Models of Addiction-Prone and –Protected Behavioral Phenotypes**

» *Nathan Holtz (University of Washington), Marilyn Carroll (University of Minnesota Twin Cities)*

11:38 - 11:54 **Linking human and animal addiction genetics - a role for human genetic association studies**

» *Scott Vrieze (University of Minnesota Twin Cities)*

11:55 - 12:11 **Social defeat-induced depressive-like behavioral disorders in Drosophila males**

» *Yong-Kyu Kim (University of Georgia), Matthew Romaine (University of Georgia), Haini Cai (University of Georgia), Ping Shen (University of Georgia)*

Thursday
12:15 - 13:15 **Lunch**

Thursday
13:15 - 15:00 **OS-2B Statistical Methods I**
Venue Yellowstone

13:15 **Modeling the association of school achievement and criminal behavior in Swedish twins, full & half siblings, and cousins using SEM and co-relative designs**

» *Hermine Maes (Virginia Institute for Psychiatric and Behavior Genetics), Michael Neale (Virginia Commonwealth University), Sara Larsson Lonn (Lund University), Henrik Ohlsson (Lund University), Kristina Sundquist (Lund University), Jan Sundquist (Lund University), Kenneth Kendler (Virginia Institute for Psychiatric and Behavior Genetics)*

13:30 **Type I error rates in multivariate behavioral genetic models**

» *Brad Verhulst (Michigan State University), Michael Neale (Virginia Commonwealth University)*

13:45 **Co-Twin Control Models: Assessing Bias from Measured and Unmeasured Confounders**

» *Gretchen Saunders (University of Minnesota), Matt McGue (University of Minnesota)*

14:00 **AC'RE model: Estimating Rearing Effects without Twins Raised Apart**

» *Mason Garrison (Vanderbilt University), Patrick O'Keefe (Vanderbilt University), Mike Hunter (University of Oklahoma Health Science Center), Will Beasley (University of Oklahoma Health Science Center), David Bard (University of Oklahoma Health Science Center), Joe Rodgers (Vanderbilt University)*

14:15 **A novel family-based model to evaluate the role of mitochondrial DNA in neuropsychiatric phenotypes**

» *S. Alexandra Burt (Michigan State University), Brad Verhulst (Michigan State University), Jenae Neiderhiser (The Pennsylvania State University)*

14:30 **Can the causal contingent common-pathway model of substance-use initiation and disorder be applied to genotyped samples of unrelated participants?: Results of a Monte Carlo simulation**
» *Robert Kirkpatrick* (Virginia Commonwealth University), *Michael Neale* (Virginia Commonwealth University)

14:45 **Best practices and proper interpretation of SNP-heritability estimates**
» *Matthew Keller* (University of Colorado Boulder), *Luke Evans* (University of Colorado Boulder)

Thursday
13:15 - 15:00 OS-2C Health
Venue Monadnock

13:15 **Responding to a 100-Year-Old Challenge from Fisher: A Biometrical Analysis of Adult Height in the NLSY Data Using Only Cousin Pairs**
» *Joe Rodgers* (Vanderbilt University), *Mason Garrison* (Vanderbilt University), *Patrick O'Keefe* (Vanderbilt University), *David Bard* (University of Oklahoma Health Science Center), *Mike Hunter* (University of Oklahoma Health Science Center), *Will Beasley* (University of Oklahoma Health Science Center)

13:30 **Modeling Child Body Mass Index Z-score Variation from Age 2 to 12 years Associated with Heritable and Rearing Environmental Factors Using Multilevel Model with Heterogeneous Variance**
» *Chang Liu* (The Pennsylvania State University), *Jenae Neiderhiser* (The Pennsylvania State University), *Leslie Leve* (University of Oregon), *Daniel Shaw* (University of Pittsburgh), *David Reiss* (Yale Child Study Center), *Misaki Natsuaki* (University of California- Riverside), *Jody Ganiban* (George Washington University)

13:45 **Multiple Processes Underlie Twin Correlations for Skewed BMI**
» *Eric Turkheimer* (University of Virginia), *Siny Tsang* (Columbia University), *Diana Dinescu* (Kennedy Krieger Institute), *Glen Duncan* (Washington State University)

14:00 **An experimental study reveals that the FTO gene and gender modify peer influence on body mass index**
» *Yi Li* (University of Macau), *Guang Guo* (UNC Chapel Hill)

14:15 **Genetic and Environmental Associations Between Objective Sleep and Weight Indicators in 8-year-old Twins**
» *Reagan Breitenstein* (Arizona State University), *Leah D. Doane* (Arizona State University), *Sierra Clifford* (Arizona State University), *Samantha Miadich* (Arizona State University), *Kathryn Lemery-Chalfant* (Arizona State University)

14:30 **Heritability of sleep duration from early adolescence to young adulthood**
» *Chelsie Benca-Bachman* (Emory University), *Ken Wright* (University of Colorado Boulder), *Robin Corley* (University of Colorado Boulder, Institute for Behavioral Genetics), *John Hewitt* (University of Colorado Boulder, Institute for Behavioral Genetics), *Naomi Friedman* (University of Colorado Boulder, Institute for Behavioral Genetics)

14:45 **Low frequency genetic variation in the TP53 locus has large effects on head circumference and intracranial volume**
» *Beate St Pourcain* (Max Planck Institute for Psycholinguistics), *Veronique Vitart* (MRC Institute of Genetics and Molecular Medicine, University of Edinburgh, Edinburgh EH16 4UX, UK), *Eleftheria Zeggini* (The Wellcome Trust Sanger Institute, Wellcome Trust Genome Campus, Hinxton CB10 1SA, UK), *George Dedoussis* (Department Of Nutrition And Dietetics, School Of Health Science And Education, Harokopio University, Athens 17671, Greece), *Vincent Jaddoe* (The Generation R Study Group, Erasmus Erasmus MC, University Medical Center Rotterdam, Rotterdam 3000 CA, the Netherlands), *Craig E. Pennell* (School of Medicine and Public Health, Faculty of Medicine and Health, The University of Newcastle (UON), Australia), *Klaus Bønnelykke* (COPSAC, Copenhagen Prospective Studies on Asthma in Childhood, Herlev and Gentofte Hospital, University of Copenhagen, DK-2820 Copenhagen, Denmark), *David Martinez* (ISGlobal, Center

for Research in Environmental Epidemiology, 08003, Barcelona, Catalonia, Spain), Klaudia Walter (The Wellcome Trust Sanger Institute, Wellcome Trust Genome Campus, Hinxton CB10 1SA, UK), Andrew Jackson (MRC Institute of Genetics and Molecular Medicine, University of Edinburgh, Edinburgh EH16 4UX, UK), Paul Timmers (MRC Institute of Genetics and Molecular Medicine, University of Edinburgh, Edinburgh EH16 4UX, UK), James F. Wilson (MRC Institute of Genetics and Molecular Medicine, University of Edinburgh, Edinburgh EH16 4UX, UK), Caroline Hayward (MRC Institute of Genetics and Molecular Medicine, University of Edinburgh, Edinburgh EH16 4UX, UK), George Davey Smith (MRC Integrative Epidemiology Unit, Department of Population Health Sciences, Bristol Medical School, University of Bristol, Bristol BS8 2BN, UK), Josine Min (MRC Integrative Epidemiology Unit, Department of Population Health Sciences, Bristol Medical School, University of Bristol, Bristol BS8 2BN, UK), Valentina Iotchkova (The Wellcome Trust Sanger Institute, Wellcome Trust Genome Campus, Hinxton CB10 1SA, UK), Tim Cole (UCL Great Ormond Street Institute of Child Health, University College London, London WC1N 1EH, UK), Members UK10K (Consortium), Hans Bisgaard (COPSAC, Copenhagen Prospective Studies on Asthma in Childhood, Herlev and Gentofte Hospital, University of Copenhagen, DK-2820 Copenhagen, Denmark), Simon Fisher (Language and Genetics Department, Max Planck Institute for Psycholinguistics, 6525 XD Nijmegen, The Netherlands), Nicholas J Timpson (MRC Integrative Epidemiology Unit, Department of Population Health Sciences, Bristol Medical School, University of Bristol, Bristol BS8 2BN, UK), Dietmar Fernandez (ISGlobal, Center for Research in Environmental Epidemiology, 08003, Barcelona, Catalonia, Spain), Jordi Sunyer (ISGlobal, Center for Research in Environmental Epidemiology, 08003, Barcelona, Catalonia, Spain), Tarunveer S Ahluwalia (COPSAC, Copenhagen Prospective Studies on Asthma in Childhood, Herlev and Gentofte Hospital, University of Copenhagen, DK-2820 Copenhagen, Denmark), Carol Wang (School of Medicine and Public Health, Faculty of Medicine and Health, The University of Newcastle (UON), Australia), Janine Felix (The Generation R Study Group, Erasmus Erasmus MC, University Medical Center Rotterdam, Rotterdam 3000 CA, the Netherlands), Ioanna Tachmazidou (The Wellcome Trust Sanger Institute, Wellcome Trust Genome Campus, Hinxton CB10 1SA, UK), Chin Yang Shapland (Language and Genetics Department, Max Planck Institute for Psycholinguistics, 6525 XD Nijmegen, The Netherlands), Simon Haworth (MRC Integrative Epidemiology Unit, Department of Population Health Sciences, Bristol Medical School, University of Bristol, Bristol BS8 2BN, UK)

Thursday
13:15 - 15:00

SY-2A Anxiety, Depression, Genetics and Stress

Chair Thalia Eley
Venue Auditorium

13:15 - 13:31

A major role for common genetic variation in anxiety disorders

» [Thalia Eley](#) (King's College London), [Kirstin Purves](#) (King's College London), [Jonathan Coleman](#) (King's College London), [Christopher Rayner](#) (King's College London), [Helena Gaspar](#) (King's College London), [Shing Wan Choi](#) (King's College London), [Carol Kan](#) (King's College London), [Christopher Huebel](#) (Karolinska Institutet), [John Hettema](#) (Virginia Commonwealth University), [Jurgen Deckert](#) (Wuerzburg), [Andrew McIntosh](#) (Edi), [Matthew Hotopf](#) (King's College London), [Katrina Davis](#) (King's College London), [Kristin Nicodemus](#) (University of Edinburgh), [Sandra Meier](#) (Aarhus University Hospital), [Manuel Mattheisen](#) (University Hospital Würzburg), [Jonas Grauholm](#) (Statens Serum Institut), [Marie Bækvad-hansen](#) (Statens Serum Institut), [Merete Nordentoft](#) (University of Copenhagen), [Thomas Werge](#) (University of Copenhagen), [David Hougaard](#) (Statens Serum Institut), [Preben Bo Mortensen](#) (Aarhus University), [Ole Mors](#) (Aarhus University Hospital), [Anders Børglum](#) (Aarhus University), [Gerome Breen](#) (King's College London)

