

# XX<sup>TH</sup> WORLD CONGRESS OF PSYCHIATRIC GENETICS

*Confronting the Complexity of Brain and Behavior*



## PROGRAM

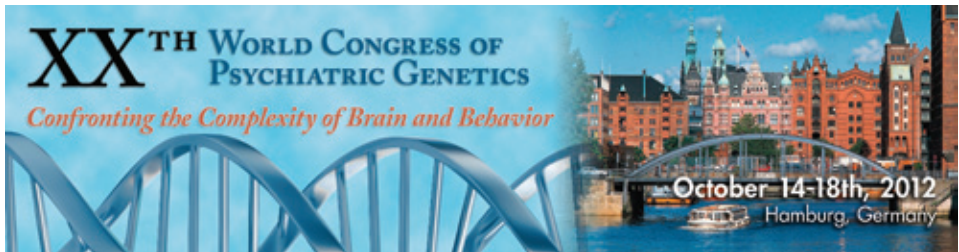
**October 14-18th, 2012**

Hamburg, Germany

**ISPG**

The International Society of Psychiatric Genetics



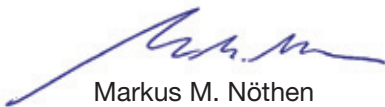


Dear friends and colleagues,

The XXth anniversary of the Society comes at a very important time in the field of psychiatric genetics. Although initial progress was sometimes slower than we would have wished, recent years have witnessed great progress in our field. This was a result of advances in our knowledge of the human genome and its variability, as well as the enormous commitment and motivation of the scientists involved in our field and their willingness to collaborate. The first unambiguous associations between variations in the human genome and psychiatric disease have now been identified, and we expect many more such findings to be reported in the near future. With firm genetic findings as a basis, we are now ready to confront and unravel the complexities of the human brain and behavior.

The diverse approaches to this task will be reflected in the excellent presentations offered at this meeting. The seaport of Hamburg – known as “the gate to the world” and a starting point for many pioneering journeys in its long history – is thus a fitting location. We welcome you to Hamburg and the XXth World Congress!

Yours Sincerely,



Markus M. Nöthen



*Congress Chair*



Marcella Rietschel



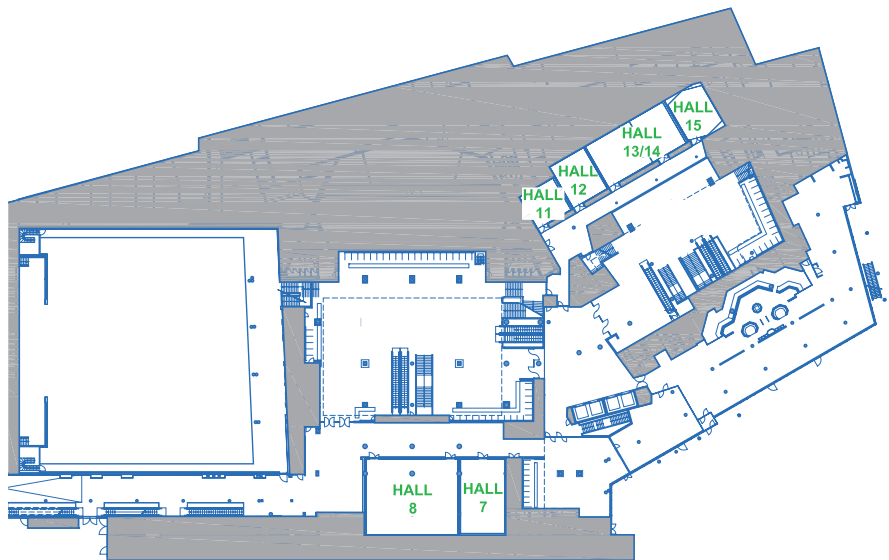
*Congress Chair*

## TABLE OF CONTENTS

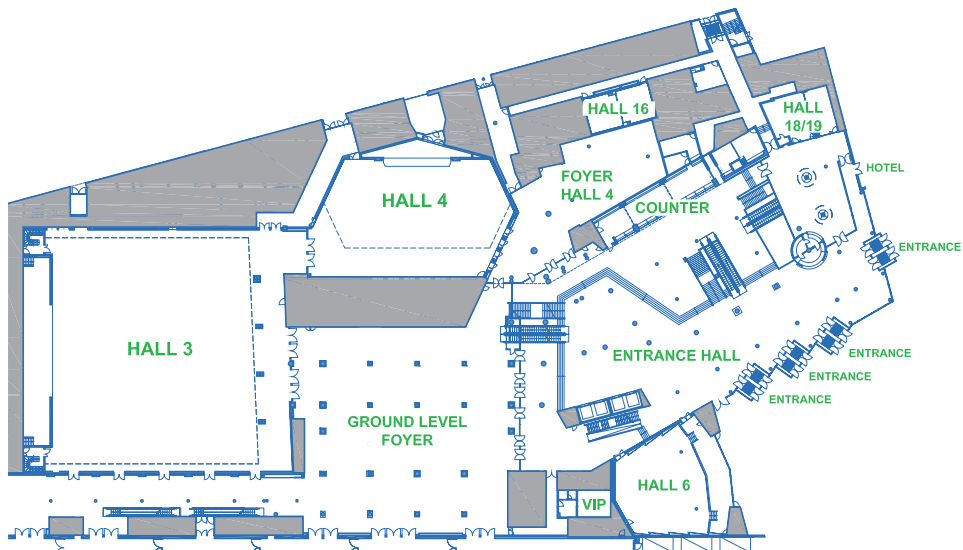
Floor Plans . . . . .	2
Program Schedule at a Glance . . . . .	4
Meeting Announcements . . . . .	9
All Committees . . . . .	12
Awards. . . . .	16
ECIP Travel Awardees . . . . .	19
Plenary Session Speakers. . . . .	22
XXth Anniversary of the ISPG . . . . .	27
Full Schedule. . . . .	32
Posters . . . . .	63
Sponsors . . . . .	105

# FLOOR PLANS

## CCH • Congress Center Hamburg



1st Floor



Ground Floor

# FLOOR PLANS

## Exhibits



# PROGRAM SCHEDULE AT A GLANCE

## SUNDAY, OCTOBER 14, 2012

Time	Hall 6	Hall 8
11:00 am – 7:00 pm	Registration (Entrance Hall, Congress Center Hamburg)	
11:00 am – 5:30 pm	Speaker Ready Room (Hall 18)	
Educational Sessions		
12:00 pm – 1:00 pm	Genetics of Bipolar Disorder	Imaging Genomics for Psychiatric Disorders
1:00 pm – 1:15 pm	Break	
1:15 pm – 2:15 pm	Schizophrenia Genetics	How to Make GWAS Successful
2:15 pm – 2:30 pm	Break	
2:30 pm – 3:30 pm	Evolutionary Aspects of Psychiatric Disorders	Analysis of Rare Variants
3:30 pm – 4:00 pm	Coffee Break (Hall 6 and 8 Foyers)	
4:00 pm – 5:00 pm	Psychiatric Epigenetics: An Introduction	Next Generation Data Integration
5:00 pm – 5:15 pm	Break	
5:15 pm – 6:15 pm	Pharmacogenomics in the Post-GWAS Era: Study Design and Analysis Approaches for the NEXT Generation of Pharmacogenomics	Registry-based Research in Psychiatric Diseases
6:00 pm – 7:00 pm	Travel Awardee Orientation (Hall 7)	
7:00 pm – 9:00 pm	Opening Reception (Hall 4)	

# PROGRAM SCHEDULE AT A GLANCE

MONDAY, OCTOBER 15, 2012				
Time	Hall 3	Hall 6	Hall 8	Hall 13/14
7:00 am – 6:00 pm	Registration (Entrance Hall, Congress Center Hamburg)			
8:00 am – 4:00 pm	Speaker Ready Room (Hall 18/19)			
9:00 am – 9:30 am	<b>Opening Session</b>			
9:30 am – 10:30 am	Plenary 1: <b><i>Architecture of the Human Brain</i></b> Karl Zilles, Research Center, Jülich			
10:30 am – 11:00 am	Coffee Break (Hall 3 Foyer)			
11:00 am – 12:00 pm	Plenary 2: <b><i>The Genomic Architecture of Psychiatric Disorders</i></b> Mark J. Daly, Massachusetts General Hospital			
12:00 pm – 1:30 pm	Lunch Break			
12:00 pm – 1:30 pm	ISPG Board Meeting (Hall 12)			
1:30 pm – 3:00 pm	Oral Presentations Session 1: <b><i>Schizophrenia</i></b>	Oral Presentations Session 2: <b><i>Bipolar</i></b>	Oral Presentations Session 3: <b><i>Autism</i></b>	Oral Presentations Session 4: <b><i>Biostatistics/ Bioinformatics</i></b>
3:00 pm – 3:30 pm	Coffee Break (Hall 3 Foyer)			
3:30 pm – 5:00 pm	Symposium 1: <b><i>PGC Cross Disorder and Pathway Analysis Group: Results from SNPs to Pathways</i></b>	Symposium 2: <b><i>Next Generation Sequencing in Schizophrenia</i></b>	Symposium 3: <b><i>Genetics of Imaging and Neuro-cognitive Phenotypes and their Relevance as Genetic Endophenotypes for Psychiatric Disorders</i></b>	Symposium 4: <b><i>Epigenetic Factors Influencing Neuropsychiatric Phenotypes and Disorders</i></b>
5:00 pm – 7:00 pm	<b>Poster Session I</b> (Hall 3 Foyer)			



# PROGRAM SCHEDULE AT A GLANCE

TUESDAY, OCTOBER 16, 2012				
Time	Hall 3	Hall 6	Hall 8	Hall 13/14
7:00 am – 6:00 pm	Registration (Entrance Hall, Congress Center Hamburg)			
7:30 am – 9:00 am	2013 Program Committee Meeting (Hall 7)			
8:00 am – 4:00 pm	Speaker Ready Room (Hall 18/19)			
9:00 am – 10:00 am	Plenary 3: <b><i>What can we Learn from the Study of Other Species for Human Brain Behavior Disorder</i></b> Kerstin Linblad-Toh, The Broad Institute, Uppsala University (Hall 3)			
10:00 am – 10:30 am	Coffee Break (Hall 3 Foyer)			
10:30 am – 11:30 am	Plenary 4: <b><i>Novel Approaches to Psychiatric Drug Discovery: Impact of Psychiatric Genetics</i></b> Bryan L. Roth, University of North Carolina at Chapel Hill (Hall 3)			
11:30 am – 1:00 pm	Lunch Break			
11:30 am – 12:15 pm	ISPG Business Meeting and 20th Anniversary of the Society (Hall 6)			
12:15 pm – 1:00 pm	Roche Pharmaceutical Sponsored Symposia Session: <b><i>From Basic Science to a Filled Drug Pipeline: Interaction between Academia and Industry</i></b> (Hall 3)			
1:00 pm – 2:30 pm	Oral Presentations Session 5: <b><i>Schizophrenia</i></b>	Oral Presentations Session 6: <b><i>Functional Genomics &amp; Model Organisms</i></b>	Oral Presentations Session 7: <b><i>Endophenotypes</i></b>	Oral Presentations Session 8: <b><i>Childhood Psychiatric Disorders</i></b>
2:30 pm – 3:00 pm	Coffee Break (Hall 3 Foyer)			
3:00 pm – 4:30 pm	Symposium 5: <b><i>Using Next Generation Sequencing to Unravel the Etiology of Mood and Psychotic Disorders</i></b>	Symposium 6: <b><i>Immunogenetics of Affective Disorders and Cognitive Function</i></b>	Symposium 7: <b><i>From GWAS Signals to Neural Mechanisms: Neurocognitive, Neuroimaging and Cellular Approaches to Characterizing the Functional Effects of Psychosis Risk Variants</i></b>	Symposium 8: <b><i>Practical, Societal, and Ethical, and Legal Challenges for Modern Biobanking and Brainbanking</i></b>
4:30 pm – 6:30 pm	Poster Session II (Hall 3 Foyer)			



# PROGRAM SCHEDULE AT A GLANCE

WEDNESDAY, OCTOBER 17, 2012				
Time	Hall 3	Hall 6	Hall 8	Hall 13/14
7:00 am – 6:00 pm	Registration (Entrance Hall, Congress Center Hamburg)			
7:30 am – 9:00 am	2014 Program Committee Meeting (Hall 7)			
7:00 am – 4:00 pm	Speaker Ready Room (Hall 18/19)			
9:00 am – 10:00 am	Plenary 5: <b><i>The Issue of Missing Heritability Revised</i></b> Peter Visscher, Queensland Brain Institute			
10:00 am – 10:30 am	Coffee Break (Hall 3 Foyer)			
10:30 am – 11:30 am	<b><i>The Snow and Ming Tsuang Lifetime Achievement Award Ceremony and Plenary Session</i></b>			
11:30 am – 1:00 pm	Lunch Break			
1:00 pm – 2:30 pm	Oral Presentations Session 9: <b><i>Epigenetics/ Schizophrenia</i></b>	Oral Presentations Session 10: <b><i>Schizophrenia</i></b>	Oral Presentations Session 11: <b><i>Functional Genomics &amp; Model Organisms</i></b>	Oral Presentations Session 12: <b><i>Affective Disorders/Other Psychiatric Disorders</i></b>
2:30 pm – 3:00 pm	Coffee Break (Hall 3 Foyer)			
3:00 pm – 4:30 pm	Symposium 9: <b><i>Genome Sequencing in Bipolar Disorder</i></b>	Symposium 10: <b><i>Comorbidities and Cross-disorder Analyses in Psychiatric Disorders</i></b>	Symposium 11: <b><i>Identification and Functional Consequences of Genetic Variants Conferring Risk of Psychiatric Disease Outcome of NEWMEDS Collaboration</i></b>	Symposium 12: <b><i>The Challenge and Future of Depression Genetics</i></b>
4:30 pm – 6:30 pm	<b>Poster Session III</b> (Hall 3 Foyer)			
7:00 pm – 12:00 am	Networking Dinner (Au Quai Restaurant)			

## PROGRAM SCHEDULE AT A GLANCE

### THURSDAY, OCTOBER 18, 2012

Time	Hall 3
8:00 am – 12:00 pm	Registration (Entrance Hall, Congress Center Hamburg)
8:00 am – 10:00 am	Speaker Ready Room (Hall 18/19)
9:00 am – 10:00 am	Plenary 6: <b><i>What Phenotypes should Psychiatric Geneticists Focus on?</i></b> Trevor, W. Robbins, University of Cambridge
10:30 am – 11:00 am	Coffee Break (Hall 3 Foyer)
10:30 am – 10:45 am	The Theodore Reich Young Investigator Award Presentation The Richard Todd Award Presentation Oral and Poster Awards Presentation
11:00 am – 12:00 pm	Plenary 7: <b><i>A Decade of Studies Investigating Gene X Environment Interactions and the Risk for Alcohol Abuse and Related Pathology: A Nonhuman Primate Model</i></b> James Dee Higley, Brigham Young University
12:00 pm – 12:30 pm	<b>Program Conclusion</b>

# MEETING ANNOUNCEMENTS

## CONGRESS VENUE:

Congress Center Hamburg (CCH)  
Am Dammtor  
20355 Hamburg, Germany  
Tel +49(0)40 3569 5033  
Website: cch.de

## REGISTRATION:

Registration for the World Congress is located at the main entrance to the Congress Center Hamburg.

<u>Date</u>	<u>Time</u>
Sunday, October 14	11:00 a.m. – 7:00 p.m.
Monday, October 15	7:00 a.m. – 6:00 p.m.
Tuesday, October 16	7:00 a.m. – 6:00 p.m.
Wednesday, October 17	7:00 a.m. – 6:00 p.m.
Thursday, October 18	8:00 a.m. – 12:00 p.m.

### **Registration Types:**

*Participant:* Scientific Attendee

*Student:* Full-time graduate student, medical student or in the first two years of a post-doctoral fellowship program at a university in a relevant field.

*Accompanying Other:* Non-scientific attendee who only attends social functions.

Registration to the 2012 World Congress includes membership to the International Society of Psychiatric Genetics for 2013.

### **Registration Timeframes:**

Early Registration: May 2012 – August 14, 2012

Late Registration: August 15, 2012 – September 28, 2012

On-site Registration: September 29, 2012 – October 18, 2012

# MEETING ANNOUNCEMENTS

## **SPEAKER READY ROOM:**

The speaker ready room is located in room 18/19 on the ground level of the Congress Center Hamburg.

### Date

Sunday, October 14

Monday, October 15

Tuesday, October 16

Wednesday, October 17

Thursday, October 18

### Time

11:00 a.m. – 5:30 p.m.

8:00 a.m. – 4:00 p.m.

7:00 a.m. – 4:00 p.m.

7:00 a.m. – 4:00 p.m.

8:00 a.m. – 10:00 a.m.

## **CME:**

The World Congress of Psychiatric Genetics has been granted 23 European CME credits by the EACCME (European Accreditation Council for Continuing Medical Education). Physicians should claim only the credits commensurate with the extent of their participation in the activity. To obtain credit, registered participants must complete an online evaluation. The evaluation may be completed at [www.ispg.net](http://www.ispg.net). A \$50 administrative fee will be charged for every submitted European CME application.

The World Congress of Psychiatric Genetics has been granted 23 German CME credits by the Ärztekammer Hamburg, Fortbildungsakademie der Ärztekammer. Attendees from Germany who wish to claim German CME should come on the last day of the congress to the congress counter to receive the credits for the sessions attended. Please bring your barcodes to be scanned.

## **CONFERENCE EVALUATION:**

All conference attendees are urged to complete an evaluation of the meeting. Attendees who request CME (EACCME) credits for the meeting are required to complete the evaluation. This form is available online only. All evaluations must be completed by November 19, 2012.

## **EXHIBITS:**

Exhibits are located in the Hall 3 Foyer on the ground level of the Congress Center Hamburg. Wi-fi is available in the exhibits area, Monday-Thursday.

# MEETING ANNOUNCEMENTS

## POSTERS:

All posters will be on display throughout the Congress in the Hall 3 Foyer. There will be three formal poster presentation sessions. The primary goal for these sessions is to provide a more intimate setting for informal discussion between authors and the attendees. Poster presenters are encouraged to be at their poster during the scheduled presentations.

***Poster Session I: Monday, October 15, 5:00 p.m. – 7:00 p.m.***

***Poster Session II: Tuesday, October 16, 4:30 p.m. – 6:30 p.m.***

***Poster Session III: Wednesday, October 17, 4:30 p.m. – 6:30 p.m.***

## ABSTRACTS:

Abstracts are available by UBS drive and included in the conference bag. Abstracts are also available as a PDF document online at [www.ispg.net](http://www.ispg.net).

## DISCLOSURES:

Disclosures for 2012 speakers, plenary, educational session, symposia, oral presentations and poster presenters may be found online at <http://meeting.ispg.net>. A copy of presenters' disclosures will be available at the registration desk.

## INSURANCE:

Neither the Local Organizing Committee nor the Congress Secretariat and organizers accept any liability for damages and/or losses of any kind which may be incurred to Congress participants or by any persons accompanying Congress participants, both during the official activities and excursions. Participation in all tours and events is at one's own risk. Participants are advised to obtain insurance against loss, accidents, or damage that could be incurred during the Congress.

## VIDEOTAPING:

Attendees may not videotape or audiotape presentations at the conference without prior permission from the session chair.

# ALL COMMITTEES

## HONORARY CONGRESS CHAIR

Peter Propping, M.D., Bonn, Germany

## SCIENTIFIC PROGRAM COMMITTEE

Laura Almasy, Ph.D.  
San Antonio, TX, USA

Olé Andreassen, M.D., Ph.D.  
Oslo, Norway

Cathy Barr, Ph.D.  
Toronto, ON, Canada

Laura Bierut, M.D.  
St. Louis, MO, USA

Dorret Boomsma, Ph.D.  
Amsterdam, The Netherlands

Margit Burmeister, Ph.D.  
Ann Arbor, MI, USA

Sven Cichon, Ph.D.  
Bonn, Germany

Nick Craddock, Ph.D.  
Cardiff, Wales, UK

Lynn DeLisi, M.D.  
Boston, MA, USA

Stephen Faraone, Ph.D.  
Syracuse, NY, USA

Elliott Gershon, M.D.  
Chicago, IL, USA

Michael Gill, M.D.  
Dublin, Ireland

Lin He, Ph.D.  
Shanghai, China

Tadafumi Kato, M.D., Ph.D.  
Tokyo, Japan

John Kelsoe, M.D.  
San Diego, CA, USA

Marion Leboyer, M.D., Ph.D.  
Paris, France

Douglas Levinson, M.D.  
San Francisco, CA, USA

Wolfgang Maier, Ph.D.  
Bonn, Germany

Nick Martin, Ph.D.  
Brisbane, Australia

Francis McMahon, M.D.  
Bethesda, MD, USA

Andreas Meyer-Lindenberg, M.D., Ph.D.  
Mannheim, Germany

Ole Mors, Ph.D.  
Aarhus, Denmark

Bertram Müller-Myhsok, M.D.  
München, Germany

Markus M. Nöthen, M.D.  
Bonn, Germany

John Nurnberger, Jr., M.D., Ph.D.  
Indianapolis, IN, USA

Michael Owen, Ph.D.  
Cardiff, Wales, UK

## ALL COMMITTEES

### SCIENTIFIC PROGRAM COMMITTEE (continued)

Andreas Papassotiropoulos, M.D.  
Basel, Switzerland

Shaun Purcell, Ph.D.  
Boston, MA, USA

Marcella Rietschel, M.D.  
Mannheim, Germany

Brien Riley, Ph.D.  
Richmond, VA, USA

Martin Schalling, M.D., Ph.D.  
Stockholm, Sweden

Thomas Schulze, M.D.  
Göttingen, Germany

Jonathan Sebat, Ph.D.  
San Diego, CA, USA

Pamela Sklar, M.D., Ph.D.  
Boston, MA, USA

David St Clair, M.D., Ph.D.  
Aberdeen, Scotland, UK

Patrick Sullivan, M.D.  
Chapel Hill, NC, USA

Ming Tsuang, M.D.  
San Diego, CA, USA

Julie Williams, Ph.D.  
Cardiff, Wales, UK

### LOCAL ORGANIZING COMMITTEE

Elisabeth Binder, M.D., Ph.D.  
München, Germany

Jürgen Deckert, M.D.  
Würzburg, Germany

Peter Falkai, M.D.  
Göttingen, Germany

Andreas Gal, Ph.D.  
Hamburg, Germany

Hans J. Grabe  
Greifswald, Germany

Johannes Hebebrand, M.D.  
Essen, Germany

Per Hoffman, Ph.D.  
Bonn, Germany

Tilo Kircher, M.D., Ph.D.  
Marburg, Germany

Bertram Müller-Myshok, M.D.  
München, Germany

Dieter Naber, M.D.  
Hamburg, Germany

Andreas Reif, M.D.  
Würzburg, Germany

Dan Rujescu, M.D.  
München, Germany

Sibylle Schwab, Ph.D.  
Erlangen, Germany

Gerd Schulte-Körne, Ph.D.  
München, Germany

Johannes Schumacker, M.D.  
Bonn, Germany

Stephanie Witt, Ph.D.  
Mannheim, Germany



## ALL COMMITTEES

### EARLY CAREER INVESTIGATOR PROGRAM SELECTION COMMITTEE

Lynn E. DeLisi, M.D. – *Co-chair*  
Boston, MA, USA

John Nurnberger, M.D., Ph.D. – *Co-chair*  
Indianapolis, IN, USA

Thomas Schulze, M.D. – *Co-chair*  
Göttingen, Germany

Gerome Breen, Ph.D.  
London, England, UK

Mirko Manchia, M.D.  
Halifax, Nova Scotia, Canada

Sevilla Deetera Wadleigh, Ph.D.  
Bethesda, MD, USA

Tiina Paunio, Ph.D.  
Helsinki, Finland

George Kirov, Ph.D.  
Cardiff, Wales, UK

James Potash, M.D.  
Iowa City, IA, USA

Cathryn Lewis, Ph.D.  
London, England, UK

George Uhl, M.D., Ph.D.  
Baltimore, MD, USA

### ISPG EXECUTIVE COMMITTEE

President: Prof. Nick Craddock, Ph.D.  
Cardiff, Wales, UK

Vice-President: Francis McMahon, M.D.  
Bethesda, MD, USA

Secretary: Lynn E. DeLisi, M.D.  
Boston, MA, USA

Treasurer: John Rice, Ph.D.  
St. Louis, MO, USA

# ALL COMMITTEES

## ISPG BOARD OF DIRECTORS

Laura Almasy, Ph.D.  
San Antonio, TX, USA

Margit Burmeister, Ph.D.  
Ann Arbor, MI, USA

Nick Craddock, Ph.D.  
Cardiff, Wales, UK

Lynn E. DeLisi, M.D.  
Boston, MA, USA

Stephen Faraone, Ph.D.  
Syracuse, NY, USA

Elliott Gershon, M.D.  
Chicago, IL, USA

Michael Gill, M.D.  
Dublin, Ireland

James Kennedy, M.D.  
Toronto, ON, Canada

Douglas Levinson, M.D.  
Stanford, CA, USA

Francis McMahon, M.D.  
Bethesda, MD, USA

Markus Nöthen, M.D.  
Bonn, Germany

John Nurnberger, M.D., Ph.D.  
Indianapolis, IN, USA

Michael Owen, Ph.D.  
Cardiff, Wales, UK

John Rice, Ph.D.  
St. Louis, MO, USA

Marcella Rietschel, M.D.  
Mannheim, Germany

Thomas Schulze, M.D.  
Göttingen, Germany

Jonathan Sebat, Ph.D.  
La Jolla, CA, USA

Jordan Smoller, M.D.  
Boston, MA, USA

Ming Tsuang, M.D.  
La Jolla, CA, USA

## AWARDS

The Prize Committee and Board of Directors of the International Society of Psychiatric Genetics are pleased to announce the 2012 Honorific Award Winners:

### THE SNOW AND MING TSUANG LIFETIME ACHIEVEMENT AWARD:

The Lifetime Achievement Award is awarded each year by the ISPG to a scientist who made a major contribution to the advancement of the field of Psychiatric Genetics.



#### **Raymond R. Crowe, M.D.**

Dr. Crowe graduated from Vanderbilt Medical School, completed an internship in Pediatrics and Medicine at the University of Kentucky, and started a residency in Psychiatry at the University of Iowa in 1967. After serving in the Air Force for two years, with one year in Vietnam as a military psychiatrist, he returned to Iowa and completed his psychiatry residency under Dr. George Winokur. Training continued with a fellowship in Human Genetics at the University of Michigan under Dr. James V. Neel. Dr. Crowe returned to Iowa as an assistant professor of psychiatry in

1975 and has continued his appointment in the department to the present time. He was promoted to Professor of Psychiatry in 1981 and became Professor of Psychiatry Emeritus in 2007. Dr. Crowe's research interests have touched on the genetics of antisocial personality disorder, panic disorder, schizophrenia and mood disorders. He has chaired NIMH study sections on Psychopathology and Clinical Biology and on Epidemiology and Genetics. His research and training programs in the genetics of mental disorders were continuously funded by the NIMH for 25 years. At the University of Iowa, he is a recipient of the Regents' Award for Faculty Excellence and is a Distinguished Life Fellow of the American Psychiatric Association.

## AWARDS

### **THEODORE REICH YOUNG INVESTIGATOR AWARD:**

Theodore (Ted) Reich (1938 – 2003) was the first President of ISPG and was both an outstanding researcher and mentor to young scientists. The award is made for published work on psychiatric genetics that is of exceptional merit to candidates who are 40 years or younger in the year of their nomination.