13:32 - 13:48

Genome-wide Association Study of Anxiety and Stress-related Disorders in the iPSYCH Cohort

» [Manuel Mattheisen](#) (University Hospital Würzburg)

13:49 - 14:05

Maternal prenatal depression as a risk factor for early-life psychopathology in offspring: results from a genetically-informative, population-based sample

» [Tom McAdams](#) (King's College London), [Laurie Hannigan](#) (King's College London), [Espen Moen Eilertsen](#) (University of Oslo), [Line Gjerde](#) (University of Oslo), [Ted Reichborn-kjennerud](#) (University of Oslo), [Thalia Eley](#) (King's College London), [Fruhling Rijdsdijk](#) (King's College London), [Eivind Ystrom](#) (University of Oslo)

14:06 - 14:22

Genes, exposure to adversity, and sensitive periods in risk for depression

» *Erin Dunn* (Psychiatric and Neurodevelopmental Genetics Unit, Massachusetts General Hospital), *Meg Wang* (Psychiatric and Neurodevelopmental Genetics Unit, Massachusetts General Hospital), *Katherine Crawford* (Psychiatric and Neurodevelopmental Genetics Unit, Massachusetts General Hospital), *Takao Hensch* (Department of Molecular and Cellular Biology, Harvard University), *Jordan Smoller* (Psychiatric and Neurodevelopmental Genetics Unit, Massachusetts General Hospital)

14:23 - 14:39

THE GENETICS OF DEPRESSION: EXPLORING THE ROLE OF TRAUMATIC ENVIRONMENTS

» *Gerome Breen* (King's College London)

14:40 - 14:56

Discussion

» *Nick Martin* (QIMR Berghofer Medical Research Institute)

Thursday
15:00 - 15:15

Coffee Break

Thursday
15:15 - 16:45

OS-3C Personality/Politics/Sexual Orientation

Venue Monadnock

15:15

The Interface between Personality and Psychopathology among Youth: A Multivariate Behavior Genetic Investigation

» *ASHLEY WATTS* (Emory University), *Holly Poore* (Emory University), *Scott Lilienfeld* (Emory University), *Irwin Waldman* (Emory University)

15:30

The Influence of Positive Emotionality, Social Competence, and Parental Warmth on the Development Internalizing and Externalizing Behaviors: A Genetically Informed Design

» *Amanda Griffin* (University of Oregon), *Amanda Ramos* (Penn State University), *Yayouk Willems* (Vrije Universiteit Amsterdam), *Daniel Shaw* (University of Pittsburgh), *Leslie Leve* (University of Oregon), *David Reiss* (Yale University), *Jody Ganiban* (George Washington University), *Misaki Natsuaki* (University of California- Riverside), *Jenae Neiderhiser* (The Pennsylvania State University)

15:45

Genetic and phenotypic associations between political ideology and fertility

» *Yuri Kim* (University of Minnesota Twin Cities), *James Lee* (University of Minnesota Twin Cities)

16:00

Psychological features of Russian women with different diplotypes of HTR2A, COMT, BDNF genes

» *Ekaterina Kovsh* (Southern Federal University, Academy of psychology and Educational sciences), *Elena Vorobyeva* (Don State Technical University, "Psychology, Pedagogy, Defectology" faculty), *Pavel Ermakov* (Southern Federal University, Academy of psychology and Educational sciences)

16:15

Results from the largest genetic study of sexual orientation

» *Robbee Wedow* (University of Colorado Boulder, Institute for Behavioral Genetics), *Abdel Abdellaoui* (Department of Psychiatry, Academic Medical Centre), *Gary Beecham* (Department of Human Genetics, University of Miami), *Felix Day* (MRC Epidemiology Unit, University of Cambridge School of Clinical Medicine, Institute of Metabolic Science), *Andrea Ganna* (Analytic and Translational Genetics Unit, Center for Genomic Medicine, Massachusetts General Hospital, Stanley Center for Psychiatric Research, Broad Institute of MIT and Harvard), *Shengru Guo* (Department of Human Genetics, University of Miami), *Robert Maier* (Analytic and Translational Genetics Unit, Center for Genomic Medicine, Massachusetts General Hospital, Stanley Center for Psychiatric Research, Broad Institute of MIT and Harvard), *Eden Martin* (Department of Human Genetics, University of Miami), *Benjamin Neale* (Analytic and Translational Genetics Unit, Center for Genomic Medicine, Massachusetts General Hospital, Stanley Center for Psychiatric Research, Broad Institute of MIT and Harvard), *Michel Nivard* (Department of Biological Psychology, VU University), *John Perry* (MRC Epidemiology Unit, University of Cambridge School of Clinical Medicine, Institute of Metabolic Science), *Alan Sanders* (Department of Psychiatry and Behavioral Sciences, NorthShore University HealthSystem Research Institute, Department of Psychiatry and Behavioral Neuroscience, University of Chicago), *Karin Verweij* (Department of Psychiatry, Academic Medical Centre), *Brendan Zietsch* (School of Psychology, University of Queensland)

16:30

TWINS SWITCHED-AT-BIRTH: CHRONOLOGY, LIFE HISTORIES AND RESEARCH FINDINGS

» [Nancy Segal](#) (California State University, Fullerton), [Yesika Montoya](#) (Columbia University)

Thursday
15:15 - 16:45

SY-3B GWAS, Causality, and the Missing Heritability Problem

Chair Lucas Matthews
Venue Yellowstone

15:15 - 15:31

Three Legs of the Missing Heritability Problem

» [Lucas Matthews](#) (University of Virginia), [Eric Turkheimer](#) (University of Virginia)

15:32 - 15:48

"Tens of Thousands of Associations but No Causal Mechanisms Revealed: Mismatches between GWAS and Developmental Molecular Biology"

» [Stephen Downes](#) (University of Utah)

15:49 - 16:05

Development, GxE Interactions, and the Challenges of Causation

» [Jonathan Kaplan](#) (Oregon State University)

16:06 - 16:22

"Don't feed the bugbears": Moving beyond imagined evils in debates about GWAS of complex human outcomes

» [K. Paige Harden](#) (University of Texas at Austin)

16:23 - 16:39

Discussion

» [David Cesarini](#) (New Y)

Thursday
15:15 - 16:45

SY-3C Phenotyping issues in genetic and genomic studies

Chair Irwin Waldman
Venue Auditorium

15:15 - 15:31

Phenotype Harmonization: Balancing between psychometric ideals and empirical data reality in the ACTION consortium

» [Gitta Lubke](#) (University of Notre Dame), [Justin Luningham](#) (University of Notre Dame)

15:32 - 15:48

Using Genomic SEM for GWAS of Latent Phenotypes

» [Andrew Grotzinger](#) (University of Texas at Austin), [K. Paige Harden](#) (University of Texas at Austin), [Michel Nivard](#) (Department of Biological Psychology, VU University), [Elliot Tucker-Drob](#) (University of Texas at Austin)

15:49 - 16:05

Exploring the tradeoff between phenotypic specificity and sample size

» [Brad Verhulst](#) (Michigan State University)

16:06 - 16:22

Reconceptualizing Psychopathology for Genetic Studies using Hierarchical Dimensional Structural Models: The Example of Externalizing and AVPR1a

» [Irwin Waldman](#) (Emory University)

16:23 - 16:39

Discussion

» [Michael Neale](#) (Virginia Commonwealth University)

Thursday
17:00 - 18:15

OS-4A Genetics & Brain Research

Venue Auditorium

17:00

What can GWAS tell us about the genetic architecture of the human cortex: Results from the ENIGMA consortium GWAS meta-analyses of cortical thickness and surface area

» Sarah Medland (QIMR Berghofer Medical Research Institute), NA The Enhancing Neuro Imaging Genetics Thr (NA)

17:15 **Scanner Inference Genome-Wide Association Studies (SIGWAS): GWAS of Inferred Psychological Traits Using Functional MRI Connectivity**

» Alexander Hatoum (University of Colorado Boulder, Institute for Behavioral Genetics), Andrew Reineberg (University of Colorado Boulder, Institute for Behavioral Genetics), Luke Evans (University of Colorado Boulder, Institute for Behavioral Genetics), John Hewitt (University of Colorado Boulder, Institute for Behavioral Genetics), Naomi Friedman (University of Colorado Boulder, Institute for Behavioral Genetics)

17:30 **Genetic and environmental influence on the human functional connectome: Evidence from studies of twins and unrelated individuals**

» Andrew Reineberg (University of Colorado Boulder), Alexander Hatoum (University of Colorado Boulder, Institute for Behavioral Genetics), Luke Evans (University of Colorado Boulder, Institute for Behavioral Genetics), Marie Banich (University of Colorado Boulder), John Hewitt (University of Colorado Boulder, Institute for Behavioral Genetics), Naomi Friedman (University of Colorado Boulder, Institute for Behavioral Genetics)

17:45 **Heritability and genetic correlations of cortical thickness and surface area, and their association with cognitive ability and psychiatric diseases**

» Katrina Grasby (Queensland Institute of Medical Research), NA The Enhancing Neuro Imaging Genetics Thr (NA)

Thursday
17:00 - 18:00

OS-4B Genomics of Externalizing Disorders

Venue Yellowstone

17:00 **Quantitative reconciliation of GWAS and candidate gene findings: measurement error, nonlinearity, and artifactual results**

» Richard Border (University of Colorado Boulder, Institute for Behavioral Genetics), Emma Johnson (Washington University St. Louis), Noah Berley (University of Colorado Boulder), Sarah Medland (QIMR Berghofer Medical Research Institute), Patrick Sullivan (University of North Carolina), Matthew Keller (University of Colorado Boulder)

17:15 **Using the Genetic Architecture of Externalizing Disorders to Aid in Gene Identification**

» Danielle Dick (Virginia Commonwealth University), Philipp Koellinger (Vrije Universiteit Amsterdam), K. Paige Harden (University of Texas at Austin), Elliot Tucker-Drob (University of Texas at Austin), Irwin Waldman (Emory University), Richard Karlsson Linnér (Vrije Universiteit Amsterdam), Travis Mallard (University of Texas at Austin), Ronald de Vlaming (Vrije Universiteit Amsterdam), Andrew Grotzinger (University of Texas at Austin), Peter Barr (Virginia Commonwealth University)

17:30 **INTEGRATIVE PRIORITIZATION OF GENOMIC LOCI FOR ALCOHOL USE DISORDERS**

» Rohan Palmer (Emory University), Jingjing Yang (Emory University), Jason Bubier (Jackson Laboratory), Jenani Srijeyanthan (Emory University), Chelsie Benca-bachman (Emory University), John Mcgeary (Brown University), Valerie Knopik (Purdue University), Elissa Chesler (Jackson Laboratory)

17:45 **EFFECTS OF RARE DNA SEQUENCE VARIATION IN GENES AND REGIONS SUSCEPTIBLE TO DNA METHYLATION ON ALCOHOL AND TOBACCO USE PHENOTYPES**

» Jacqueline Otto (University of Missouri - Columbia), Ian Gizer (University of Missouri - Columbia), Chris Bizon (Renaissance Computing Institute), Kirk Wilhelmsen (University of North Carolina)

Thursday
17:00 - 18:00

OS-4C IQ/Executive Functioning

Venue Monadnock

17:00 **Gene x SES Interaction and Age-related Increases in the Heritability of IQ**

» Evan Giangrande (University of Virginia), Eric Turkheimer (University of Virginia)

17:15 **Genetic Influences of Schizophrenia and Intelligence Independently Associate with General Cognition in Older Adults**

» *Chelsea Sawyers* (Virginia Commonwealth University), Mark Logue (Boston University), Matthew Panizzon (University of California, San Diego), William Kremen (University of California, San Diego), Michael Neale (Virginia Commonwealth University)

17:30 **'Same but different': Phenotypic and genetic associations between executive functions, impulse control and character**

» *Margherita Malanchini* (University of Texas at Austin), Laura Engelhardt (University of Texas at Austin), Andrew Grotzinger (University of Texas at Austin), K. Paige Harden (University of Texas at Austin), Elliot Tucker-Drob (University of Texas at Austin)

17:45 **Genetic and Environmental Relations of Executive Functions to Antisocial Personality Symptoms and Psychopathy**

» *Naomi Friedman* (University of Colorado Boulder, Institute for Behavioral Genetics), Soo Rhee (University of Colorado Boulder, Institute for Behavioral Genetics), Jessica Ross (University of Colorado Boulder, Institute for Behavioral Genetics), Robin Corley (University of Colorado Boulder, Institute for Behavioral Genetics), John Hewitt (University of Colorado Boulder, Institute for Behavioral Genetics)

Thursday
18:00 - 21:00

PS-1 Methods

Bootstrap Confidence Interval Methods for DeFries-Fulker Models

» *Patrick O'Keefe* (Vanderbilt University), Joe Rodgers (Vander)

Testing the Impact of Phenotypic Definition on Epigenome-wide Association Study Results

» *Dana Lapato* (Virginia Commonwealth University), Eva Lancaster (Virginia Commonwealth University), Brad Verhulst (Michigan State University), Aaron Wolen (Virginia Commonwealth University), Timothy York (Virginia Commonwealth University), Roxann Roberson-Nay (Virginia Commonwealth University)

Thursday
18:00 - 21:00

PS-2 Cognitive Development

Genetic and Environmental Influences on Achievement Goals Shift with Age

» *anqing zheng* (University of Illinois at Urbana-Champaign), Daniel Briley (University of Illinois at Urbana-Champaign), Margherita Malanchini (University of Texas at Austin), Jennifer Tackett (Northwestern University), K. Paige Harden (University of Texas at Austin), Elliot Tucker-Drob (University of Texas at Austin)

Shared environmental sources of the variation in non-verbal intelligence are largely twin-specific: The study of twin and sibling pairs from Russia

» *Ivan Voronin* (Psychological Institute of Russian Academy of Education), Sergey Malykh (Psychological Institute of Russian Academy of Education), Tatiana Tikhomirova (Psychological Institute of Russian Academy of Education)

Understanding the genetic architecture of language- and literacy-related abilities during mid-childhood and adolescence: Evidence for genetically shared factors with early vocabulary

» Ellen Verhoef (Max Planck Institute for Psycholinguistics), Chin Yang Shapland (Max Planck Institute for Psycholinguistics), Philip Dale (University of New Mexico), Simon Fisher (Max Planck Institute for Psycholinguistics), *Beate St Pourcain* (Max Planck Institute for Psycholinguistics)

Genetic and Environmental Influences on Executive Functioning in Middle Childhood: The Role of Early Adversity

» *Gianna Rea-Sandin (Arizona State University), Sierra Clifford (Arizona State University), Leah D. Doane (Arizona State University), Kathryn Lemery-Chalfant (Arizona State University)*

Associations Between Dopaminergic Gene Methylation and Executive Performance in a Childhood MZ Twin Difference Design

» *Candace Lewis (Translational Genomics Research Institute), Adrienne Henderson-Smith (Translational Genomics Research Institute), Reagan Styles (Arizona State University), Matthew Huentelman (Translational Genomics Research Institute), Leah D. Doane (Arizona State University), Kathryn Lemery-Chalfant (Arizona State University)*

Thursday
18:00 - 21:00

PS-3 Musical Ability

Gene-environment interplay and music ability

» *Laura Wesseldijk (Karolinska Institutet), Miriam Mosing (Karolinska Institutet), Fredrik Ullen (Karolinska Institutet)*

Genetic influences on musical specialization: A twin study on choice of instrument and music genre

» *Miriam Mosing (Karolinska Institutet), Fredrik Ullen (Karolinska Institutet)*

Thursday
18:00 - 21:00

PS-4 Impulsivity

Association of COMT and MAOA genes with psychological features of Caucasian women

» *Ekaterina Kovsh (Southern Federal University, Academy of psychology and Educational sciences), Elena Vorobyeva (Don State Technical University, "Psychology, Pedagogy, Defectology" faculty), Pavel Ermakov (Southern Federal University, Academy of psychology and Educational sciences), Irina Skirtach (Southern Federal University, Academy of psychology and Educational sciences)*

Genetic Overlap between ADHD and Externalizing, Internalizing and Neurodevelopmental Disorder Symptoms: A Systematic Review and Meta-Analysis

» *Anneli Andersson (School of Medical Sciences, Örebro University), Catherine Tuvblad (Department of Psychology, University of Southern California/School of Psychology, Law and Social Work, Örebro University, Sweden), Ralf Kuja-Halkola (Department of Medical Epidemiology and Biostatistics, Karolinska Institute), Qi Chen (Department of Medical Epidemiology and Biostatistics, Karolinska Institute), Henrik Larsson (School of Medical Sciences, Örebro University/Department of Medical Epidemiology and Biostatistics, Karolinska Institute)*

Assortative mating and intergenerational transmission of ADHD

» *Eivind Ystrom (University of Oslo), Espen Moen Eilertsen (Norwegian Institute of Public Health), Line Gjerde (University of Oslo), Fruhling Rijdsdijk (King's College London), Kristin Gustavson (Norwegian Institute of Public Health), Helga Ask (Norwegian Institute of Public Health), Ted Reichborn-kjennerud (Norwegian), Tom McAdams (Norwegian Institute of Public Health)*

Polymorphisms in dopaminergic genes predict proactive inhibition in a Go/No Go task

» *Nathan Beu (University of Adelaide), Nicholas Burns (University of Adelaide), Irina Baetu (University of Adelaide)*

The Genetic and Environmental Associations Between Sleep and Impulsivity in Middle Childhood

» *Samantha Miadich (Arizona State University), Leah Doane (Arizona State University), Reagan Breitenstein (Arizona State University), Sierra Clifford (Arizona State University), Mary Davis (Arizona State University), Kathryn Lemery-Chalfant (Arizona State University)*

Genetic Factors in the Neuro-Development of Negative Urgency: Findings from a Community

Dwelling Sample

» *Owen Mulledy* (University of Massachusetts Amherst), Casey Evans (Suffolk University), Kayle Sawyer (Boston University School of Medicine), Sarah Levy (Suffolk University), *Jessica Pan* (Suffolk University), Emilykate McDonough (Tufts University), *David Gansler* (Suffolk University)

Thursday
18:00 - 21:00

PS-5 Internalizing & Externalizing Problems

Genetic and Environmental Contributions to Stability and Change in Callous-Unemotional Behaviors Across the Preschool Years

» *Megan Flom* (Boston University), Kimberly Saudino (Boston University)

The Relationship Between Callous-Unemotional Behaviors and Social Fear: A Cross-Lagged Analysis

» *Dorothy White* (The George Washington University), Megan Flom (Boston University), Julia Mancini (The George Washington University), Kimberly Saudino (Boston University), Jody Ganiban (George Washington University)

Genetic and Environmental Influences on Psychopathy: A Meta-Analysis of Twin Studies

» *Brooke Slawinski* (Michigan State University), E. Elisa Carsten (Michigan State University), Samantha Schires (Michigan State University), S. Alexandra Burt (Michigan State University)

The genetic and environmental structure of psychopathology spectra in middle childhood

» *Line Gjerde* (Norwegian Institute of Public Health), Espen Moen Eilertsen (Norwegian Institute of Public Health), Tom Rosenström (Norwegian Institute of Public Health), Ted Reichborn-kjennerud (Norwegian Institute of Public Health), Tom McAdams (King's College London), Thalia Eley (King's College London), Eivind Ystrom (University of Oslo)

Examining the relevance of canonical candidate genes for major depression in the era of genome-wide association studies

» *Richard Border* (University of Colorado Boulder, Institute for Behavioral Genetics), Emma Johnson (Washington University St. Louis), Luke Evans (University of Colorado Boulder), Andrew Smolen (University of Colorado Boulder, Institute for Behavioral Genetics), Noah Berley (University of Colorado Boulder), Patrick Sullivan (University of North Carolina), Matthew Keller (University of Colorado Boulder)

Shared Genetic and Environmental Effects on Social Support, Stress, and Depression in Adult African American Twins

» *Lauren Bertin* (Emory University), Chelsie Benca-Bachman (Emory University), Keith Whitfield (Wayne State University), Rohan Palmer (Emory University)

Thursday
18:00 - 21:00

PS-6 Genetics, Pregnancy, and Prenatal Environment

GWAS meta-analysis of nausea and vomiting during pregnancy

» *Lucia Colodro Conde* (QIMR Berghofer Medical Research Institute), Sarah Medland (QIMR Berghofer Medical Research Institute), Jodie Painter (QIMR Berghofer Medical Research Institute), Penelope Lind (QIMR Berghofer Medical Research Institute), Na Nausea And Vomiting In Pregnancy Consort (NA)