#### **Danielle M. Dick, Ph.D.**

Dr. Dick is an Associate Professor in the Departments of Psychiatry, Psychology, and Human and Molecular Genetics at the Virginia Institute for Psychiatric and Behavioral Genetics (VIPBG) at Virginia Commonwealth University. She received her Ph.D. in Psychology in 2001 from Indiana University, and, subsequently completed a postdoctoral fellowship in the Department of Medical and Molecular Genetics. She was on the faculty at Washington University, St. Louis from 2003 – 2007 before joining VCU.

Her research interests involve studying how genetic predispositions interact with environmental factors to contribute to patterns of substance use/dependence and related behavioral disorders across development. She currently holds a K02 mid-career award from NIAAA, and is the PI of multiple NIH funded grants. She is the previous recipient of a National Science Foundation Graduate Fellowship, a National Institutes of Health NRSA Postdoctoral Fellowship, and a NARSAD Young Investigator Award. She has >130 peer-reviewed publications, and has won numerous awards, including the Behavior Genetics Association Fuller & Scott Award for Outstanding Young Investigator in 2006, the Fulker Award for best paper published in the journal *Behavior Genetics* in 2007, the Research Society on Alcoholism Young Investigator Award in 2010, and the World Congress of Psychiatric Genetics Richard Todd Award in Child Psychiatry in 2011.

## AWARDS

### **RICHARD TODD AWARD:**

Richard Todd (1952 – 2008) was an internationally known expert on the influences of genetics and environment on psychiatric illness in children. The award is given by the Awards Committee for oral presentation in the category of Childhood Psychiatric Disorders

### **Joint Recipients:**



#### **Prof. Anke Hinney, Ph.D.**

Prof. Anke Hinney, began her professorship in Molecular Genetics of Obesity and Eating Disorders at the University of Duisburg-Essen in October 2012. Previously, she was head of the research division, 'Molecular Genetics', in the Department of Child and Adolescent Psychiatry at the same university. From 1995 – 2004, she was head of the Molecular Genetic Laboratory of a DFG-clinical research group in the Department of Child and Adolescent Psychiatry at Philipps-University of Marburg. She received her Ph.D. from the

Institute of Anthropology and Human Genetics at the University of Tübingen, and completed her PostDoc at the University of Düsseldorf.



#### **Ivonne Jarick, Dipl. Math.**

Ivonne Jarick is a Ph.D. candidate in the group of Prof. Dr. Helmut Schäfer at the Institute of Medical Biometry and Epidemiology (IMBE), Philipps University of Marburg. She studied Mathematics at the Ruprecht-Karls University of Heidelberg and earned her diploma in the field of Mathematical Statistics. Currently, she is working in the BMBF funded project NGFN-Plus (National Genome Research Network) on obesity in collaboration with Prof. Dr. Johannes Hebebrand, Prof. Dr. Anke Hinney and PD Dr.

André Scherag. Her particular research focus lies on strategies for the genome-wide analysis of raw copy number variation (CNV) data.

## ECIP TRAVEL AWARDEES

The Early Career Investigator Program is sponsored by grants from NIMH, NIDA, NIAAA, the Lundbeck Foundation and the International Society of Psychiatric Genetics. The Society is grateful for their support that makes the travel awards possible.

### CONGRATULATIONS TO THE 2012 ECIP TRAVEL AWARDEES:

Heike Anderson-Schmidt, Göttingen,  
Germany

Olga Beltcheva, Sofia, Bulgaria

Mariko Brandon, Nashville, TN, USA

Enda Byrne, Brisbane, Australia

Carolina Cappi, São Paulo, Brazil

Gyulnas Cebir, Sofia, Bulgaria

Teresa de Candia, Boulder, CO, USA

Eric Diehl, London, Ontario, Canada

Laramie Duncan, Somerville, MA,  
USA

Manuela Eisenhardt, Mannheim,  
Germany

Josef Frank, Mannheim, Germany

Juan Gallego, Glen Oaks, NY, USA

Suzanne Gonzalez, San Antonio, TX,  
USA

Danielle Hairston, Washington, DC,  
USA

Ellis Hannon, Cardiff, Wales, UK

Daniel Howrigan, Boulder, CO, USA

Ivan Iourov, Moscow, Russia

Katri Kantojarvi, Helsinki, Finland

Iordanis Karagiannidis,  
Alexandroupoli, Greece

Martin Kohli, Miami, FL, USA

Mark Kos, San Antonio, TX, USA

Eszter Kótyuk, Budapest, Hungary

Ben Laufer, London, Ontario, Canada

Phil Hyoun Lee, Boston, MA, USA

Judit Lazáry, Budapest

Simon Leul, Washington, DC, USA

Jurjen Luykx, Utrecht, The  
Netherlands

Katarzyna Mantha, London, Ontario,  
Canada

Nathaniel McGregor, Tygerberg,  
South Africa

Sandra Meier, Mannheim, Germany

Vanessa Nieratschker, Mannheim,  
Germany

Takeshi Otowa, Tokyo, Japan

Stephan Ripke, Boston, MA, USA

Seunghyong Ryu, Seoul, Korea

# ECIP TRAVEL AWARDEES

## CONGRATULATIONS TO THE 2012 ECIP TRAVEL AWARDEES:

Kaitlin Samocha, Boston, MA, USA

Mari Sepp, Tallinn, Estonia

Nadia Solovieff, Boston, MA, USA

Helen Spiers, London, UK

Alessio Squassina, Cagliari, Italy

Geeta Thakur, Montreal, Quebec,  
Canada

Yash Tiwari, Toronto, Ontario,  
Canada

Claudio Toma, Barcelona, Spain

Jens Treutlein, Mannheim, Germany

Gina Victor, Washington, DC, USA

Biju Viswanath, Bethesda, MD, USA

Joshua Wang, Farmington, CT, USA

Michael Way, London, UK

C. Peng Wong, London, UK

Hei Man Wu, Hong Kong

## ORAL AND POSTER PRESENTATION AWARDS:

The Program Committee selected oral and poster presentation finalists from the ECIP Travel Awardees. The authors will compete for one of three Oral Presentation Awards or Poster Presentation Awards. Oral and poster presentation award finalists are notated throughout the program with an **ECIP** symbol.

## ORAL PRESENTATION AWARD FINALISTS:

Heiki Anderson-Schmidt, Germany

Teresa de Candia, USA

Laramie Duncan, USA

Eilis Hannon, UK

Daniel Howrigan, USA

Martin Kohli, USA

Phil Lee, USA

Jurjen Luykx, The Netherlands

Sandra Meier, Germany

Stephan Ripke, USA

Nadia Solovieff, USA



## ECIP TRAVEL AWARDEES

### POSTER PRESENTATION AWARD FINALISTS:

Olga Beltcheva, Bulgaria

Enda Byrne, Australia

Carolina Cappi, Brazil

Gyulnas Cebir, Bulgaria

Eric Diehl, Canada

Manuela Eisenhardt, Germany

Josef Frank, Germany

Juan Gallego, USA

Suzanne Gonzalez, USA

Ivan Iourov, Russia

Katri Kantojarvi, Finland

Iordanis Karagiannidis, Greece

Mark Kos, USA

Eszter Kótyuk, Hungary

Benjamin Laufer, Canada

Judit Lazáry, Budapest

Katarzyne Mantha, Canada

Nathaniel McGregor, South Africa

Vanessa Nieratschker, Germany

Takeshi Otowa, Japan

Chloe Peng Wong, UK

Seunghyong Ryu, South Korea

Kaitlin Samocha, USA

Mari Sepp, Estonia

Helen Spiers, UK

Alessio Squassina, Italy

Geeta Thakur, Canada

Yash Tiwari, Australia

Claudio Toma, Spain

Jens Treutlein, Germany

Biju Viswanath, India

Joshua Wang, USA

Michael Way, UK

Hei Man Wu, China

## PLENARY SESSION SPEAKERS



**Prof. Karl Zilles, M.D., Ph.D.**

Monday, October 15, 2012, 9:30 a.m. – 10:30 a.m.

*Architecture of the Human Brain*

Prof. Karl Zilles studied medicine at the Universities of Tübingen and Frankfurt/Main in Germany. He completed his Ph.D. at the Medical School Hanover and became an Associate Professor at the Anatomical Institute of the University of Kiel. He became Full Professor at the Anatomical Institute at the University of Cologne and later Full Professor and Director of the C. & O. Vogt Brain Research Institute at the University of Düsseldorf and Director of the Institute of Neuroscience and Medicine at the Research Center Jülich. He is a Fellow of the National Academy of Science, Leopoldina and a Fellow of the Academy of Science and Arts North-Rhine Westfalia. He has published over 550 original articles in peer reviewed international journals and over 90 book chapters or books.



**Prof. Mark J. Daly, Ph.D.**

Monday, October 15, 2012, 11:00 a.m. – 12:00 p.m.

*The Genomic Architecture of Psychiatric Disorders*

Mark J. Daly, Ph.D. is an Associate Professor at the Massachusetts General Hospital/Harvard Medical School and a Senior Associate Member of the Broad Institute, where he is Co-Director of Medical and Population Genetics. His lab focuses on computational approaches to understanding the genetics of disease with a strategy of integrating powerful techniques from human and mouse genetics. The lab has extensive experience in linkage and association analysis and has focused efforts over the past decade on the development and analysis of variation resources such as HapMap, as well as tools and methods for design and interpretation of association studies using these maps. Recently, the focus has shifted towards the aggressive application of these approaches in major common disease areas, with particular focus on Crohn's disease and autism. He has recently been named founding chief of the Analytic and Translational Genetics Unit at MGH where the focus will be on the interpretation of human genome sequencing data for both the discovery of the biological components of disease as well as the clinically relevant genetic insights for patient care.

## PLENARY SESSION SPEAKERS



**Prof. Kerstin Lindblad-Toh, Ph.D.**

Tuesday, October 16, 2012, 9:00 a.m. – 10:00 a.m.

*What Can We Learn from the Study of Other Species for Human Brain Behavior Disorder*

Kerstin Lindblad-Toh is a professor in comparative genomics and the Director of Science for Life Laboratory Uppsala and the Scientific Director of Vertebrate Genome Biology at the Broad Institute.

At the Broad Institute, Kerstin is responsible for the 29 mammals project to annotate the human genome for functional constraint as well as for a large number of vertebrate genome projects several of which emphasize the detection of selective sweeps. She also leads the dog disease-mapping group. Her group has developed several SNP chips that have been used to identify canine disease genes.

In Uppsala, Kerstin's research emphasizes the dog as a comparative model for human diseases. Her group is mapping over 20 diseases including cancer, autoimmune, cardiac and neurological diseases. Many of the findings are now being translated to human patients cohorts. She is an active participant in and on the Steering Committee of the LUPA consortium an FP7 project aiming to map human complex traits using dog as a model.

Kerstin is also the Director Science for Life Laboratory Uppsala, a novel strategic research center with the vision of being an internationally leading center that develops, applies, and provides access to large-scale technologies for molecular biosciences with a focus on translational medicine and on evolutionary and systems biology.

An author on over 110 papers, Kerstin has received several scholarships and awards from the Svenska Institutet Scholarship for Research Abroad and the Swedish Medical Research Council and the prestigious European Young Investigator award (EURYI), Fernström's price and the Lilly och Sven Thureus pris. In 2012 she was elected into the Royal Swedish Academy of Sciences.

Kerstin received her Ph.D. from the Department of Molecular Medicine, Karolinska Institute, Sweden, in 1998 studying trinucleotide repeat disorders.

## PLENARY SESSION SPEAKERS



### **Prof. Bryan L. Roth, M.D., Ph.D.**

Tuesday, October 16, 2012, 10:30 a.m. – 11:30 a.m.

*Novel Approaches to Psychiatric Drug Discovery: Impact of Psychiatric Genetics*

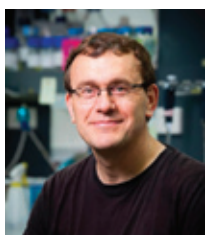
Bryan L. Roth, M.D., Ph.D., is the Michael Hooker Distinguished Professor of Pharmacology and the Director of the National Institute of Mental Health Psychoactive Drug Screening Program at the University of North Carolina Chapel Hill Medical School.

Dr. Roth has published more than 300 papers, has served on many editorial boards and review panels and is a frequent consult to pharmaceutical and biotechnology companies.

Recent papers include:

- The validation of an approach to predict off-target actions of known medications (Keiser et al, **Nature**, 2009)
- The discovery that topoisomerase inhibitors can unsilence the ubiquitin ligase (*Ube3A*) implicated in Angleman Syndrome (Huang et al, **Nature** 2011)
- Opioid receptor crystal structures (Wu et al, **Nature**, 2012; Thompson et al, **Nature** 2012)
- Novel synthetic biology approaches for GPCR biology (Alexander et al, **Neuron** 2009; Garner et al, **Science** 2012).

Web site: <http://pdsp.med.unc.edu/rothlab/>



### **Prof. Peter Visscher, Ph.D.**

Wednesday, October 17, 2012 – 9:00 a.m. – 10:00 a.m.

*The Issue of Missing Heritability Revisited*

Peter Visscher was born in The Netherlands from Dutch and English parents. He moved to Edinburgh in 1987 for an MSc and subsequent Ph.D. in animal breeding and genetics, working on the estimation of genetic parameters in large livestock pedigrees.

A postdoctoral period in Melbourne was followed by a return to Edinburgh, where he developed methods to map genetic loci underlying complex traits. In 1995, he moved to a faculty position at the University of Edinburgh, developing gene mapping methods and software tools, with practical applications in livestock and human populations. Prof. Visscher joined the Queensland Institute of Medical Research in

## PLENARY SESSION SPEAKERS

### **Prof. Peter Visscher, Ph.D. continued**

2005 and in 2011 moved to the University of Queensland where he is Professor and Chair of Quantitative Genetics. Prof. Visscher is a Senior Principal Research Fellow of the Australian National Health and Medical Research Council and was elected a Fellow of the Australian Academy of Science in 2010. Visscher's research interests are focussed on a better understanding of genetic variation for complex traits, including quantitative traits and disease.