Examining the genetic relationship between nausea and vomiting in pregnancy, anxiety and depression

» *Sarah Medland* (QIMR Berghofer Medical Research Institute), Lucia Colodro Conde (QIMR Berghofer Medical Research Institute), Jodie Painter (QIMR Berghofer Medical Research Institute), Penelope Lind (QIMR Berghofer Medical Research Institute), Na Nausea and Vomiting in Pregnancy Consort (NA)

Parental prenatal depression and offspring ADHD: A genetically informed intergenerational study

» *Espen Moen Eilertsen* (Norwegian Institute of Public Health), *Laurie Hannigan* (King's College London), *Tom McAdams* (King's College London), *Fruhling Rijdsdijk* (King's College London), *Nikolai Olavi Czajkowski* (University of Oslo), *Ted Reichborn-kjennerud* (University of Oslo), *Eivind Ystrom* (University of Oslo), *Line Gjerde* (University of Oslo)

Maternal smoking during pregnancy and DNA methylation disruption in toddlers

» *Veronika Odintsova* (National Medical Research Center for Obstetrics, Gynecology and Perinatology, Ministry of Healthcare of the Russian Federation; VU University), *Irina Ovchinnikova* (Saint Petersburg State University), *Marina Zhukova* (Saint Petersburg State University), *Oxana Naumova* (University of Houston, Texas, USA; Vavilov Institute of General Genetics RAS, Russia)

Apgar score and heritability in twins

» *Veronika Odintsova* (VU University)

Thursday
18:00 - 21:00

PS-7 Health Behaviors & Outcomes

Using a siblings reared apart and together design to parse genetic vs. environmental influences on children's body mass index

» *Hannah Tavalire* (University of Oregon), *Elizabeth Budd* (University of Oregon), *Tasia Smith* (University of Oregon), *Misaki Natsuaki* (University of California- Riverside), *Jenae Neiderhiser* (The Pennsylvania State University), *David Reiss* (Yale Child Study Center), *Daniel Shaw* (University of Pittsburgh), *Jody Ganiban* (George Washington University), *Leslie Leve* (University of Oregon)

TWINStudy of Environment, Lifestyle Behaviors, and Health

» *Glen Duncan* (Washington State University), *Ally Avery* (Washington State University), *Philip Hurvitz* (University of Washington), *Anne Vernez-moudon* (University of Washington), *Siny Tsang* (Columbia University), *Eric Turkheimer* (University of Virginia)

Associations between Subjective Well-being Polygenic Scores and Personality, Mental Health and Behavioral Outcomes in Young Adults

» *Sally Kuo* (Virginia Commonwealth University), *Peter Barr* (Virginia Commonwealth University), *Zoe Neale* (Virginia Commonwealth University), *Christina Sheerin* (Virginia Commonwealth University), *Ananda Amstadter* (Virginia Commonwealth University), *Danielle Dick* (Virginia Commonwealth University)

Type 2 Diabetes in the Washington State Twin Registry

» *Ally Avery* (Washington State University), *Glen Duncan* (Washington State University)

Heritability of Screen Time in the ABCD Study

» *Jeffrey Lessem* (University of Colorado Boulder, Institute for Behavioral Genetics)

One reason children in the same family are so different: parental difference in phenotype

» *Sarah Carroll* (University of Virginia), *Juliana Gottschling* (Saarland University), *Eric Turkheimer* (University of Virginia)

Thursday
18:00 - 21:00

PS-8 Substance Use

Early Cannabis Use & Young Adult Sleep Duration: A Biometrically Informed Design

» *Evan Winiger* (University of Colorado Boulder, Institute for Behavioral Genetics), *Spencer Huggett* (University of Colorado Boulder, Institute for Behavioral Genetics), *John Hewitt* (University of Colorado Boulder, Institute for Behavioral Genetics)

Adolescent-Limited Cannabis Use and Developmental Delay

» [Maia Frieser](#) (Institute for Behavioral Genetics), [Robin Corley](#) (University of Colorado Boulder, Institute for Behavioral Genetics), [John Hewitt](#) (University of Colorado Boulder, Institute for Behavioral Genetics), [Christian Hopfer](#) (University of Colorado Denver), [Tamara Wall](#) (University of California, San Diego), [Chandra Reynolds](#) (University of California- Riverside), [Sally Wadsworth](#) (University of Colorado Boulder, Institute for Behavioral Genetics), [Michael Stallings](#) (University of Colorado Boulder, Institute for Behavioral Genetics)

The influence of familial risk, cannabis use, and depression on college student academic success

» [Zoe Neale](#) (Virginia Commonwealth University), [Nathaniel Thomas](#) (Virginia Commonwealth University), [Nathan Gillespie](#) (Virginia Institute for Psychiatric and Behavior Genetics), [Danielle Dick](#) (Virginia Commonwealth University)

SEX DIFFERENCES IN ASSOCIATIONS BETWEEN PERSONALITY POLYGENIC RISK SCORES AND HAZARDOUS ALCOHOL USE

» [Alex Miller](#) (University of Missouri - Columbia), [Ian Gizer](#) (University of Missouri - Columbia), [Jacqueline Otto](#) (University of Missouri - Columbia), [Cindy Ehlers](#) (The Scripps Research Institute), [Kirk Wilhelmson](#) (University of North Carolina)

Cross-species alcohol dependence-associated gene networks: Co-analysis of mouse brain gene expression and human genome-wide association data

» [Kristin Mignogna](#) (Virginia Commonwealth University), [Silviu Bacanu](#) (Virginia Commonwealth University), [Brien Riley](#) (Virginia Commonwealth University), [Aaron Wolen](#) (Virginia Commonwealth University), [Michael Miles](#) (Virginia Commonwealth University)

Birth cohort effects on the quantity and heritability of alcohol consumption in adulthood: A Finnish longitudinal twin study

» [Suvi Virtanen](#) (University of Helsinki), [Jaakko Kaprio](#) (University of Helsinki), [Richard Viken](#) (Indiana University, Bloomington), [Richard Rose](#) (Indiana University, Bloomington), [Antti Latvala](#) (University of Helsinki)

GENOME-WIDE INVESTIGATION OF ALCOHOL RESPONSE: A META-ANALYTIC REVIEW

» [Joseph Deak](#) (University of Missouri - Columbia), [Ian Gizer](#) (University of Missouri - Columbia), [Jacqueline Otto](#) (University of Missouri - Columbia), [Bruce Bartholow](#) (University of Missouri - Columbia), [Kirk Wilhelmson](#) (University of North Carolina)

Cocaine'omics: Neuron-Specific RNA Sequencing & Alternative Splicing Analyses of the Dorsal-Lateral Pre-Frontal Cortex from Humans with Cocaine Use Disorder

» [Spencer Huggett](#) (University of Colorado Boulder, Institute for Behavioral Genetics), [Michael Stallings](#) (University of Colorado Boulder, Institute for Behavioral Genetics)

Electrophysiological endophenotypes and polygenic risk scores for substance misuse

» [Jeremy Harper](#) (University of Minnesota Twin Cities), [Mengzhen Liu](#) (University of Minnesota Twin Cities), [Stephen Malone](#) (University of Minnesota Twin Cities), [Matt McGue](#) (University of Minnesota Twin Cities), [Bill Iacono](#) (University of Minnesota Twin Cities), [Scott Vrieze](#) (University of Minnesota Twin Cities)

Friday, 22nd June

Friday
09:00 - 10:00

KN-2
Venue Auditorium

Keynote

09:00

Dobzhansky Lecture II

» [Hill Goldsmith](#) University of Wisconsin-Madison

Friday
10:00 - 10:30

Coffee Break

Friday
10:30 - 12:00

OS-5B Alcohol Use/Dependence

Venue Yellowstone

10:30

Genome-wide meta-analysis of >14,000 alcohol dependent individuals highlights psychiatric comorbidities

» *Raymond Walters* (Analytic and Translational Genetics Unit, Center for Genomic Medicine, Massachusetts General Hospital, Stanley Center for Psychiatric Research, Broad Institute of MIT and Harvard), Na Substance Use Disorder Group Of The Psyc (NA), Benjamin Neale (Analytic and Translational Genetics Unit, Center for Genomic Medicine, Massachusetts General Hospital, Stanley Center for Psychiatric Research, Broad Institute of MIT and Harvard), Howard Edenberg (Indiana University School of Medicine), Joel Gelernter (Yale University School of Medicine; VA Connecticut Healthcare System), Arpana Agrawal (Washington University School of Medicine)

10:45

Genetic overlap and causality among major depressive disorder, alcohol dependence, and alcohol consumption: Findings from the Psychiatric Genomics Consortium

» *Roseann Peterson* (Virginia Institute for Psychiatric and Behavioral Genetics), Renato Polimanti (Yale University School of Medicine; VA Connecticut Healthcare System), Raymond Walters (Massachusetts General Hospital), Na Major Depressive Disorder Working Group (Virginia Institute for Psychiatric and Behavioral Genetics), Na Substance Use Disorder Working Group Of (Virginia Institute for Psychiatric and Behavioral Genetics), Eske Derks (QIMR Berghofer Medical Research Institute)

11:00

Genetic Loci Associated with Voluntary Ethanol Consumption and Preference in Diversity Outbred Mice

» *Kristin Mignogna* (Virginia Commonwealth University), Lorna Macleod (Virginia Commonwealth University), Jessica Jurmain (Virginia Commonwealth University), Michael Miles (Virginia Commonwealth University)

11:15

Couples' drinking and perceived spousal support: Contextual influences of regional socioeconomic status

» *Arielle Deutsch* (Sanford Research), Nathan Gillespie (Virginia Commonwealth University), Lucia Colodro Conde (QIMR Berghofer Medical Research Institute), Nick Martin (QIMR Berghofer Medical Research Institute)

11:30

Socioeconomic Status and Adolescent Alcohol Involvement: Evidence for a Gene-Environment Interaction

» *Christal Davis* (University of Missouri), Wendy Slutske (University of Missouri)

11:45

Genetic and Environmental Contributions to Alcohol Reduction Attempts

» *Elizabeth Prom-Wormley* (Virginia Commonwealth University), Peter Barr (Virginia Commonwealth University), Jessica Salvatore (Virginia Commonwealth University), Hermine Maes (Virginia Commonwealth University), Judy Silberg (Virginia Commonwealth University), Jaakko Kaprio (University of Helsinki), Richard Rose (Indiana University, Bloomington), Danielle Dick (Virginia Commonwealth University)