### **Prof. Trevor W. Robbins, CBE, FRS, FMedSci, Ph.D.**

Thursday, October 18, 2012 – 9:00 a.m. – 10:00 a.m.

*What Phenotypes Should Psychiatric Geneticists Focus On?*

Trevor Robbins was appointed in 1997 as Professor of Cognitive Neuroscience and was elected to the Chair of Expt. Psychology (and Head of Department) at the University of Cambridge from October 2002. He is a Fellow of the British Psychological Society (BPS) (1990), the Academy of Medical Sciences (2000), and the Royal Society (2005). He has been President of the British Association for Psychopharmacology (1994-1996) and the European Behavioural Pharmacology Society (1992-1994), winning the latter Society's inaugural Distinguished Scientist Award in 2001. He also co-shared the IPSEN FOUNDATION 'Neuroplasticity Prize' in 2005 and gave the F. Kavli Distinguished International Lecturer at the Society for Neuroscience meeting in the same year. He was recently jointly given the prestigious Distinguished Scientific Contribution Award for 2011 by the American Psychological Association. He has been a member of the Medical Research Council (UK) and chaired the Neuroscience and Mental Health Board from 1996 until 1999. He has published nearly 700 full papers or chapters, and has an H index of about 134. He has co-edited six books including *Neurobiology of Addiction; New Vistas (OUP, 2010)* and *Decision-making, Affect and Learning (OUP, 2011)*. Prof. Robbins edits the journal *Psychopharmacology* (since 1980) and has been an Advisory Editorial Board for *Science* magazine since 2003. Currently, he directs the MRC/Wellcome Trust-funded 'Behavioural and Clinical Neuroscience Institute', the mission of which is to enhance translation from basic to clinical neuroscience. His interest in this area began with his co-invention of the CANTAB computerised neuropsychological battery which is currently used in over 500 institutes and clinical centres world-wide. He recently stepped down as President of the British Neuroscience Association after the Biennial meeting in Harrogate that he helped to organize. He was made a CBE in the New Year's Honours list of the U.K. in 2012.

## PLENARY SESSION SPEAKERS



**Prof. James Dee Higley, Ph.D.**

Thursday, October 18, 11:00 a.m. – 12:00 p.m.

*A Decade of Studies Investigating Gene X Environment Interactions and the Risk for Alcohol Abuse and Related Psychopathology: A Nonhuman Primate Model*

***This session is sponsored by a grant from the National Institute of Alcohol Abuse and Alcoholism***

Dr. Higley is a professor of psychology at Young University. He received his Ph.D. in Child Development and Primate Behavior from the University of Wisconsin. For nearly two decades, Dr. Higley headed the National Institutes of Alcohol Abuse and Alcoholism's intramural nonhuman primate research program, located just outside of Washington, DC. Dr. Higley is recognized as an international expert in serotonin-mediated temperament and personality, and developmental psychopathology. More recently, he has received a good deal of interest for his teams' discovery that genes that modulate behavior function differently depending on the environmental setting. Dr. Higley's major research area is on the effects of parents on their offspring. He has published extensively on alcohol abuse, violence, impulsivity, and individual differences.

### 20 YEARS OF THE INTERNATIONAL SOCIETY OF PSYCHIATRIC GENETICS (ISPG)

**As recounted through the memories and documents of Lynn E. DeLisi, M.D.  
(Co-Founder and Secretary: 1992-1212)**

On Friday, October 23, 1992, Ted Reich, Professor of Psychiatry at Washington University in St Louis, invited a handful of colleagues (T. Crow, J. F. W. Deakin, L. DeLisi, R. Elston, D. Kirch, J. Nurnberger, and R. Todd) to his department to discuss holding a congress of psychiatric genetics in the USA in 1993. A few scattered events led up to this meeting, one of which was a workshop sponsored by E. Gershon, R. Cloninger, P. Propping and myself with funding and support contributed by Professor Hans Hippius from Bonn, Germany. It was an invited 2-day conference, held in Berlin in 1986 for approximately 30 international senior researchers focused on the genetics of schizophrenia. Its aim was to discuss the unanswered questions and to form hypotheses to pursue in future collaborations. The success of this workshop led to Tim Crow and Peter McGuffin from the UK establishing The World Congress of Psychiatric Genetics (WCPG) as a meeting of the Biological Psychiatry division of the British Royal College of Psychiatrists.

The first congress was held in Cambridge in 1989 and the second congress in London in 2001, each attracted approximately 200 researchers. At the London congress, there was discussion to host the next meeting in the USA. Cold Spring Harbor was investigated as a site, but T. Reich suggested having the first USA congress as a satellite of the American Society of Human Genetics Annual Meeting to be held in New Orleans in 1993. There was much discussion at the October 1992 meeting about the future of world congresses.

In order to ensure some stability and transparency to the process and for the WCPG, it was decided to form a society of interested researchers, have an Advisory Board, Program Committee and Officers that would rotate over the years according to a set of by-laws. While the other attendees at the St. Louis meeting took roles in the planning of a 1st USA, New Orleans meeting, I volunteered to look into the feasibility of forming a professional society. Naively, I thought the first step would be to see if in fact there was interest among our colleagues to belong to such a society. As a first step, to confirm interest among colleagues to belong to a society, a flyer was developed announcing the society and stating for a nominal fee of \$10, one could become a member. The response was tremendous and mail began to accumulate with checks from colleagues who wished to become members. It was then that I realized the implications



## XXth Anniversary of the ISPG

and work required to begin a new society, including opening a bank account and establishing non-profit status. These happened within a short time with the aid of my research assistant, Gail Shields, who then lived in Nevada. The Society was incorporated in Nevada as a 501c (3) corporation with Gail as the “resident” administrator.

By the time of the New Orleans meeting and the first face-to-face Board meeting of the International Society of Psychiatric Genetics (ISPG), we had a founding Board of Directors (N=8), By-laws, approximately 300 members, and 2 Life-time Achievement award winners were honored (Seymour Kety and George Winokur). An original sculpture with DNA was designed by New York artist, Charles Reina. The rest is “history” that many of you have been part of at different times.

The notable events during the past 20 years have included an established relationship with the journal *Neuropsychiatric Genetics* in the 1990’s and later, a relationship with the journal, *Psychiatric Genetics*. From 1999 to the present, through grants from our respective universities both J. Nurnberger and I have had USA NIH grants to provide travel awards for students and young investigators. In 2007, we established the travel awardee rapporteur program whereby travel awardees are assigned oral sessions to report and summarize for a later publication documenting the notable events of the congress. An *Educational Day* was also established in 2005 to take place one day prior to each WCPG for reviews of different aspects of the field for new investigators beginning work in psychiatric genetics, as well as to inform the public and media. During the 1998, WCPG in Bonn, Germany, a notable field trip took place to Hadamar Psychiatric Hospital to educate genetic researchers about the use of eugenics to form policies about psychiatric patients during the Nazi era. The result was the extermination of thousands of patients, bringing to the forefront important lessons from history about the potential misuse of psychiatric information. Other ethical issues were discussed and policies formulated during these 20 years. One in particular dealt with the use of family members for ascertainment of information in genetic studies and the question of who were the “research subjects” requiring informed consent. Another discussion addressed the need for a society supported statement to the public about the use of genetic testing in psychiatry.

Although the main mission of the society is to educate and facilitate advancement in research on psychiatric genetics, important political and ethical issues involving the use of genetics cannot be ignored and will continue to be discussed. In 2010, the Society Executive Office moved from my university academic office, to be administered by a professional society management company, Parthenon

## XXth Anniversary of the ISPG

Management Company, under the auspices of the American College of Neuropsychopharmacology and Dr. Ronnie Wilkins as the Executive Director. This transition will enable the society to continue to expand its professional status in coming years and have a consistent organization for its annual congresses. These are exciting times for the uncovering of genetic mechanisms for disease and the ISPG has been at the forefront in facilitating progress toward the understanding of the genetics of mental illness.

The following is a summary of the history of the society to be recorded for future generations of researchers so that they know and understand what came before them:

### Officers and terms:

1st president: Ted Reich, Vice-President: Tim Crow; 1992-1996

2nd President: Peter McGuffin, Vice President: 1996-2000

3rd President: Mike Owen, Vice President: Christine van Broeckhoven, 2000-2005

4th President: Ming Tsuang; Vice President Steve Faraone 2005-2010

5th President: Nick Craddock, Vice President: Francis McMahon 2010-2012

Secretary: Lynn DeLisi: 1992-2012

Treasurer: Richard Todd: 2005-2008

John Rice: 2008-present

### Board Members and estimated terms:

K. Abe 1995-2002

Laura Almasy 2008-2014

Nick Barden 2002-2004

Sam Barondes 1994-2011

Kate Berg 1994-1998

Margit Burmeister 2008-2014

Nick Craddock 2000-2012

Tim Crow 1992-2011

Lynn DeLisi 1992-present

Bill Deakin 1992-2000

Robert Elston 1992-1999

Steve Faraone 2003-2012

Susan Folstein 2000-2004

Elliott Gershon 2008-present

Michael Gill 2002-present

Irv Gottesman 1995-2010

Ken Kendler 1995-2000

Jim Kennedy 2008-present

Darryl Kirch 1992-1997

Doug Levinson 2000-present

Jacque Mallet, 1995-2010

Peter McGuffin 1994-2008

Francis McMahon 2004-present

Markus Nöthen 2000-present

John Nurnberger 1992-present

Michael Owen 1995-present

Lena Peltonen 1992-2009

Peter Propping 1994-2010

Ted Reich 1992-2003

John Rice 1999-present

Marcella Rietschel 2010-present

Thomas Schulze 2008-present

Jonathan Sebat 2010-present

Jordan Smoller 2010-present

## XXth Anniversary of the ISPG

### Board Members and estimated terms:

Richard Todd 1992-2008

Ken Warren 1994-2000

Ming Tsuang 1995-present

Maria del Zompo 2006-2009

Christine van Broekhoven 1995-2009

### **WCPGs sponsored by ISPG and corresponding Chairs/Co-Chairs:**

1993	New Orleans (Reich)
1995	Cardiff (McGuffin/Owen)
1996	Interim San Francisco (DeLisi)
1997	Santa Fe (DeLisi)
1998	Bonn (Propping/Nöthen)
1999	Monterrey (Nurnberger)
2000	Versailles (Mallet)
2001	St. Louis (Todd)
2002	Brusselles (Van Broeckhoven)
2003	Quebec City (Barden)
2004	Dublin (Gill)
2005	Boston (Faraone)
2006	Sardinia (Del Zompo)
2007	New York City (DeLisi/Levinson)
2008	Osaka (Yoneda/ Okamura)
2009	San Diego (Kelsoe/Schalling)
2010	Athens (Craddock/Papadimitriou)
2011	Washington D.C. (McMahon/Schulze)
2012	Hamburg, Germany (Nöethen/Rietschel)
2013	Boston, MA (Smoller/DeLisi)
2014	Copenhagen, Denmark (Schulze, Mors)
2015	Toronto, Canada (Kennedy)

## XXth Anniversary of the ISPG

### **Awards Presented by ISPG:**

#### Lifetime Achievement Awardees:

1993: Seymour S. Kety and George Winokur  
1995: Ming T. Tsuang  
1997: Irving I. Gottesman  
1999: Theodore Reich  
2001: Michael Conneally  
2002: Jules Angst and Nikki Erlenmeyer-Kimling  
2003: C. Robert Cloninger  
2004: Peter Propping  
2005: NONE  
2006: Elliot S. Gershon  
2007: Peter McGuffin  
2008: Jurg Ott  
2010: Susan E. Folstein  
2011: Kenneth Kendler  
2012: Raymond R. Crowe

#### Reich Junior Investigator Award (Began in 2004):

2004: Carol Prescott  
2005: Laura Almasy and Nigel Williams  
2006: Thomas G. Schulze  
2007: Alexander B. Niculescu III  
2008: Shaun Purcell  
2009: Jonathan Sebat  
2010: Elisabeth B. Binder  
2011: David Glahn  
2012: Danielle Dick

#### Richard Todd Child Psychiatric Genetics Award (began in 2009):

2009: Robert Althoff  
2010: Joseph D. Buxbaum  
2011: Danielle Dick  
2012: Anke Hinney

# FULL SCHEDULE

**SUNDAY, OCTOBER 14, 2012**

**11:00 AM – 7:00 PM** *Registration*

*Entrance Hall*

## CONCURRENT EDUCATIONAL SESSIONS

*Hall 6*

**12:00 PM – 1:00 PM** *Genetics of Bipolar Disorder*  
Sven Cichon, Nick Craddock

**1:00 PM – 1:15 PM** *Break*

**1:15 PM – 2:15 PM** *Schizophrenia Genetics*  
Mick O'Donovan

**2:15 PM – 2:30 PM** *Break*

**2:30 PM – 3:30 PM** *Evolutionary Aspects of Psychiatric Disorders*  
Matthew Keller

**3:30 PM – 4:00 PM** *Coffee Break*

*Hall 6 Foyer*

**4:00 PM – 5:00 PM** *Psychiatric Epigenetics: An Introduction*  
James Potash

**5:00 PM – 5:15 PM** *Break*

**5:15 PM – 6:15 PM** *Pharmacogenomics in the Post-GWAS Era: Study Design and Analysis Approaches for the Next Generation of Pharmacogenomics*  
Brooke Fridley, Wolfgang Sadée, Eli Stahl

# FULL SCHEDULE

**SUNDAY, OCTOBER 14, 2012**

<b>CONCURRENT EDUCATIONAL SESSIONS</b>		<i>Hall 8</i>
<b>12:00 PM – 1:00 PM</b>	<b><i>Imaging Genomics for Psychiatric Disorders</i></b> Sophia Frangou	
<b>1:00 PM – 1:15 PM</b>	<b><i>Break</i></b>	
<b>1:15 PM – 2:15 PM</b>	<b><i>How to Make GWAS Successful</i></b> Stephan Ripke	
<b>2:15 PM – 2:30 PM</b>	<b><i>Break</i></b>	
<b>2:30 PM – 3:30 PM</b>	<b><i>Analysis of Rare Variants</i></b> Benjamin Neale	
<b>3:30 PM – 4:00 PM</b>	<b><i>Coffee Break</i></b>	<i>Hall 8 Foyer</i>
<b>4:00 PM – 5:00 PM</b>	<b><i>Next Generation Data Integration</i></b> Alexander B. Niculescu III, Thomas Schulze	
<b>5:00 PM – 5:15 PM</b>	<b><i>Break</i></b>	
<b>5:15 PM – 6:15 PM</b>	<b><i>Registry-based Research in Psychiatric Diseases</i></b> Preben Bo Mortensen	
<b>6:00 PM – 7:00 PM</b>	<b><i>Travel Awardee Orientation</i></b>	<i>Hall 7</i>
<b>7:00 PM – 9:00 PM</b>	<b><i>Opening Reception</i></b>	<i>Hall 4</i>

# FULL SCHEDULE

## MONDAY, OCTOBER 15, 2012

7:00 AM – 6:00 PM	<b>Registration</b>	<i>Entrance Hall</i>
9:00 AM – 9:30 AM	<b>OPENING SESSION</b>	<i>Hall 3</i>
9:30 AM – 10:30 AM	<b>PLENARY SESSION 1</b> <b><i>Architecture of the Human Brain</i></b> Karl Zilles	<i>Hall 3</i>
10:30 AM – 11:00 AM	<b>Coffee Break</b>	<i>Hall 3 Foyer</i>
11:00 AM – 12:00 PM	<b>PLENARY SESSION 2</b> <b><i>The Genomic Architecture of Psychiatric Disorders</i></b> Mark Daly	<i>Hall 3</i>
12:00 PM – 1:30 PM	<b>Lunch Break</b>	<i>Hall 3 Foyer</i>
12:00 PM – 1:30 PM	<b>ISPG Board Meeting</b>	<i>Hall 12</i>

# FULL SCHEDULE

## MONDAY, OCTOBER 15, 2012

<b>1:30 PM – 3:00 PM</b>	<b>ORAL PRESENTATION SESSION 1</b> <b>Schizophrenia</b>  <b>Chairs:</b> Ole Andreassen, Brien Riley	<i>Hall 3</i>
<b>Oral Session 1.1</b>	<b>Investigation of PAK7 Duplications as Risk Factors for Schizophrenia and Psychotic Disorder</b> Aiden Corvin	
<b>Oral Session 1.2</b>	<b>Psychopathological Characterization of Two Families with Brain Disorders and Segregating Mutations of Neurexin1</b> Linh Duong	
<b>Oral Session 1.3</b> <b>ECIP</b>	<b>Additive Genetic Variation in Risk to Schizophrenia Shared between African American and European American Populations</b> Teresa de Candia	
<b>Oral Session 1.4</b>	<b>Analysis of Recessive and Compound Heterozygous Variants in a Schizophrenia Exome Sequencing Sample of 5,000 Individuals</b> Douglas Ruderfer	
<b>Oral Session 1.5</b>	<b>An Assessment of Tandem Repeat Variation in Schizophrenia Exomes</b> Colm O'Dushlaine	
<b>Oral Session 1.6</b>	<b>Analysis of Copy Number Variants (CNV) in Genes Reported to Carry De Novo Point Mutations in Schizophrenia</b> Franziska Degenhardt	

\*Oral presentation award finalists are notated with an **ECIP** symbol.



# FULL SCHEDULE

## MONDAY, OCTOBER 15, 2012

1:30 PM – 3:00 PM	<b>ORAL PRESENTATION SESSION 2</b> <i>Bipolar</i> <b>Chairs:</b> Tadafumi Kato, John Kelsoe	<i>Hall 6</i>
Oral Session 2.1	<b>Replication of Bipolar Disorder Susceptibility Alleles and Identification of 2 Novel Genome-wide Significant Associations in a New Bipolar Disorder Case-control Sample</b> Elaine Green	
Oral Session 2.2	<b>De Novo CNVs in Bipolar Affective Disorder</b> George Kirov	
Oral Session 2.3	<b>Massively Parallel Sequencing of the Brain Transcriptome Reveals Differential Expression of Novel Genes in Bipolar Disorder</b> Nirmala Akula	
Oral Session 2.4	<b>Genetic and Functional Abnormalities of the Melatonin Biosynthesis Pathway in Patients with Bipolar Disorder</b> Stéphane Jamain	
Oral Session 2.5	<b>Market Research Tool Approach Detects Significant Genotype-phenotype Correlations in Bipolar Disorder</b> Rene Breuer	
Oral Session 2.6	<b>Psychiatric Genomic Consortium (PGC) Report on a Expanded GWAS of Over 25,000 Samples in Bipolar Disorder</b> Pamela Sklar	

# FULL SCHEDULE

## MONDAY, OCTOBER 15, 2012

<b>1:30 PM – 3:00 PM</b>	<b>ORAL PRESENTATION SESSION 3</b> <b><i>Autism</i></b>  <b>Chair:</b> Dorrett Boomsma	<i>Hall 8</i>
<b>Oral Session 3.1</b>	<b>A Genomic Instability Model of a Neurodevelopmental Disorder: Global Copy Number Burden Associated with Autism</b> Scott Selleck	
<b>Oral Session 3.2</b>	<b>Identical by Descent Filtering Reveals ASD Genes Detected by Exome Sequencing in Extended Families</b> John Gilbert	
<b>Oral Session 3.3</b>	<b>Identification of Autism Spectrum Disorder Variants through Targeted Next Generation Sequencing in a Case and Control Cohort</b> John Gilbert	
<b>Oral Session 3.4</b>	<b>Functional Polymorphisms in the CNTNAP2 Gene Promoter in Context of Autism Spectrum Disorder</b> Christine Freitag	
<b>Oral Session 3.5</b>	<b>Impact of a Rare RPL10 Mutation on the Molecular Phenotype of Autism in a Patient Specific Cell Model</b> Andreas Chiocchetti	
<b>Oral Session 3.6</b>	<b>Excess of Rare Novel Loss-of-Function Variants Identified in Putative Susceptibility Genes for Schizophrenia and Autism Spectrum Disorders</b> Derek Morris	

# FULL SCHEDULE

## MONDAY, OCTOBER 15, 2012

1:30 PM – 3:00 PM	<b>ORAL PRESENTATION SESSION 4</b> <i>Biostatistics/Bioinformatics</i>  Chairs: Nick Martin, John Nurnberger	<i>Hall 13/14</i>
Oral Session 4.1 <b>ECIP</b>	<b>Using Identity-by-Descent Information to Detect De Novo and Recent Mutations in Population-based Exome-sequencing Studies</b> Nadia Solovieff	
Oral Session 4.2	<b>A Polygenic Analysis of Schizophrenia and Depression Risk Alleles Effect on Reproductive Fitness in the General Population</b> Robert Power	
Oral Session 4.3 <b>ECIP</b>	<b>Partitioning Genome-wide Autozygosity to Target Polygenic Signals: Methods and Application to Schizophrenia GWAS Data</b> Daniel Howrigan	
Oral Session 4.4	<b>Pleiotropy and Power: Methods for Improving Gene Discovery in Psychiatric GWAS</b> Wesley Thompson	
Oral Session 4.5	<b>Network and Structural Properties of Monogenic and Complex Disease-related Genes</b> Danielle Posthuma	
Oral Session 4.6 <b>ECIP</b>	<b>Evaluation of Algorithms for in Silico Prediction of Deleterious Mutations in a Large Whole-exome Sequencing Study</b> Laramie Duncan	
3:00 PM – 3:30 PM	<b>Coffee Break</b>	<i>Hall 3 Foyer</i>

# FULL SCHEDULE

## MONDAY, OCTOBER 15, 2012

3:30 PM – 5:00 PM	<b>SYMPOSIUM 1</b> <i>Hall 3</i> <b><i>PGC Cross Disorder and Pathway Analysis Group: Results from SNPs to Pathways</i></b>  <b>Chair:</b> Gerome Breen <b>Co-Chair:</b> Peter Holmans <b>Discussant:</b> Peter Holmans
<b>Symposium 1.1</b>	<b>Update on PGC Cross Disorder Analysis</b> Stephan Ripke
<b>Symposium 1.2</b> <b>ECIP</b>	<b>Network and Pathway Analysis for Deciphering the Pathogenetic Role of MicroRNAs in Psychiatric Disorders</b> Phil Hyun Lee
<b>Symposium 1.3</b>	<b>Combined Pathway Analysis from PGC Disorder Datasets</b> Gerome Breen
<b>Symposium 1.4</b>	<b>Genomic Partitioning by Functional Annotation of Variance and Covariance Explained by SNPs</b> S. Hong Le

# FULL SCHEDULE

## MONDAY, OCTOBER 15, 2012

3:30 PM – 5:00 PM

### SYMPOSIUM 2

*Hall 6*

#### *Next Generation Sequencing in Schizophrenia*

**Chair:** George Kirov

**Co-Chair:** Shaun Purcell

**Discussant:** George Kirov

#### Symposium 2.1

#### **Seeking De Novo Mutations in Schizophrenia by Whole Exome Sequencing of 600 Trios**

Michael O'Donovan

#### Symposium 2.2

#### **De Novo Mutations in Neurodevelopmental Disorders**

Guy Rouleau

#### Symposium 2.3

#### **Sequence Analysis of Schizophrenia and Autism Spectrum Disorders in the UK10K Project**

Aarno Palotie

#### Symposium 2.4

#### **Whole-exome Sequencing in 5000 Swedish Schizophrenia Patients and Matched Controls**

Shaun Purcell

# FULL SCHEDULE

## MONDAY, OCTOBER 15, 2012

3:30 PM – 5:00 PM	<b>SYMPOSIUM 3</b> <i>Genetics of Imaging and Neuro-cognitive Phenotypes and Their Relevance as Genetic Endophenotypes for Psychiatric Disorders</i>  <b>Chair:</b> Stephanie Le Hellard <b>Discussant:</b> Vidar M. Steen	<i>Hall 8</i>
Symposium 3.1	<b>TCF4 Sequence Variants and mRNA Levels are Associated with Neurodevelopmental Characteristics in Psychotic Disorders</b> Ole Andreasen	
Symposium 3.2	<b>Systematic Search for Genetic Factors Influencing the Thickness of the Cerebral Cortex</b> Sven Cichon	
Symposium 3.3	<b>ENIGMA: Enhancing Neuro-imaging Genetics through Meta-analysis</b> Sarah Medland	
Symposium 3.4	<b>Polygenic Deconstruction of Psychiatric Disorders with Neuro-cognitive Gene Sets</b> Stephanie Le Hellard	

# FULL SCHEDULE

## MONDAY, OCTOBER 15, 2012

3:30 PM – 5:00 PM

### SYMPOSIUM 4

*Hall 13/14*

#### ***Epigenetic Factors Influencing Neuropsychiatric Phenotypes and Disorders***

**Chair:** Melanie Carless

**Co-Chair:** Jimmy Potash

**Discussant:** Jimmy Potash

#### **Symposium 4.1**

#### **Genetic and Epigenetic Regulation of Schizophrenia Associated MicroRNA**

Murray Cairns

#### **Symposium 4.2**

#### **Combined Genetic Analysis of DNA Methylation and Gene Expression in Schizophrenia Identifies Disease Susceptibility Loci**

Roel Ophoff

#### **Symposium 4.3**

#### **Methylomic Profiling in Autism Spectrum Disorder**

Chloe Wong

#### **Symposium 4.4**

#### **Allele-specific DNA Demethylation in FKBP5: A Molecular Mediator of Gene X Environment Interactions with Childhood Trauma**

Torsten Klengel

5:00 PM – 7:00 PM

### POSTER SESSION I

*Hall 3 Foyer*

#### **Posters 1 – 104**

*See pages 64 – 77 for posters*

# FULL SCHEDULE

## TUESDAY, OCTOBER 16, 2012

7:00 AM – 6:00 PM	<b>Registration</b>	<i>Entrance Hall</i>
7:30 AM – 9:00 AM	<b>2013 Program Committee Meeting</b>	<i>Hall 7</i>
9:00 AM – 10:00 AM	<b>PLENARY SESSION 3</b> <b><i>What Can We Learn from the Study of Other Species for Human Brain Behavior Disorder?</i></b> Kerstin Lindblad-Toh	<i>Hall 3</i>
10:00 AM – 10:30 AM	<b>Coffee Break</b>	<i>Hall 3 Foyer</i>
10:30 AM – 11:30 AM	<b>PLENARY SESSION 4</b> <b><i>Novel Approaches to Psychiatric Drug Discovery: Impact of Psychiatric Genetics</i></b> Bryan L. Roth	<i>Hall 3</i>
11:30 AM – 1:00 PM	<b>Lunch Break</b>	<i>Hall 3 Foyer</i>
11:30 AM – 12:15 PM	<b>ISPG Business Meeting and 20th Anniversary of the Society</b>	<i>Hall 6</i>



# FULL SCHEDULE

## TUESDAY, OCTOBER 16, 2012

12:15 PM – 1:00 PM

**ROCHE PHARMACEUTICAL SPONSORED  
SYMPOSIA SESSION**

*Hall 3*

*From Basic Science to a Filled Drug Pipeline:  
Interaction Between Academia and Industry*