Friday
10:30 - 12:00

OS-5C Internalizing Problems

Venue Monadnock

10:30

NR3C1 Methylation is Associated with Internalizing Symptoms in Early Childhood

» *Candace Lewis* (Translational Genomics Research Institute), Adrienne Henderson-Smith (Translational Genomics Research Institute), Reagan Styles (Arizona State University), Matthew Huentelman (Translational Genomics Research Institute), Leah D. Doane (Arizona State University), Kathryn Lemery-Chalfant (Arizona State University)

10:45 **Are Neuroticism, Depressive Rumination, and Anger Rumination Genetically Distinct?**
» [Alta du Pont](#) (University of Colorado Boulder, Institute for Behavioral Genetics), [Soo Rhee](#) (University of Colorado Boulder, Institute for Behavioral Genetics), [Robin Corley](#) (University of Colorado Boulder, Institute for Behavioral Genetics), [John Hewitt](#) (University of Colorado Boulder, Institute for Behavioral Genetics), [Naomi Friedman](#) (University of Colorado Boulder, Institute for Behavioral Genetics)

11:00 **Early childhood internalizing symptoms and hostile parenting are distinct pathways to middle childhood anxiety symptoms independent of inherited vulnerability for psychopathology.**
» [Amanda Broderick](#) (The Pennsylvania State University), [Jenae Neiderhiser](#) (The Pennsylvania State University), [Misaki Natsuaki](#) (University of California- Riverside), [Jody Ganiban](#) (George Washington University), [David Reiss](#) (Yale University), [Leslie Leve](#) (University of Oregon)

11:15 **Genetic Contributions to Suicidal Ideation and Neurocognitive Functioning**
» [Leslie Brick](#) (Brown University), [Marisa Marraccini](#) (University of North Carolina), [Lauren Micalizzi](#) (Brown University), [Chelsie Benca-bachman](#) (Emory University), [Valerie Knopik](#) (Purdue University), [Rohan Palmer](#) (Emory University)

11:30 **Extracting stability increases the SNP heritability of emotional problems in young people**
» [Rosa Cheesman](#) (King's College London), [Kirstin Purves](#) (King's College London), [Jean-Baptiste Pingault](#) (University College London), [Gerome Breen](#) (King's College London), [Fruhling Rijdsdijk](#) (King's College London), [Robert Plomin](#) (King's College London), [Thalia Eley](#) (King's College London)

11:45 **GWAS for anorexia nervosa finds 6 loci and suggests it is both a psychiatric and metabolic disease**
» [Nick Martin](#) (Queensland Institute of Medical Research)

SY-5A Genomic Structural Equation Modeling Provides Insights into the Multivariate Genetic Architecture of Complex Traits

Friday
10:30 - 12:00

Chair Elliot Tucker-Drob
Venue Auditorium

10:30 - 10:46 **Structural Equation Modeling: What Is It For and Why Is It Useful for Genetics?**
» [K. Paige Harden](#) (University of Texas at Austin), [Andrew Grotzinger](#) (University of Texas at Austin), [Michel Nivard](#) (Department of Biological Psychology, VU University), [Elliot Tucker-Drob](#) (University of Texas at Austin)

10:47 - 11:03 **Fitting Structural Equation Models to GWAS-Derived Genetic Covariance Matrices**
» [Elliot Tucker-Drob](#) (University of Texas at Austin), [Andrew Grotzinger](#) (University of Texas at Austin), [Michel Nivard](#) (Department of Biological Psychology, VU University)

11:04 - 11:20 **Using Genomic SEM for Multivariate GWAS Discovery**
» [Andrew Grotzinger](#) (University of Texas at Austin), [Mijke Rhemtulla](#) (University of California, Davis), [Ronald de Vlaming](#) (Vrije Universiteit Amsterdam), [Stuart Ritchie](#) (University of Edinburgh), [Travis Mallard](#) (University of Texas at Austin), [W. David Hill](#) (University of Edinburgh), [Hill Ip](#) (Department of Biological Psychology, VU University), [Andrew Mcintosh](#) (Edi), [Ian Deary](#) (University of Edinburgh), [Philipp Koellinger](#) (Vrije Universiteit Amsterdam), [K. Paige Harden](#) (University of Texas at Austin), [Michel Nivard](#) (Department of Biological Psychology, VU University), [Elliot Tucker-Drob](#) (University of Texas at Austin)

11:21 - 11:37 **Genetic path modeling using genomic structural equation modeling**
» [Michel Nivard](#) (Department of Biological Psychology, VU University), [Andrew Grotzinger](#) (University of Texas at Austin), [Hill Ip](#) (Department of Biological Psychology, VU University), [Elliot Tucker-Drob](#) (University of Texas at Austin), [Dorret I Boomsma](#) (Vrije Universiteit Amsterdam)

Friday
12:00 - 13:30

Lunch and Business Meeting

Friday
13:30 - 15:00

OS-6B Achievement/Cognitive Abilities

Venue Yellowstone

- 13:30 **DNA provides the best child-specific prediction of educational achievement from birth**
» *Kaili Rimfeld (King's College London), Margherita Malanchini (University of Texas at Austin), Saskia Selzam (King's College London), Philip Dale (University of New Mexico), Andrea Allegrini (King's College London), Robert Plomin (King's College London)*
- 13:45 **An examination of the influence of early childhood care on academic achievement using quantile regression**
» *Callie Little (University of New England), Sally Larsen (University of New England), Brian Byrne (University of New England), William Coventry (University of New England), Jessica Logan (Ohio State University)*
- 14:00 **How parents facilitate the educational achievement of their children: An adoption study**
» *Elise Anderson (University of Minnesota Twin Cities), James Lee (University of Minnesota Twin Cities), Bill Iacono (University of Minnesota Twin Cities), Matt McGue (University of Minnesota Twin Cities)*
- 14:15 **Gene x Environment Interaction on Developmental Outcomes in Germany: What is the Environment that matters?**
» *Juliana Gottschling (Saarland University), Elisabeth Hahn (Saarland University), Frank Spinath (Saarland University)*
- 14:30 **Translating knowledge of genetic risk into prevention of speech and language disorders: A pilot study in infants with classic galactosemia**
» *Beate Peter (Arizona State University), Nancy Potter (Washington State University), Carol Stoel-Gammon (University of Washington), Kari Lien (Arizona State University), Laurel Bruce (Arizona State University), Caitlin Vote (Arizona State University), Linda Eng (Ar), Mark Vandam (Washington State University)*
- 14:45 **Rare LAMA5 variant is the likely cause of a severe speech and reading disorder in a de novo case**
» *Beate Peter (Arizona), Caitlin Vote (Arizona State University)*

Friday
13:30 - 15:00

OS-6C Adult Development & Aging

Venue Monadnock

- 13:30 **Genetic Effects Shared Between Schizophrenia and Cognition: Changes Across Age of Risk**
» *Susan Kuo (University of Pittsburgh), Christie Musket (University of Pittsburgh), Petra Rupert (University of Pittsburgh), Laura Almasy (University of Pennsylvania), Ruben Gur (University of Pennsylvania), Konasale Prasad (University of Pittsburgh), David Roalf (University of Pennsylvania), Raquel Gur (University of Pennsylvania), Vishwajit Nimgaonkar (University of Pittsburgh), Michael Pogue-Geile (University of Pittsburgh)*
- 13:45 **Genetic and Environmental Influences on Verbal Fluency in Middle Age: A New Framework**
» *Daniel Gustavson (University of California, San Diego), Matthew Panizzon (University of California, San Diego), Jeremy Elman (University of California, San Diego), Carol Franz (University of California, San Diego), Chandra Reynolds (University of California- Riverside), Kristen Jacobson (University of Chicago), Hong Xian (St. Louis University), Rosemary Toomey (Boston University), Michael Lyons (Boston University), William Kremen (University of California, San Diego)*
- 14:00 **Monozygotic twin similarities for AD Biomarkers: The Twin60+ Study**
» *Anouk den Braber (Vrije Universiteit Amsterdam), Dorret I Boomsma (Vrije Universiteit Amsterdam), Elles Konijnenberg (Vrije Universiteit Medisch Centrum Amsterdam), Mara Ten Kate (Vrije Universiteit*

Medisch Centrum Amsterdam), Jori Tomassen (Vrije Universiteit Medisch Centrum Amsterdam), Charlotte Teunissen (Vrije Universiteit Medisch Centrum Amsterdam), Frederik Barkhof (Vrije Universiteit Medisch Centrum Amsterdam), Bart Van Berckel (Vrije Universiteit Medisch Centrum Amsterdam), Eco J.C. De Geus (Vrije Universiteit Medisch Centrum Amsterdam), Philip Scheltens (Vrije Universiteit Medisch Centrum Amsterdam), Pieter Jelle Visser (Vrije Universiteit Medisch Centrum Amsterdam)

14:15 **Longitudinal Associations of APOE and General Cognitive Ability in CATSLife**
» Chandra Reynolds (University of California- Riverside), Andrew Smolen (University of Colorado Boulder, Institute for Behavioral Genetics), Robin Corley (University of Colorado Boulder, Institute for Behavioral Genetics), Elizabeth Munoz (University of California- Riverside), John Defries (University of Colorado Boulder, Institute for Behavioral Genetics), Sally Wadsworth (University of Colorado Boulder, Institute for Behavioral Genetics)

14:30 **An Early Risk Indicator of Alzheimer's Disease (AD): AD Polygenic Risk Score is Associated with a Psychophysiological Index of Cognitive Effort in Cognitively Normal Adults**
» William Kremen (University of California, San Diego), Matthew Panizzon (University of California, San Diego), Jeremy Elman (University of California, San Diego), Daniel Gustavson (University of California, San Diego), Sean Hatton (University of California, San Diego), Mark Sanderson-cimino (University of California, San Diego), Nathan Gillespie (Virginia Institute for Psychiatric and Behavior Genetics), Michael Neale (Virginia Commonwealth University), Chandra Reynolds (University of California- Riverside), Rosemary Toomey (Boston University), Ruth Mckenzie (Boston University), Michael Lyons (Boston University), Carol Franz (University of California, San Diego)

14:45 **A Genetically-Informed Study of Neighborhoods and Health: Results from the MIDUS Twin Sample**
» Jennifer Robinette (University of Southern California), Christopher Beam (University of Southern California)

SY-6A Behavior genetic research on drug abuse: Translation to enhance public health