**Chair:** Wolfgang Maier

**Co-Chair:** Dan Rujescu

**The Field of Pharmacogenetics: Chances and  
Limitations**

Claus Weichel

**From the Detection of the Amyloid-precursor  
Protein to Potential Treatment of Alzheimer's  
Disease**

Antonella Santucci Chadha

**Molecular Biomarkers and the Development  
of Personalized Healthcare Strategies in CNS  
Disorders**

Enrico Domenici

# FULL SCHEDULE

## TUESDAY, OCTOBER 16, 2012

1:00 PM – 2:30 PM	<b>ORAL PRESENTATION SESSION 5</b> <b>Schizophrenia</b> <b>Chairs:</b> Francis McMahon, Thomas Schulze	<i>Hall 3</i>
Oral Session 5.1	<b>Genome-wide Association Study of 32,143 Individuals Reveals Several Novel Associations in Schizophrenia</b> Colm O'Dushlaine	
Oral Session 5.2 <b>ECIP</b>	<b>Dissection of Genetic Architecture of Bipolar Disorder and Schizophrenia: Results from a Combined Dataset of Nearly 40,000 Individuals</b> Stephan Ripke	
Oral Session 5.3	<b>Genetic Pleiotropy between Schizophrenia and Multiple Cardiovascular Disease Risk Factors</b> Ole A. Andreassen	
Oral Session 5.4	<b>Genome-wide Study of Association and Interaction with Maternal Cytomegalovirus Infection Suggests New Schizophrenia Loci</b> Anders Børglum	
Oral Session 5.5	<b>Mapping the Human Genome's Missing Pieces and Investigating Their Relationship to Schizophrenia Structural Variants</b> Giulio Genovese	
Oral Session 5.6	<b>Analysis of Low-frequency, Protein Altering Variation in 13,000 Individuals from a Swedish Schizophrenia Cohort on the Exome Array</b> Benjamin Neale	

# FULL SCHEDULE

## TUESDAY, OCTOBER 16, 2012

<b>1:00 PM – 2:30 PM</b>	<b>ORAL PRESENTATION SESSION 6</b> <i>Hall 6</i> <b><i>Functional Genomics and Model Organisms</i></b> <b>Chairs:</b> Margit Burmeister, Michael Gill
<b>Oral Session 6.1</b>	<b>MIR137, A Candidate Gene for Schizophrenia Risk: Identification of Targets and Downstream Effects</b> Ann Collins
<b>Oral Session 6.2</b>	<b>Expression QTL Analysis of Glucocorticoid Regulated Gene Expression: New Insights into the Genetics of Mood and Anxiety Disorders</b> Janine Arloth
<b>Oral Session 6.3</b>	<b>Mapping Genetic and Epigenetic Factors Influencing Human Hippocampal Gene Expression</b> Lutz Priebe
<b>Oral Session 6.4</b>	<b>Using Measures of Allelic Expression to Elucidate Regional and Temporal Risk Mechanisms for Psychiatric Disorders</b> Nick Bray
<b>Oral Session 6.5</b>	<b>Whole-genome Sequencing Analysis of Human induced Pluripotent Stem Cell Lines Uncovers Lineage-manifested Copy Number Variation</b> Alexander Urban
<b>Oral Session 6.6</b>	<b>Induced Pluripotent Stem Cel (iPSC) Models for Bipolar Disorder</b> Melvin McInnis

# FULL SCHEDULE

## TUESDAY, OCTOBER 16, 2012

1:00 PM – 2:30 PM	<b>ORAL PRESENTATION SESSION 7</b> <b><i>Endophenotypes</i></b> <b>Chair:</b> Andreas Papassotiropoulos	<i>Hall 8</i>
Oral Session 7.1	<b>Quantitative Trait Loci Identified for Working and Spatial Memory: Identifying Endophenotypes for Psychosis using Realistic Phenotypic Models</b> Emma Knowles	
Oral Session 7.2	<b>Reduced Inferior Frontal Gyrus Activation during Response Inhibition to Emotional Stimuli in Youth at High Genetic Risk of Bipolar Disorder: Genetic Associations</b> Philip Mitchell	
Oral Session 7.3	<b>Identification of Convergent Molecular Pathways of Human Working Memory Performance: Evidence from Genome-wide Pathway Analyses and Brain Imaging Studies</b> Angela Heck	
Oral Session 7.4	<b>Sparse Reduced-rank Regression as a Multivariate Technique for Genome-wide Association Studies: Application to Identify Genetic Variants Associated to Neuro-Cognition and Brain-imaging Traits</b> Eva Janousova	
Oral Session 7.5	<b>Genetic Variation in the Atrial Natriuretic Peptide Transcription Factor GATA4 Modulates Amygdala Responsiveness to Alcohol Cues and Relapse Risk in Alcohol-dependent Subjects</b> Falk Kiefer	
Oral Session 7.6 <b>ECIP</b>	<b>GABA and NMDAR-agonists in Human Cerebrospinal Fluid: From Hypothesis-driven to Genome-wide Association Studies</b> Jurjen Luykx	

# FULL SCHEDULE

## TUESDAY, OCTOBER 16, 2012

<b>1:00 PM – 2:30 PM</b>	<b>ORAL PRESENTATION SESSION 8</b> <b><i>Childhood Psychiatric Disorders</i></b>  <b>Chairs:</b> Cathy Barr, Steve Faraone	<i>Hall 13/14</i>
<b>Oral Session 8.1</b>	<b>WTCCC3 and GCAN: A Genome-wide Scan for Anorexia Nervosa</b> Cynthia Bulik	
<b>Oral Session 8.2</b>	<b>Genome-wide Meta-analysis of Internalizing Problems at Age 3</b> Christel Middeldorp	
<b>Oral Session 8.3</b>	<b>Childhood Adversities affect Adult Age Leukocyte Telomere Length of the Finnish Population</b> Iiris Hovatta	
<b>Oral Session 8.3</b>	<b>Childhood Adversities affect Adult Age Leukocyte Telomere Length of the Finnish Population</b> Iiris Hovatta	
<b>Oral Session 8.4</b>	<b>Genome-wide Analysis of Rare Copy Number Variations Reveals PARK2 as a Candidate Gene for Attention-Deficit /Hyperactivity Disorder</b> Anke Hinney	
<b>Oral Session 8.5</b>	<b>A Shared Polygenic Contribution between ADHD in Childhood and Schizophrenia</b> Marian Hamshere	
<b>Oral Session 8.6</b>	<b>Exome Sequencing in Adults with a Family History of ADHD</b> Stefan Johansson	
<b>2:30 PM – 3:00 PM</b>	<b><i>Coffee Break</i></b>	<i>Hall 3 Foyer</i>

# FULL SCHEDULE

## TUESDAY, OCTOBER 16, 2012

3:00 PM – 4:30 PM	<b>SYMPOSIUM 5</b> <i>Using Next Generation Sequencing to Unravel the Etiology of Mood and Psychotic Disorders</i>  <b>Chair:</b> Dick McCombie <b>Co-Chair:</b> Fernando Goes <b>Discussant:</b> Aiden Corvin	<i>Hall 3</i>
Symposium 5.1	<b>Next Generation Sequencing of the DISC1 Locus in Major Mental Illness and Cognition</b> David Porteous	
Symposium 5.2	<b>Family Studies of Psychiatric Disorders</b> Dick McCombie	
Symposium 5.3	<b>Exome Sequencing of Familial Bipolar Disorder</b> Fernando Goes	
Symposium 5.4	<b>Whole-exome Sequencing in Swedish Bipolar Disorder Patients and Matched Controls</b> Pamela Sklar	

# FULL SCHEDULE

## TUESDAY, OCTOBER 16, 2012

3:00 PM – 4:30 PM

### SYMPOSIUM 6

*Hall 6*

#### ***Immunogenetics of Affective Disorders and Cognitive Function***

**Chair:** Bernhard Baune

**Co-Chair:** Sarah Cohen-Woods

**Discussant:** Peter McGuffin

#### **Symposium 6.1**

#### **Immune System in Emotion and Cognitive Processing**

Bernhard Baune

#### **Symposium 6.2**

#### **Immune System in Neuroimaging**

Udo Dannlowski

#### **Symposium 6.3**

#### **Molecular Aspects of the Immune System in Depression**

Patricia Zunszain

#### **Symposium 6.4**

#### **Childhood Stress-reactivity and Inflammatory Mechanisms in Clinical Major Depressive Disorder**

Sarah Cohen-Woods

# FULL SCHEDULE

## TUESDAY, OCTOBER 16, 2012

3:00 PM – 4:30 PM	<b>SYMPOSIUM 7</b> <i>From GWAS Signals to Neural Mechanisms: Neurocognitive, Neuroimaging and Cellular Approaches to Characterizing the Functional Effects of Psychosis Risk Variants</i>  <b>Chair:</b> Gary Donohoe <b>Co-Chair:</b> Katherine Burdick <b>Discussant:</b> Katherine Burdick	Hall 8
Symposium 7.1	<b>CSMD1 Genome-wide Associated Risk Variant For Schizophrenia: Effects on Brain Function and Structure</b> Gary Donohoe	
Symposium 7.2	<b>The Neural Basis of Polygenetic Risk to Bipolar Disorder</b> Andrew McIntosh	
Symposium 7.3	<b>Molecular Mechanisms of the Schizophrenia Susceptibility Gene TCF4</b> Matthew Hill	
Symposium 7.4	<b>Functional Effects of Two Different ANK3 Alleles Associated with Psychosis</b> Sophia Frangou	



# FULL SCHEDULE

## TUESDAY, OCTOBER 16, 2012

3:00 PM – 4:30 PM

### SYMPOSIUM 8

*Hall 13/14*

***Practical, Societal, Ethical, and Legal Challenges for Modern Biobanking and Brainbanking***

**Chair:** Thomas Schulze

**Co-Chair:** Peter Falkai

**Discussant:** Marcella Rietschel

#### Symposium 8.1

**ECIP**

**The DGPPN Cohort Study A National Initiative by the German Association for Psychiatry and Psychotherapy (DGPPN) for Establishing a Large-scale Cohort of Psychiatric Patients**

Heike Anderson-Schmidt

#### Symposium 8.2

**The Biological Psychiatrist's View on BrainNet Europe II (BNE), a European-Wide Association of Brain Banks**

Peter Falkai

#### Symposium 8.3

**“When the Entire Country is a Cohort.” Registries, Cohorts and Biobanks in Norway: Research Opportunities and Ethical, Legal and Societal Implications**

Camilla Stoltenberg

#### Symposium 8.4

**Brain Banking: Ethical Issues and Legal Solutions The UK Experience**

Shawn Harmon

4:30 PM – 6:30 PM

### **Poster Session II**

**Posters 105 – 209**

*See pages 77 – 91 for posters*

*Hall 3 Foyer*

# FULL SCHEDULE

## WEDNESDAY, OCTOBER 17, 2012

7:00 AM – 6:00 PM	<i>Registration</i>	<i>Entrance Hall</i>
7:30 AM – 9:00 AM	<i>2014 Program Committee Meeting</i>	<i>Hall 7</i>
9:00 AM – 10:00 AM	<b>PLENARY SESSION 5</b> <i>The Issue of Missing Heritability Revisited</i> Peter Visscher	<i>Hall 3</i>
10:00 AM – 10:30 AM	<i>Coffee Break</i>	<i>Hall 3 Foyer</i>
10:30 AM – 11:30 AM	<i>The Snow and Ming Tsuang Lifetime Achievement Award Ceremony</i> Award Presentation: James Potash Award Recipient: Raymond R. Crowe	<i>Hall 3</i>
11:30 AM – 1:00 PM	<i>Lunch Break</i>	<i>Hall 3 Foyer</i>

# FULL SCHEDULE

## WEDNESDAY, OCTOBER 17, 2012

1:00 PM – 2:30 PM	<b>ORAL PRESENTATION SESSION 9</b> <i>Epigenetics/Schizophrenia</i> <b>Chair:</b> Ole Mors	<i>Hall 3</i>
Oral Session 9.1	<b>Pre-, Peri- and Postnatal Stress in Human and Non-human Off-spring: A Translational Approach to Study Epigenetic Impact on Depression</b> Vanessa Nieratschker	
Oral Session 9.2	<b>The Role of Genetic and Epigenetic Factors in Future Risk of Bipolar Disorder: A Longitudinal Study in a High-risk Cohort</b> Janice Fullerton	
Oral Session 9.3	<b>A Role for DNA Methylation in Neurological Phenotypes Associated with Declarative Memory</b> Melanie Carless	
Oral Session 9.4	<b>Psychiatric Genomics Consortium (PGC) Doubles Schizophrenia GWAS Sample-size to an Estimated 40,000 Individuals</b> Stephan Ripke	
Oral Session 9.5	<b>Integrating the Spectrum of Genetic Variation and Protein Domain Annotation in Schizophrenia Sequencing</b> Menachem Fromer	
Oral Session 9.6	<b>Gene Co-expression Network Analysis in Schizophrenia</b> Panos Roussos	

# FULL SCHEDULE

## WEDNESDAY, OCTOBER 17, 2012

<b>1:00 PM – 2:30 PM</b>	<b>ORAL PRESENTATION SESSION 10</b> <b>Schizophrenia</b>  <b>Chair:</b> Sven Cichon	<i>Hall 6</i>
<b>Oral Session 10.1</b>	<b>MIR137, A Candidate Gene for Schizophrenia Risk: Genetic Follow-up</b> Ann Collins	
<b>Oral Session 10.2</b>	<b>Clinical and Genetic Validation of a New Sample (CLOZUK) and Sampling Methodology for Genetic Studies of Schizophrenia</b> James Walters	
<b>Oral Session 10.3</b>	<b>Complete Genome Sequence Based Genetic Analysis of Monozygotic Twins Discordant For Schizophrenia</b> Christina Castellani	
<b>Oral Session 10.4</b>	<b>A Population Isolate Reveals a Recessively Inherited Deletion in Schizophrenia and Cognitive Disability</b> Olli Pietilainen	
<b>Oral Session 10.5</b>	<b>Genome-wide Significant Associations in Schizophrenia to ITIH3/4, CACNA1C and SDCCAG8, and Extensive Replication of Associations Reported by the Schizophrenia PGC</b> Marian Hamshire	
<b>Oral Session 10.6</b> <b>ECIP</b>	<b>Analysis of Gene Expression Patterns in Foetal Brains with Schizophrenia and Bipolar GWAS Data</b> Eilis Hannon	

# FULL SCHEDULE

## WEDNESDAY, OCTOBER 17, 2012

1:00 PM – 2:30 PM	<b>ORAL PRESENTATION SESSION 11</b> <i>Functional Genomics and Model Organisms</i> <b>Chairs:</b> Elliott Gershon	<i>Hall 8</i>
Oral Session 11.1	<b>Comparing Genome-wide Association Results for Fear Conditioning in Two Advanced Intercross Mouse Lines: Implications for Gene Identification in Posttraumatic Stress Disorder in Humans</b> Clarissa Parker	
Oral Session 11.2	<b>Effect of Paternal Age on Mutational Burden and Behavior in Mice</b> James Crowley	
Oral Session 11.3	<b>Genome-wide Copy Number Variation in 162 Strains of Laboratory Mice: An Invaluable Tool for Investigators in Psychiatric Genetics</b> Jin Szatkiewicz	
Oral Session 11.4 <b>ECIP</b>	<b>Studies in Humans and Mice Implicate Neurocan in the Etiology of Mania</b> Sandra Meier	
Oral Session 11.5	<b>Biochemical and Genetic Evidence for a Critical Role of the Akt1 Serine-threonine Kinase in Cognition, Depression and Suicide</b> Thomas Franke	
Oral Session 11.6	<b>ZNF804A Knockdown in Human Neurons Derived from iPSCs</b> Herb Lachman	

# FULL SCHEDULE

## WEDNESDAY, OCTOBER 17, 2012

**1:00 PM – 2:30 PM**      **ORAL PRESENTATION SESSION 12**      *Hall 13/14*  
***Affective Disorders/Other Psychiatric Disorders***  
**Chairs:** Gerome Breen, Martin Schalling

**Oral Session 12.1**      **Identifying the Genetic Contribution to Age at Onset in Major Depressive Disorder**  
 Cathryn Lewis

**Oral Session 12.2**      **Genetic Predictors of Antidepressant Side Effects**  
 Karen Hodgson

**Oral Session 12.3**      **GWAS Meta-analysis Targeting Shared Anxiety Disorder Susceptibility**  
 John Hettema

**Oral Session 12.4**      **TMEM132D Gene: Functional Validation Studies of the New Candidate Gene for Anxiety-related Phenotypes**  
 Angelika Erhardt

**Oral Session 12.5**      **Large Repeat Expansions in the C9ORF72 Gene Contribute to a Spectrum of Neurodegenerative Disorders Including Alzheimer's Disease in Caucasians, but not African-Americans**  
**ECIP**      Martin Kohli

**Oral Session 12.6**      **Missense Mutations in CACNG5 are Associated with Schizophrenia and Bipolar Disorder**  
 Yi Lin

**2:30 PM – 3:00 PM**      ***Coffee Break***      *Hall 3 Foyer*

# FULL SCHEDULE

**WEDNESDAY, OCTOBER 17, 2012**

**3:00 PM – 4:30 PM**

## **SYMPOSIUM 9**

*Hall 3*

### ***Genome Sequencing in Bipolar Disorder***

**Chair:** John Kelsoe

**Co-Chair:** Francis McMahon

**Discussant:** Francis McMahon

#### **Symposium 9.1**

#### **Whole Genome Sequencing in an Unusual Family Identifies a Possible Pathogenic Variant in the NTRK1**

John Kelsoe

#### **Symposium 9.2**

#### **Whole-exome Sequencing in Bipolar Disorder**

Jimmy Potash

#### **Symposium 9.3**

#### **The Bipolar Research in Deep Genome and Epigenome Sequencing (BRIDGES) Study**

Margit Burmeister

#### **Symposium 9.4**

#### **Family Genome Sequencing of Bipolar Disorder**

Seth Ament

# FULL SCHEDULE

## WEDNESDAY, OCTOBER 17, 2012

<b>3:00 PM – 4:30 PM</b>	<b>SYMPOSIUM 10</b> <span style="float: right;"><i>Hall 6</i></span> <b><i>Comorbidities and Cross-disorder Analyses in Psychiatric Disorders</i></b>  <b>Chair:</b> Manuel Mattheisen <b>Co-Chair:</b> Preben Bo Mortensen <b>Discussant:</b> Marcella Rietschel
<b>Symposium 10.1</b>	<b>Somatic Comorbidities as Clues for the Etiology of Schizophrenia</b> Preben Bo Mortensen
<b>Symposium 10.2</b>	<b>Estimation of Variance Explained by SNPs for 5 Disorders and Estimation of Genome-wide Pleiotropy between Them</b> Naomi Wray
<b>Symposium 10.3</b>	<b>Causation and Causal Inference in Genetic Epidemiology</b> Christoph Lange
<b>Symposium 10.4</b>	<b>Asthma as a Comorbidity in Psychiatric Disorders</b> Manuel Mattheisen



# FULL SCHEDULE

## WEDNESDAY, OCTOBER 17, 2012

3:00 PM – 4:30 PM

### SYMPOSIUM 11

*Hall 8*

***Identification and Functional Consequence of Genetic Variants Conferring Risk of Psychiatric Disease in Outcome of NEWMEDS Collaboration***

**Chair:** Michael Didriksen

**Discussant:** René S. Kahn

#### Symposium 11.1

#### **Recurrent CNVs Affecting Fecundity**

Hreinn Stefánsson

#### Symposium 11.2

#### **Gene-dosage Dependent Effects of a Copy Number Variant Associated with Schizophrenia Risk on Brain Structure**

Andreas Meyer-Lindenberg

#### Symposium 11.3

#### **A Mouse Model of 15q13.3 Microdeletion Syndrome Recapitulates Several Phenotypes of the Human Syndrome**

Jacob Nielsen

#### Symposium 11.4

#### **A Mouse Model of 15q13.3 Microdeletion Syndrome Display Pre-attentive Processing Deficits and EEG Phenotypes Seen in Schizophrenia**

Michelle Rosgaard Birknow

# FULL SCHEDULE

## WEDNESDAY, OCTOBER 17, 2012

<b>3:00 PM – 4:30 PM</b>	<b>SYMPOSIUM 12</b> <i><b>The Challenge and Future of Depression Genetics</b></i> <b>Chair:</b> Gerome Breen <b>Co-Chair:</b> Douglas Levinson <b>Discussant:</b> Douglas Levinson	<i>Hall 13/14</i>
<b>Symposium 12.1</b>	<b>eQTL Analysis of Glucocorticoid Regulated Gene Expression: New Insights into the Genetics of Major Depression</b> Elisabeth Binder	
<b>Symposium 12.2</b>	<b>Analysis of the Evolutionary Effects and Context of Depression</b> Robert Power	
<b>Symposium 12.3</b>	<b>Depression Genes and Networks: Combining Genotype and Gene Expression Data to Unravel Regulatory Networks Contributing to the Risk of Major Depressive Disorder</b> Sara Mostafavi	
<b>Symposium 12.4</b>	<b>The Current State and Future of Depression Genetics</b> Gerome Breen	
<b>4:30 PM – 6:30 PM</b>	<b>Poster Session III</b> <b>Posters 210 – 316</b> <i>See pages 91 – 104 for posters</i>	<i>Hall 3 Foyer</i>
<b>7:00 PM – 12:00 AM</b>	<b>Networking Dinner –</b> <b>Advance Reservations Required</b>	<i>Au Quai Restaurant</i>

# FULL SCHEDULE

## THURSDAY, OCTOBER 18, 2012

8:00 AM – 11:00 AM      *Registration*      *Entrance Hall*

9:00 AM – 10:00 AM      **PLENARY SESSION 6**      *Hall 3*  
*What Phenotypes Should Psychiatric Geneticists Focus On?*  
Trevor W. Robbins

10:00 AM – 10:30 AM      *Coffee Break*      *Hall 3 Foyer*

10:30 AM – 11:00 AM      *The Theodore Reich Young Investigator Award*      *Hall 3*  
Award Presentation: John Nurnberger  
Award Recipient: Danielle M. Dick  
  
*The Richard Todd Award*  
Award Presentation: John Nurnberger  
Award Recipients: Anke Hinney, Ivonne Jarick  
  
*Independent Oral and Poster Presentation Awards*  
Award Presentation: Thomas Schulze

11:00 AM – 12:00 PM      **PLENARY SESSION 7**      *Hall 3*  
*A Decade of Studies Investigating Gene X Environment Interactions and the Risk for Alcohol Abuse and Related Psychopathology: A Nonhuman Primate Model*  
James Dee Higley

12:00 PM – 12:30 PM      **PROGRAM CONCLUSION**      *Hall 3*

## POSTERS

TOPIC	POSTER NUMBERS	PAGES
ADHD	1 – 10	64 – 65
Affective Disorders	11 – 56	65 – 71
Anxiety Disorders	57 – 68	71 – 73
Autism	69 – 85	73 – 75
Biostatistics/Bioinformatics	86 – 93	75 – 76
Biostatistics/Bioinformatics	105 – 106	77
Dementia	107 – 108	78
ELSI, Counseling and Genetic Testing	109	78
Endophenotypes	110 – 127	78 – 80
Epigenetics	128 – 141	80 – 82
Functional Genomics & Model Organisms	142 – 149	82 – 83
Miscellaneous Other Psychiatric Disorders	150 – 159	83 – 84
Neuroimaging	160 – 170	84 – 86
Other Childhood Psychiatric Disorders	171 – 173	86
Pharmacogenetics	174 – 198	86 – 90
Schizophrenia	210 – 289	91 – 101
Substance Abuse	290 – 298	101 – 102
Technology, Sequencing	299 – 303	102 – 103
ECIP (Substance Abuse)	94 – 104	76 – 77
ECIP (ADHD, Anxiety Disorders, Autism)	199 – 209	90 – 91
ECIP (All Other Topics)	304 – 315	103 – 104

# POSTERS

## ADHD

- 1**      *Childhood ADHD and Obesity: Evidence for a Common Genetic Link*  
Özgür Albayrak, Markus M. Nöthen, Psychiatric GWAS Consortium, Sven Cichon, Klaus-Peter Lesch, Stephen Faraone, Benjamin Neale, Andre Scherag, Johannes Hebebrand, Anke Hinney
- 2**      *Genetics of Preparation in ADHD*  
Björn Albrecht, Daniel Brandeis, Henrik Uebel, Lilian Valko, Hartmut Heinrich, Renate Drechsler, Jonna Kuntsi, Philip Asherson, Hans-Christoph Steinhausen, Aribert Rothenberger, Tobias Banaschewski
- 3**      *AD/HD Subtyping and Genetic Influences on the Occurrence of Comorbid Conditions*  
Arthur Anastopoulos, Melanie Garrett, Erin Morrissey-Kane, Jennifer Sommers, Scott Kollins, Allison Ashley-Koch
- 4**      *Evidence from Polygenic Analysis that Conduct Disorder is Enriched for ADHD Risk Alleles*  
Marian Hamshere, Kate Langley, Joanna Martin, Sharifah Syed, Evangelia Stergiakouli, The Psychiatric GWAS Consortium ADHD, Peter Holmans, Lindsey Kent, Michael Owen, Michael Gill, Michael O'Donovan
- 5**      *Genetic Variation in Genes Encoding 14-3-3 Proteins in ADHD*  
Kaya Jacobsen, Rune Kleppe, Thegna Mavroconstanti, Stefan Johansson, Jan Haavik
- 6**      *Methylphenidate Improves some but not All Measures of Attention, as Measured by the Test of Everyday Attention in Children (TEA-Ch) in Medication, Naïve Children with Attention-Deficit Hyperactivity Disorder (ADHD)*  
Katherine Johnson, Phoebe Hammond, Kate Paton, Edwina Barry, Michael Fitzgerald, Fiona McNicholas, Aiveen Kirley, Ian Robertson, Mark Bellgrove, Michael Gill
- 7**      *Studies of DIRAS2, a Candidate Gene in Adult Attention-Deficit Hyperactivity Disorder (aADHD)*  
Elisabeth Landaas, Lena Weissflog, Heike Weber, Thuy Trang Nguyen, Carina Quast, Elisabeth Binder, Josep Antoni Ramos-Quiroga, Stefan Johansson, Barbara Franke, Jan Buitelaar, Bru Cormand

\*Poster award presentation finalists are notated with an **ECIP** symbol.