Friday
13:30 - 15:00

Chair Erica Spotts & Naimah Weinberg
Venue Auditorium

13:30 **The Impact of Cannabis Use on Intelligence and Executive Functioning**
» Jessica Ross (University of Colorado Boulder, Institute for Behavioral Genetics), Jarrod Ellingson (University of Colorado Boulder), Soo Rhee (University of Colorado Boulder, Institute for Behavioral Genetics), John Hewitt (University of Colorado Boulder, Institute for Behavioral Genetics), Robin Corley (University of Colorado Boulder, Institute for Behavioral Genetics), Naomi Friedman (University of Colorado Boulder, Institute for Behavioral Genetics)

13:45 **Strengthening causal inference via genetically informative studies**
» Michael Neale (Virginia Commonwealth University)

14:00 **The Genomics of Neonatal Abstinence Syndrome**
» Jonathan Davis (Tufts University School of Medicine), Evan Johnson (Boston University School of Medicine)

14:15 **Polygenic Risk, Family Cohesion, and Adolescent Aggression in Mexican-Origin and Non-Hispanic White Families: Pathways to Early Adult Alcohol Use**
» Kit Elam (Arizona State University), Laurie Chassin (Arizona State University), Danielle Pandika (Arizona State University)

14:30 **Discussion**
» Leslie Leve (University of Oregon)

Friday
15:00 - 15:30

Coffee Break

Friday
15:30 - 16:30

KN-3 Keynote

Venue Auditorium

15:30 **Keynote address**

» [Mark Daly](#), Broad Institute

Friday
16:40 - 18:10

OS-7B Substance Use

Venue Yellowstone

16:40 **Meta-analysis of genome-wide association study of 1.2 million people finds novel signals in alcohol and nicotine use**

» [Mengzhen Liu](#) (University of Minnesota Twin Cities), NA GWAS and Sequencing Consortium of Alcohol (NA)

16:55 **Novel insight into the epigenomic signature of regular smoking using serum cotinine**

» [Richa Gupta](#) (University of Helsinki), Yu Fu (University of Helsinki), Rachel Tyndale (University of Toronto), Vidya Velagapudi (University of Helsinki), Tellervo Korhonen (University of Helsinki), Jaakko Kaprio (University of Helsinki), Anu Loukola (University of Helsinki), Miina Ollikainen (miina.ollikainen@helsinki.fi)

17:10 **Forced Migration due to War suppresses Genetic Influences on Cigarette Smoking**

» [Jaakko Kaprio](#) (University of Helsinki), Teemu Palviainen (University of Helsinki), Tellervo Korhonen (University of Helsinki)

17:25 **Cocaine'omics: Genome-wide and Transcriptome-wide Associations With Cocaine Use and Dependence, an Unorthodox Replication**

» [Spencer Huggett](#) (University of Colorado Boulder, Institute for Behavioral Genetics), Michael Stallings (University of Colorado Boulder, Institute for Behavioral Genetics)

17:40 **Results from the largest GWAS of lifetime cannabis use (N=184,765): new risk loci, genetic overlap with mental health, and a causal influence of schizophrenia on cannabis use**

» [Karin Verweij](#) (Department of Psychiatry, Academic Medical Centre), Joëlle Pasman (Radboud University), Nathan Gillespie (Virginia Institute for Psychiatric and Behavior Genetics), Eske Derks (QIMR Berghofer Medical Research Institute), Jacqueline Vink (Radboud University)

17:55 **Discovering rare variants associated with substance use in 65,000 deep whole genome sequences in the Trans-Omics for Precision Medicine (TOPMed) Program**

» [Hannah Young](#) (University of Minnesota Twin Cities), Mengzhen Liu (University of Minnesota Twin Cities), Gargi Datta (University of Minnesota Twin Cities), David Beame (University of Washington), Diane Becker (Johns Hopkins University), Michael Bowers (University of Washington), Brian Cade (Brigham & Women's Hospital), Fang Chen (The Pennsylvania State University), Sean David (Stanford University), Leslie Emery (University of Washington), Marilyn Foreman (Morehouse School of Medicine), Ervin Fox (University of Mississippi), Sina Gharib (University of Washington), David Glahn (Yale University), Michael Hall (University of Mississippi), Jiang He (Tulane University), John Hokanson (University of Colorado Denver), Shih-jen Hwang (NIH National Heart, Lung, and Blood Institute), Anne Justice (University of North Carolina), Robert Kaplan (Albert Einstein College of Medicine), Cathie Laurie (University of Washington), Dan Levy (National Institutes of Health), Dajiang Liu (The Pennsylvania State University), Lisa Martin (George Washington University), Daniel McGuire (The Pennsylvania State University), Margaret Ragland (University of Colorado Denver), Robert Reed (University of Maryland), Aladdin Shadyab (University of California, San Diego), Tao Wang (Albert Einstein College of Medicine), Robert Wedow (University of Colorado Boulder), Kate Wehr (University of Washington), Wendy White (Tougaloo College), Lisa Yanek (Johns Hopkins University), Kristin Young (University of North Carolina), Wei Zhao (University of Michigan), Goncalo Abecasis (University of Michigan), Kari North (University of North Carolina), Scott

Friday
16:40 - 18:25

OS-7C Gene-Environment Interplay

Venue Monadnock

16:40

The Role of the Child in Teacher-Child Relationships: Evocative Gene-Environment Correlation

» *Elizabeth Shewark* (Penn State University), *Amanda Ramos* (Penn State University), *Jody Ganiban* (George Washington University), *David Reiss* (Yale University), *Daniel Shaw* (University of Pittsburgh), *Misaki Natsuaki* (University of California- Riverside), *Leslie Leve* (University of Oregon), *Jenae Neiderhiser* (The Pennsylvania State University)

16:55

Inaccurate Perceptions of Emotional Faces Elicit Bullying Via Gene-Environment Correlations

» *Lisabeth DiLalla* (Southern Illinois University School of Medicine)

17:10

Stress vulnerability effects on gene-environment correlation over time

» *Christopher Beam* (University of Southern California), *Patrizia Pezzoli* (Åbo Akademi University), *Jane Mendle* (Cornell University), *S. Alexandra Burt* (Michigan State University), *Michael Neale* (Virginia Commonwealth University), *Pamela Keel* (Florida State University), *Steven Boker* (University of Virginia), *Kelly Klump* (Michigan State University)

17:25

Genetic analysis of social-class mobility: Evidence from five longitudinal studies

» *daniel belsky* (Duke University School of Medicine)

17:40

Out of control: the association between family conflict and low self-control in adolescence

» *Yayouk Willems* (Vrije Universiteit Amsterdam), *Eveline De Zeeuw* (Vrije Universiteit Amsterdam), *Catharina Van Beijsterveldt* (Vrije Universiteit Amsterdam), *Dorret Boomsma* (Vrije Universiteit Amsterdam), *Meike Bartels* (Vrije Universiteit Amsterdam), *Catrin Finkenauer* (Universiteit Utrecht)

17:55

Do environmentally-induced psychotic experiences exist in adolescence?

» *Angelica Ronald* (Birkbeck, University of London), *Mark Taylor* (Karolinska Institutet), *Daniel Freeman* (University of Oxford)

Friday
16:40 - 18:10

SY-7A Large-scale genome-wide association studies and applications

Chair Phillip Koellinger

Venue Auditorium

16:40 - 16:56

Genome-wide study identifies ~600 loci associated with risk tolerance and risky behaviors

» *Richard Karlsson Linnér* (Vrije Universiteit Amsterdam), *Pietro Biroli* (University of Zürich), *Edward Kong* (Harvard University), *S Fleur W Meddens* (Vrije Universiteit Amsterdam), *Robbee Wedow* (University of Colorado Boulder, Institute for Behavioral Genetics), *The Social Science Genetic Association Consortium (SSGAC)*, *David Cesarini* (New York University), *Daniel J Benjamin* (University of Southern California), *Philipp Koellinger* (Vrije Universiteit Amsterdam), *Jonathan P Beauchamp* (University of Toronto)

16:57 - 17:13

Genome-wide association study of diet composition identifies 21 loci and uncovers associations with health and behavior

» *Fleur Meddens* (Vrije Universiteit Amsterdam), *Casper Burik* (Vrije Universiteit Amsterdam), *Peter Bowers* (National Bureau of Economics Research), *James Lee* (University of Minnesota Twin Cities), *Sean C Lee* (National Bureau of Economics Research), *Richard Karlsson Linnér* (Vrije Universiteit Amsterdam), *Aysu Okbay* (Vrije Universiteit Amsterdam), *Cornelius A. Rietveld* (Erasmus University Rotterdam), *Patrick Turley* (Massachusetts General Hospital), *Ronald de Vlaming* (Vrije Universiteit Amsterdam), *Daniel Benjamin* (University of Southern California), *Carson C Chow* (NIH/NIDDK), *Philipp Koellinger* (Vrije Universiteit Amsterdam), *Na Social Science Genetic Association Conso* (NA)

17:14 - 17:30

Genome-wide association study of mania and psychosis reveals complex relationships between psychiatric disorders and their cardinal symptoms

» [Travis Mallard](#) (University of Texas at Austin), [Richard Karlsson Linnér](#) (Vrije Universiteit Amsterdam), [Aysu Okbay](#) (Vrije Universiteit Amsterdam), [Ronald De Vlaming](#) (Vrije Universiteit Amsterdam), [Andrew Grotzinger](#) (University of Texas at Austin), [S Fleur W Meddens](#) (Vrije Universiteit Amsterdam), [Elliot Tucker-Drob](#) (University of Texas at Austin), [Matthew Keller](#) (University of Colorado Boulder), [Philipp Koellinger](#) (Vrije Universiteit Amsterdam), [K. Paige Harden](#) (University of Texas at Austin)

17:31 - 17:47

A Repository of Polygenic Scores

» [Aysu Okbay](#) (Vrije Universiteit Amsterdam), [Daniel Benjamin](#) (University of Southern California), [Casper Burik](#) (Vrije Universiteit Amsterdam), [David Cesarini](#) (New York University), [Edward Kong](#) (Harvard University), [Omeed Maghzian](#) (Harvard University), [Patrick Turley](#) (Massachusetts General Hospital)

Saturday, 23rd June

Saturday
09:00 - 10:00

KN-4 Keynote
Venue Auditorium

09:00

Genotype to phenotype: Deconstructing neuropsychiatric disorders

» [Elise Robinson](#) Harvard Chan School of Public Health, Broad Institute

Saturday
10:00 - 10:30

Coffee Break

Saturday
10:30 - 12:15

OS-8A Statistical Methods II
Venue Auditorium

10:30

Multi-ancestry Meta-analysis and LD Score Regression

» [Patrick Turley](#) (Massachusetts General Hospital), [Alicia Martin](#) (Massachusetts General Hospital), [Hui Li](#) (Harvard University), [Raymond Walters](#) (Massachusetts General Hospital), [Daniel Benjamin](#) (University of Southern California), [David Cesarini](#) (New York University), [Mark Daly](#) (Massachusetts General Hospital), [Benjamin Neale](#) (Analytic and Translational Genetics Unit, Center for Genomic Medicine, Massachusetts General Hospital, Stanley Center for Psychiatric Research, Broad Institute of MIT and Harvard)

10:45

Highly Efficient Multivariate GREML

» [Eric A.W. Slob](#) (Erasmus University Rotterdam), [Ronald de Vlaming](#) (Vrije Universiteit Amsterdam), [Cornelius A. Rietveld](#) (Erasmus University Rotterdam), [Patrick J.F. Groenen](#) (Erasmus University Rotterdam)

11:00

Signatures of negative selection in the genetic architecture of human complex traits

» [Jian Zeng](#) (University of Queensland), [Ronald de Vlaming](#) (Vrije Universiteit Amsterdam), [Yang Wu](#) (University of Queensland), [Matthew R. Robinson](#) (University of Queensland), [Luke R. Lloyd-jones](#) (University of Queensland), [Loic Yengo](#) (University of Queensland), [Chloe X. Yap](#) (University of Queensland), [Angli Xue](#) (University of Queensland), [Julia Sidorenko](#) (University of Queensland), [Allan F. Mcrae](#) (University of Queensland), [Joseph E. Powell](#) (University of Queensland), [Grant W. Montgomery](#) (University of Queensland), [Andres Metspalu](#) (University of Tartu), [Tonu Esko](#) (University of Tartu), [Greg Gibson](#) (Georgia Institute of Technology), [Naomi R. Wray](#) (University of Queensland), [Peter M. Visscher](#) (University of Queensland), [Jian Yang](#) (University of Queensland)

11:15

Genetic Instrumental Variable (GIV) regression: Explaining socioeconomic and health outcomes in non-experimental data

» [Thomas Diprete](#) (Columbia University), [Casper Burik](#) (Vrije Universiteit Amsterdam), [Philipp Koellinger](#) (Vrije Universiteit Amsterdam)

- 11:30 **A likelihood implementation for censored data; an implementation of the tobit model in a likelihood setting**
 » *Ralf Kuja-Halkola (Karolinska Institutet)*
- 11:45 **Investigating the causal relationships between mental and physical health outcomes using Mendelian randomization**
 » *Chia-Yen Chen (Analytic and Translational Genetics Unit & Psychiatric and Neurodevelopmental Genetics Unit, Center for Genomic Medicine, Massachusetts General Hospital, Stanley Center for Psychiatric Research, Broad Institute of MIT and Harvard), Jordan Smoller (Psychiatric and Neurodevelopmental Genetics Unit, Center for Genomic Medicine, Massachusetts General Hospital, Stanley Center for Psychiatric Research, Broad Institute of MIT and Harvard), Benjamin Neale (Analytic and Translational Genetics Unit, Center for Genomic Medicine, Massachusetts General Hospital, Stanley Center for Psychiatric Research, Broad Institute of MIT and Harvard)*
- 12:00 **Maximizing prediction accuracy of cognitive traits in childhood and adolescence in a cohort of 7,026 individuals**
 » *Andrea Allegrini (King's College London), Saskia Selzam (King's College London), Kaili Rimfeld (King's College London), Robert Plomin (King's College London)*

SY-8B Family and molecular genetic studies provide insights into ADHD, its comorbidities (Aggression and auto-immune disorders) and symptomatology

Saturday
10:30 - 12:30

Chair Michel Nivard & Tetyana Zayats
Venue Yellowstone

- 10:30 - 10:46 **Prediction of Aggression by ADHD subscales in children and adults**
 » *Dorret Boomsma (Department of Biological Psychology, VU University), Conor Dolan (Department of Biological Psychology, VU University), Meike Bartels (Department of Biological Psychology, VU University), Tom Claassen (Radboud University), Jeffrey Glennon (Radboud Univ, Donders Institute for Brain, Cognition and Behaviour), MATRICS Consortium (Radboud University), ACTION Consortium (Department of Biological Psychology, VU University)*
- 10:47 - 11:03 **Multivariate GWA meta-analysis in over 500K observations on aggressive behavior and ADHD symptoms**
 » *Hill Ip (Department of Biological Psychology, VU University), Na Saagy (NA), Dorret Boomsma (Vrije Universiteit Amsterdam)*
- 11:04 - 11:20 **A multi-polygenic score approach to the prediction of harmonized aggression**
 » *Andrea Allegrini (King's College London), Margherita Malanchini (University of Texas at Austin), Eva Krapohl (King's College London), Saskia Selzam (King's College London), Kaili Rimfeld (King's College London), NA ACTION (NA), Robert Plomin (King's College London)*
- 11:21 - 11:37 **Genetics of ADHD Dimensions. Genome-wide Association Analyses of inattention and hyperactivity/impulsivity.**
 » *Tetyana Zayats (Broad Institute, University of Bergen), Geoffrey English (QIMR Berghofer Medical Research Institute), Andrea Allegrini (King's College, Institute of Psychiatry, Psychology and Neuroscience, Social, Genetic and Developmental Psychiatry Centre, London, UK), Kaili Rimfeld (King's College, Institute of Psychiatry, Psychology and Neuroscience, Social, Genetic and Developmental Psychiatry Centre, London, UK), Christie Burton (SickKids Research Institute, University of Toronto, Toronto, Canada), Bowei Xiao (SickKids Research Institute, University of Toronto, Toronto, Canada), Joanna Martin (Cardiff University, Karolinska Institutet), Yi Lu (Karolinska Institutet), Isabell Brikell (Karolinska Institutet), Michel Nivard (Department of Biological Psychology, VU University), Jennifer Crosbie (SickKids Research Institute, University of Toronto, Toronto, Canada), Paul Arnold (Mathison Centre for Mental Health Research & Education, University of Calgary; SickKids Research Institute, University of Toronto, Toronto, Canada), Russell Schachar (SickKids Research Institute, University of Toronto, Toronto, Canada), Corina Greven (King's College, Institute of Psychiatry, Psychology and Neuroscience, Social, Genetic and Developmental Psychiatry Centre, London, UK; Radboud Univ, Donders Institute for Brain, Cognition and Behaviour),*

Stefan Johansson (K.G.Jebsen Center for Neuropsychiatric Disorders, Department of Clinical Science, University of Bergen, Bergen, Norway), Sebastian Lundström (University of Gothenburg), Henrik Larsson (Karolinska Institutet), Paul Lichtenstein (Karolinska Institutet), Dorret Boomsma (Vrije Universiteit Amsterdam), Sarah Medland (QIM), Jan Haavik (K.G.Jebsen Center for Neuropsychiatric Disorders, Department of Biomedicine, University of Bergen, Bergen, Norway), Benjamin Neale (Analytic and Translational Genetics Unit, Center for Genomic Medicine, Massachusetts General Hospital, Stanley Center for Psychiatric Research, Broad Institute of MIT and Harvard)

11:38 - 11:54

Familial co-aggregation of attention-deficit/hyperactivity disorder and autoimmune diseases

» Tor-Arne Hegvik (K.G. Jebsen Center for Neuropsychiatric Disorders, Department of Biomedicine, University of Bergen), Qi Chen (Department of Medical Epidemiology and Biostatistics, Karolinska Institute), Kari Klungsoyr (Department of Global Public Health and Primary Care, University of Bergen and Department of Health Registers, Norwegian Institute of Public Health), Ralf Kuja-Halkola (Department of Medical Epidemiology and Biostatistics, Karolinska Institute), Emma Frans (Department of Medical Epidemiology and Biostatistics, Karolinska Institute), Agnieszka Butwicka (Department of Medical Epidemiology and Biostatistics, Karolinska Institute), Jan Haavik (K.G. Jebsen Center for Neuropsychiatric Disorders, Department of Biomedicine, University of Bergen and Division of Psychiatry, Haukeland University Hospital), Henrik Larsson (Department of Medical Epidemiology and Biostatistics, Karolinska Institute)

11:55 - 12:11

Copy number variation and neurodevelopmental problems in females and males in the general population

» Joanna Martin (Cardiff University), Kristiina Tammimies (Center of Neurodevelopmental Disorders at Karolinska Institutet (KIND)), Robert Karlsson (Karolinska Institutet), Yi Lu (Karolinska Institutet), Henrik Larsson (Karolinska Institutet), Paul Lichtenstein (Karolinska Institutet), Patrik Magnusson (Karolinska Institutet)

SY-8C Polygenic, Twin and Adoption Designs Elucidate the Role of Parenting and Intervention in Child Psychopathology

Saturday

10:30 - 12:15

Chair Kathryn Lemery-Chalfant

Venue Monadnock

10:30 - 10:50

Does Warm Parenting Mitigate Birth Risk Effects on Conduct Problems? An MZ Twin Differences Study

» Kirby Deater-Deckard (University of Massachusetts Amherst), Lee Thompson (Case Western Reserve University), Steve Petrill (Ohio State University)

10:51 - 11:11

Using a Siblings Reared Apart and Together Design to Study Associations Between Harsh Parenting and Child Behavior Problems

» Leslie Leve (University of Oregon), Hannah Tavalire (University of Oregon), Daniel Shaw (University of Pittsburgh), David Reiss (Yale Child Study Center), Misaki Natsuaki (University of California- Riverside), Jody Ganiban (George Washington University), Jenae Neiderhiser (The Pennsylvania State University)

11:12 - 11:32

Genetic Influences on Socio-Cultural Sensitivity: Moderation of Effects of the Family Check-Up Intervention on Symptoms of Child Psychopathology

» Kathryn Lemery-Chalfant (Arizona State University), Sierra Clifford (Arizona State University), Thomas Dishion (Arizona State University), Daniel Shaw (University of Pittsburgh), Melvin Wilson (University of Virginia)

11:33 - 11:53

The Family Check-Up Intervention Attenuates the Link Between Polygenic Risk and Trajectories of Aggression across Early Childhood

» Danielle Pandika (Arizona State University), Kit Elam (Arizona State University), Sierra Clifford (Arizona State University), Thomas Dishion (Arizona State University), Daniel Shaw (University of Pittsburgh), Melvin Wilson (University of Virginia), Kathryn Lemery-Chalfant (Arizona State University)

11:54 - 12:14

Examining the role of parent and child in positive youth development: An adoption study

» *Amanda Ramos* (The Pennsylvania State University), *Jenae Neiderhiser* (The Pennsylvania State University), *David Reiss* (Yale University), *Leslie Leve* (University of Oregon), *Daniel Shaw* (University of Pittsburgh), *Misaki Natsuaki* (University of California- Riverside), *Jody Ganiban* (George Washington University)

Saturday
12:15 - 13:15

Lunch

Saturday
13:15 - 15:15

OS-9C Psychopathology

Venue Monadnock

13:15 **A General Psychopathology Factor (P Factor) in Adolescence: A Test of Hierarchical Structure, Heritability, and Associations with Parental Psychopathology**

» *Veronica Oro* (Arizona State University), *Carol Van Hulle* (University of Wisconsin-Madison), *Hill Goldsmith* (University of Wisconsin-Madison), *Kathryn Lemery-Chalfant* (Arizona State University)

13:30 **Redefining Phenotypes to Advance Psychiatric Genetics: Implications from Hierarchical Taxonomy of Psychopathology**

» *Monika Waszczuk* (Stony Brook University), *Nicholas Eaton* (Stony Brook University), *Robert Krueger* (University of Minnesota Twin Cities), *Alexander Shackman* (University of Maryland), *Irwin Waldman* (Emory), *David Zald* (Vanderbilt University), *Benjamin Lahey* (Department of Psychiatry and Behavioral Sciences, NorthShore University HealthSystem Research Institute, Department of Psychiatry and Behavioral Neuroscience, University of Chicago), *NA The Hierarchical Taxonomy Of Psychopatho (NA)*, *Roman Kotov* (Stony Brook University)

13:45 **Deciphering and interpreting shared genetic influences on psychopathology-related traits**

» *SEONKYEONG JANG* (University of Minnesota Twin Cities), *Mengzhen Liu* (University of Minnesota Twin Cities), *Robbee Wedow* (University of Colorado Boulder, Institute for Behavioral Genetics), *Hannah Young* (University of Minnesota Twin Cities), *Scott Vrieze* (University of Minnesota Twin Cities)

14:00 **Maternal opioid use in the first trimester of pregnancy and offspring neurodevelopmental problems**

» *Ayesha Sujan* (Indiana University, Bloomington), *Patrick Quinn* (Indiana University, Bloomington), *Martin Rickert* (Indiana University, Bloomington), *Kelsey Wiggs* (Indiana University, Bloomington), *Paul Lichtenstein* (Karolinska Institutet), *Henrik Larsson* (Karolinska Institutet), *Anna Sara Oberg* (Harvard T.H. Chan School of Public Health), *Brian D'Onofrio* (Indiana University, Bloomington)

14:15 **Higher genetic risk for schizophrenia is associated with living in more densely populated areas**

» *Lucia Colodro Conde* (QIMR Berghofer Medical Research Institute), *Baptiste Couvy-duchesne* (University of Queensland), *Sarah Medland* (QIMR Berghofer Medical Research Institute), *Nick Martin* (QIMR Berghofer Medical Research Institute)

14:30 **Age of onset and clinical severity, cognitive functioning, and community functioning in schizophrenia: A multiplex extended pedigree study**

» *Christie Musket* (University of Pittsburgh), *Susan Kuo* (University of Pittsburgh), *Petra Rupert* (University of Pittsburgh), *Laura Almasy* (University of Pennsylvania), *Ruben Gur* (University of Pennsylvania), *Konasale Prasad* (University of Pittsburgh), *David Roalf* (University of Pennsylvania), *Raquel Gur* (University of Pennsylvania), *Vishwajit Nimgaonkar* (University of Pittsburgh), *Michael Pogue-Geile* (University of Pittsburgh)

14:45 **Polygenic influences on clinical features of schizophrenia in diverse populations**

» *Tim Bigdeli* (SUNY Downstate Medical Center), *Ayman Fanous* (SUNY Downstate Medical Center), *Pgc Schizophrenia Working Group (PGC)*, *Gpc Subphenotype Workgroup (GPC)*

Saturday

SY-9A Explaining Differences in Well-Being

13:15 - 15:00
Chair Meike Bartels
Venue Auditorium

13:15 - 13:35 **How your parents influence your well-being – Genetic and environmental pathways for parenting styles**
» *Elisabeth Hahn* (Saarland University), *Juliana Gottschling* (Saarland University), *Julia Iser* (Saarland University), *Frank Spinath* (Saarland University)

13:36 - 13:56 **Causes of individual differences in health-related quality of life according to the EQ-5D questionnaire: A twin tale of two countries**
» *Juan Ordonana* (University of Murcia), *Miriam Mosing* (Karolinska Institutet), *Jose J Morosoli* (School of Psychology, University of Queensland), *Lucia Colodro Conde* (QIMR Berghofer Medical Research Institute), *Mirjam Sprangers* (University of Amsterdam), *Francisco Perez-riquelme* (University of Murcia), *Nancy Pedersen* (Karolinska Institute), *Na Geneqol Consortium* (NA)

13:57 - 14:17 **GxE in Health and Well-Being**
» *Jaime Derringer* (University of Illinois at Urbana-Champaign)

14:18 - 14:38 **Psychosocial Exposures and Well-Being: Concurrent and Longitudinal Overlap Before and After Accounting for Gene-Environment Correlation**
» *Frank Mann* (University of Minnesota Twin Cities), *Colin DeYoung* (University of Minnesota Twin Cities), *Robert Krueger* (University of Minnesota Twin Cities)

14:39 - 14:59 **First genetic variants for Eudaimonia and the genetic overlap with Hedonia**
» *Meike Bartels* (Vrije Universiteit Amsterdam), *Bart Baselmans* (Vrije Universiteit Amsterdam)

Saturday
13:15 - 15:00
SY-9B Free Will and Determinism
Chair Colin DeYoung
Venue Yellowstone

13:15 - 13:35 **Genetics, cybernetics, and human agency**
» *Colin DeYoung* (University of Minnesota Twin Cities), *Robert Krueger* (University of Minnesota Twin Cities), *Valerie Tiberius* (University of Minnesota Twin Cities)

13:36 - 13:56 **Free will, determinism, and intuitive judgments about the heritability of behavior**
» *Emily Willoughby* (University of Minnesota Twin Cities), *Alan Love* (University of Minnesota Twin Cities), *Matt McGue* (University of Minnesota Twin Cities), *Jack Quigley* (University of Minnesota Twin Cities), *James Lee* (University of Minnesota Twin Cities)

13:57 - 14:17 **Considering the Multiverse of Gene-Environment Interplay**
» *Daniel Briley* (University of Illinois at Urbana-Champaign), *Jonathan Livengood* (University of Illinois at Urbana-Champaign), *Jaime Derringer* (University of Illinois at Urbana-Champaign)

14:18 - 14:38 **Nurturing our better nature: A proposed framework for understanding the metacognitive locus of moral agency**
» *Eugenia Gorlin* (Boston University), *Tania Lombrozo* (University of California, Berkeley)

14:39 - 14:59 **Discussion**
» *Jonathan Livengood* (University of Illinois at Urbana-Champaign)

Saturday
15:00 - 15:15
Coffee Break

Saturday

15:15 - 16:45 SY- Ethics in Behavior Genetics: Challenges & Considerations To Studies
10A Including Racial/Ethnic Diversity as a Biological Variable
Chair Rohan Palmer & Jenae Neiderhiser
Venue Auditorium

15:15 **The importance of diversity in genetic research on aging**
» Jonathan King (National Institute on Aging, National Institutes of Health)

15:30 **Racial and Ethnic Differences in the Genetic Risk of Eating Disorder Phenotypes**
» Melissa Munn-Chernoff (University of North Carolina at Chapel Hill)

15:45 **Genetic risk prediction across diverse populations**
» Alicia Martin (Massachusetts General Hospital), Patrick Turley (Massachusetts General Hospital), Hailiang Huang (Ma), Raymond Walters (Massachusetts General Hospital), Chia-yen Chen (Massachusetts General Hospital), Max Lam (Institute of Mental Health), Duncan Palmer (Massachusetts General Hospital), Christopher Gignoux (University of Colorado Denver), Eimear Kenny (Icahn School of Medicine at Mount Sinai), Benjamin Neale (Analytic and Translational Genetics Unit, Center for Genomic Medicine, Massachusetts General Hospital, Stanley Center for Psychiatric Research, Broad Institute of MIT and Harvard), Mark Daly (Massachusetts General Hospital)

16:00 **The Need for Racial/Ethnic Diversity in Genetics Research, and How We Make that Happen**
» Danielle Dick (Virginia Commonwealth University)

Saturday SY-10B Genetics of neurodevelopmental disorders and comorbid problems
15:15 - 16:45 Chair Tinca Polderman
Venue Yellowstone

15:15 **Inhibitory Control and Attention Deficit Hyperactivity Disorder (ADHD) in Childhood: Evidence from Two Multi-method, Longitudinal Twin Studies**
» Jeffrey Gagne (Texas A & M University), Kimberly Saudino (Boston University), Carol Van Hulle (University of Wisconsin-Madison), Kathryn Lemery-Chalfant (Arizona State University), Hill Goldsmith (University of Wisconsin-Madison)

15:30 **Differential patterns of genetic overlap between inattention and four neurocognitive factors**
» Lauren Micalizzi (Brown University), Leslie Brick (Brown University), Marisa Marraccini (University of North Carolina), Chelsie Benca-bachman (Emory University), Rohan Palmer (Emory University), Valerie Knopik (Purdue University)

15:45 **Genetic overlap between ADHD and ASD: a review of the evidence from twin and family studies**
» Laura Ghirardi (Karolinska Institute), Ralf Kuja-Halkola (Karolinska Institutet), Erik Pettersson (Karolinska Institutet), Henrik Larsson (Karolinska Institutet)

16:00 **Associating psychiatric polygenic risk scores with neurodevelopmental disorders in a clinical child and adolescent sample**
» Tinca Polderman (Vrije Universiteit Amsterdam), Arija G Jansen (Vrije Universiteit Amsterdam), Philip R Jansen (Vrije Universiteit Amsterdam), Danielle Posthuma (Vrije Universiteit Amsterdam), Gwen C Dieleman (Erasmus University Medical Centre Rotterdam, Child and Adolescent Psychiatry)

Saturday Executive Committee Meeting
16:45 - 17:30 Venue Board Room

Saturday Reception
18:00 - 19:00 Venue Hotel Marlowe

Saturday
19:00 - 21:00

Banquet

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