## POSTERS

- 8** *Examining the Genetic Overlap of Attention-Deficit Hyperactivity Disorder with Autism Spectrum Disorder Traits*  
Joanna Martin, Marian Hamshere, Michael O'Donovan, Anita Thapar
- 9** *Investigating Biological, Familial and Early Environmental Factors in Children with Attention-Deficit Hyperactivity Disorder with and without Mild Intellectual Disability*  
Joanna Martin, Peter Holmans, Kate Langley, Alka Ahuja, Evangelia Stergiakouli, Marian Hamshere, Michael Owen, Michael O'Donovan, Anita Thapar
- 10** *What is the Total L SNP-associated Heritability for Alcohol and Nicotine Dependence?*  
Nick Martin, Gu Zhu, Penelope Lind, Andrew Heath, Pamela Madden, Michele Pergadia, Grant Montgomery, John Whitfield

## AFFECTIVE DISORDERS

- 11** *For Whom the Clock Ticks: CLOCK and PER3 Genetic Variants Interact with Stressful Life Events to Influence Patterns of Sleep*  
Niki Antypa, Chiara Fabbri, Laura Mandelli, Finiki Nearchou, Chrysostomos Vaipoulos, Costas Stefanis, Alessandro Serretti, Nikos Stefanis
- 12** *Genetics of Bipolar Disorder*  
Susanne Bengesser, Bernd Reininghaus, Hans-Peter Kapfhammer, Stefanie Leopold, Armin Birner, Nina Lackner, Erwin Petek, Anna-Maria Painold, Eva Reininghaus
- 13** *Associations Between Genome-wide Homozygosity and Neuroticism, Anxiety and Depression*  
Dorret Boomsma, Jouke Jan Hottenga, Xiangjun Xiao, Paul Scheet, Erik Ehli, Gareth Davies, James Hudziak, Maria Groen-Blokhuis, Eco de GEus, Abdel Abdellaoui, Brenda Penninx
- 14** *Hint for Gender-specific Association of CREB1 and a History of Suicide Attempts in MDD: Results from a European Multicenter Study on Treatment Resistant Depression*  
Laura Carlberg, Alexandra Schosser, Raffaella Calati, Alessandro Serretti, Isabelle Massat, Sylvie Linotte, Julien Mendlewicz, Daniel Souery, Joseph Zohar, Stuart Montgomery, Siegfried Kasper

## POSTERS

- 15**     *Genome-wide Association Signals in Bipolar Disorder are Enriched for Genetic Variants within Transcription Factor Binding Sites and Expression Quantitative Trait Loci*

David Chen, Akula Nirmala, Liping Hou, Girma Hawariat, Sevilla Detera-Wadleigh, Xueying Jiang, BiGS (Bipolar Genetics Study), Francis McMahon

- 16**     *Association of SORT1 with Bipolar Disorder*

Ditte Demontis, Mette Nyegaard, Ulrik Bølcho, Thomas Werge, Ole Andreassen, Srdjan Djurovic, Ole Mors, Jun Wang, Anders Nykjær, Anders D. Børglum

- 17**     *Alterations in Brain Somatostatin Receptors in Rats Subjected to Chronic Mild Stress, Responding or Not Responding to Imipramine*

Agata Faron-Gorecka, Maciej Kuśmider, Piotr Gruca, Dariusz Zurawek, Magdalena Gaska, Mariusz Papp, Marta Dziedzicka-Wasylewska

- 18**     *Mutation Screening and Tests of Association in the Glutamate Transporter 1 (SLC1A2) Gene in Bipolar Disorder*

Alessia Fiorentino, Andrew McQuillin, Sally Sharp, Adebayo Anjorin, David Curtis, Hugh Gurling

- 19**     *Copy Number Variants in Major Depression Disorder: Looking at Concordance within Affected Sibling Pairs*

Paolo Ottavio Flore, James Rucker, Margarita Rivera, Katherine Tansey, Shaza Alsabban, Sarah Cohen-Woods, Ian Craig, Cathryn Lewis, Anne Farmer, Gerome Breen, Peter McGuffin

- 20**     *Genetics of Suicidal Behavior and Intermediate Phenotypes*

Ina Giegling

- 21**     *A Novel Cis-regulating Polymorphism of the Brain-derived Neurotrophic Factor Gene Expression Moderates the Susceptibility to Depressive Disorders*

Hans Grabe, Alexander Teumer, Claudia Schurmann, Christian Schwahn, Henry Völzke, Harald Freyberger

- 22**     *Heritability and Linkage Analysis of Temperament in Bipolar Disorder*

Tiffany Greenwood, Tatyana Shekhtman, Hagop Akiskal, John Kelsoe

## POSTERS

**23**     *Validity of Two and Three Onset Age Groups in Bipolar Disorder in Three Independent European Samples: Clinical Significance*

Maria Grigoriou-Serbanescu, Marcella Rietschel, Joanna Hauser, Stefan Herms, Piotr Czerski, Xiangqing Sun, Robert C. Elston

**24**     *Replication of Functional Serotonin Receptor Type 3A and B in Bipolar Affective Disorder: A European Multicenter Study*

Christian Hammer, Sven Cichon, Thomas W. Mühleisen, Britta Haenisch, Franziska Degenhardt, Manuel Mattheisen, Gudrun Rappold, Marcella Rietschel, Markus M. Nöthen, Beate Niesler

**25**     *The Risk Variant in ODZ4 for Bipolar Disorder Impacts on Amygdala Activation during Reward Processing*

Angela Heinrich, Anbarasu Lourdasamy, Jelka Tzschope, Tobias Banaschewski, Stephanie Witt, Herta Flor, Gunter Schumann, Marcella Rietschel, Frauke Nees, IMAGEN Consortium

**26**     *Association Study of DRD2 Polymorphisms and Affective Disorders in Case-control and Family Based Study of Patients with Bulgarian and Roma Origin*

Mina Ivanova, Tania Hristova, Nikolina Djurova, Christian Kostov, Vihra Milanova, Vanio Mitev, Ivo Kremensky, Radka Kaneva

**27**     *A Functional Kozak Sequence Mutation in the GRM3 Glutamate Receptor Gene is Associated with Bipolar Disorder*

Radhika Kandaswamy, Andrew McQuillin, Sally Sharp, Alessia Fiorentino, Adebayo Anjorin, Robert Blizard, David Curtis, Hugh Gurling

**28**     *Gene x Environment Interaction in Depressive Disorders: Which Environment of Risk?*

Niki Antypa, Laura Mandelli, Carolyn Petrelli, Alessandro Serretti

**29**     *Genetic Variation in FKBP5 is Associated with the Extent of Stress Hormone System Dysregulation in Major Depression*

Andreas Menke, Torsten Klengel, Monika Rex-Haffner, Manfred Uhr, Florian Holsboer, Elisabeth Binder



## POSTERS

- 30**     *Genetics of Emergent Suicidality during Antidepressive Treatment: Data from a Naturalistic Study on a Large Sample of Inpatients with a Major Depressive Episode*

Richard Musil, Peter Zill, Florian Seemüller, Michael Obermeier, Ilja Spellmann, Marcella Rietschel, Dan Rujescu, Rebecca Schennach, Hans-Jürgen Möller, Michael Riedel

- 31**     *Kynurenines in Mood Disorders: Is There a Role for Genetics?*

Aye-Mu Myint, Matthias Rothermundt, Stephan Claes

- 32**     *High-resolution Melting Analysis of Regulatory Regions of Calcium Channel Genes*

Niamh O'Brien, Sally Sharp, Alessia Fiorentino, David Curtis, Hugh Gurling, Andrew McQuillin

- 33**     *USF1 Regulates Sleep and Depression in Humans*

Hanna Ollila, Joni Turunen, Kaisa Silander, Veikko Salomaa, Jouko Miettunen, Tarja Porkka-Heiskanen, Mikko Härmä, Sampsa Puttonen, Juha Veijola, Vesa Kiviniemi, Tiina Paunio

- 34**     *P2RX7 Reveals Association to Alcoholism and Comorbid Psychiatric Disorders in a Population-based Sample*

Tiina Paunio, Outi Mantere, Pia Soronen, Timo Partonen, Erkki Isometsä, Siddheshwar Utge

- 35**     *Analysis of the Intron 2 VNTR Polymorphism (STin2) of the Serotonin Transporter Gene (SLC6A4) in a Sample of Bulgarian Outpatients with Recurrent Major Depressive Disorder*

Diana Pendicheva, Radka Kaneva, Gyulnas Cebir, Reni Tzveova, Antoaneta Pandurska

- 36**     *Homozygosity and Inbreeding as a Risk for Major Depression*

Robert Power, Matthew Keller, Naomi Wray, Patrick Sullivan, Katherine Tansey, Peter McGuffin, Cathryn Lewis, MDD-PGC Working Group, Gerome Breen

- 37**     *Genome-wide Gene-based Associations in Suicidal Behavior: A Cross-disorder Analysis*

Attila Pulay, János Réthelyi

## POSTERS

**38**     *Identification of Rare Variants in the Susceptibility Gene for Depression SLC6A15 Using Next-generation Sequencing*

Carina Quast, Andre Altmann, Peter Weber, Daniel Bader, Serena Cuboni, Angelika Erhardt, Bertram Müller-Myhsok, Susanne Lucae, Janine Arloth, Elisabeth Binder, Felix Hausch

**39**     *Genetic Relationship between Depression and Obesity: The FTO Gene Opens the Way*

Margarita Rivera, Zainad Samaan, Karen Kapur, Sarah Cohen-Woods, Martin Preisig, Sven Bergmann, Sonia Anand, David Meyre, Cathryn Lewis, Anne Farmer, Peter McGuffin

**40**     *Multi-candidate Association Analysis of Aggression*

Maria Sasvari-Szekely, Zsuzsanna Elek, Anna Szekely, Zsolt Ronai, Zsofia Nemoda, Tibor Nanasi

**41**     *Regulation of TSPAN8 Gene Expression and Its Role in Bipolar Disorder*

Christoph Schartner, Lena Weissflog, Claus-Jürgen Scholz, Heike Weber, Andreas Reif

**42**     *Preliminary Results of a BICC1 and NLGN1 Association Study in MDD: An Attempt to Replicate Previous GWAS Findings*

Alexandra Schosser, Monika Schloegelhofer, Johannes Zeiler, Michaela Schmoeger, Laura Carlberg, Roland Knabl, Luiza Olajossy-Hilkesberger, Rainer Kaufmann, Harald N. Aschauer

**43**     *BDNF Haplotypes Including the Functional Val66Met Polymorphism Associated with Suicide Risk in Male MDD Patients of a European Multicenter Treatment Resistant Depression Study*

Alexandra Schosser, Raffaella Calati, Alessandro Serretti, Isabelle Massat, Konstantinos Papageorgiou, Sylvie Linotte, Julien Mendlewicz, Daniel Souery, Joseph Zohar, Stuart Montgomery, Siegfried Kasper

**44**     *Alopecia Areata: Genetic and Psychological Factors*

Jana Strohmaier, Fabian Streit, Henriette Wagner, Frederike Schirmbeck, Silke Redler, Rene Breuer, Sandra Meier, Stephanie Witt, Regina Betz, Markus M. Nöthen, Marcella Rietschel

## POSTERS

**45**     *Investigation of a Polymorphic Repeat in the Retinoic Acid Induced 1 Gene in Perinatal Depression*

Ene Choo Tan, Jasmine Ng, Helen Chen, Tze-En Chua, Chih-Huei Choo, Theresa Lee, Suzanne Hui-San Tan

**46**     *CACNA1C Risk Variant and Amygdala Activity in Bipolar Disorder, Schizophrenia and Healthy Controls*

Martin Tesli, Kristina Skaatun, Olga Therese Ousdal, Andrew Anand Brown, Christian Thoresen, Ingrid Agartz, Ingrid Melle, Srdjan Djurovic, Jimmy Jensen, Ole Andreassen

**47**     *The Role of the HLA System in Major Depression: A Microarray Study on Human Fibroblast Samples*

Andrea Vereczkei, Károly Mirnics

**48**     *MicroRNA Expression Profiling of a Genetic Animal Model of Depression-like States*

Yabin Wei, Philippe Melas, Gregers Wegener, Aleksander Mathé, Catharina Lavebratt

**49**     *DGKH: Candidate Gene for Bipolar Disorder*

Lena Weissflog, Heike Weber, Elisabeth Landaas, Nils Becker, Nelli Bossert, Elisabeth Binder, Klaus-Peter Lesch, Andreas Reif

**50**     *Association of PCLO with HPA Axis Activity and Clinical Symptoms in Patients with Depression*

Stephanie Witt, Christine Kühner, Flor Herta, Carsten Diener, Marcella Rietschel, Bettina Ubl

**51**     *Transcription Profiling and Pathway Analysis in Euthymic and Manic Bipolar Patients and Controls*

Stephanie Witt, Dilafruz Juraeva, Carsten Sticht, Christine Kohl, Vanessa Nieratschker, Helene Dukal, Manuel Mattheisen, Stefan Herms, Christian Witt, Markus M. Nöthen, Marcella Rietschel

## POSTERS

- 52**     *Association Between SNPs in the Promoter Region of the Tryptophan Hydroxylase 2 Gene (TPH2) and the Hypothalamic-Pituitary-Adrenocortical (HPA) Axis Dysregulation in Patients with Major Depression*

Peter Zill, Thomas Baghai, Cornelius Schüle, Rainer Rupprecht, Hans-Jürgen Möller, Brigitta Bondy

- 53**     *RNaseq Analysis using the Pipeline Graphical Workflow Environment in Neuropsychiatric Disorders*

Federica Torri, Ivo Dinov, Alen Zamanyan, Sam Hobel, Alex Genco, Marquis Vawter, Petros Petrosyan, Zhizhong Liu, Paul Eggert, Ilaria Guella, Jonathan Pierce

- 54**     *Genetic Risk Factors for Interferon-induced Depression*

Marc Udina, Moreno-España Jose, Navinés Ricard, Giménez Dolors, Langohr Klaus, Gratacós Mònica, Solà Ricard, Martín-Santos Rocío

- 55**     *Genes of the Serotonin System and Depression in Patients with Coronary Heart Disease*

Alexander Dolzhikov, Beatrice Volel, Margarita Alfimova, Vera Golimbet

- 56**     *Psychopathological Disorders (Depression) on Chronic Hemodialysis Patients at EMMS Nazareth: Identification and Assessment*

Joseph Farah, Zaher Armaly, Bishara Bisharat, Abdalla Bowirrat

## ANXIETY DISORDERS

- 57**     *The BclI Polymorphism in the Glucocorticoid Receptor Gene is Associated with Emotional Memory Performance in Healthy Individuals*

Sandra Ackermann, Angela Heck, Bjoern Rasch, Andreas Papassotiropoulos, Dominique J. F. de Quervain

- 58**     *Psychological Treatment Response of Cognitive Behaviour Therapy for Social Anxiety Disorder and Genetic Polymorphisms in Three Candidate Genes*

Evelyn Andersson, Erik Hedman, Catharina Lavebratt, Martin Schalling, Nils Lindefors, Christian Rück

## POSTERS

- 59**     *The Interaction of the Catechol-O-Methyltransferase Val158Met Polymorphism and Early Life Experiences Affects an Intermediate Endophenotype of Anxiety Disorders*  
Christian Baumann, Andreas Reif, Katharina Domschke, Benedikt Klauke, Paul Pauli, Jürgen Deckert
- 60**     *Are TMEM Genes Potential Candidate Genes for Panic Disorder?*  
Noomi Gregersen, Henriette N. Buttenschøn, Hans A. Dahl, Ann S. Kristensen, David P. D. Woldbye, August G. Wang, Sofus Joensen, Angelika Erhardt, Anders D. Børglum, Ole Mors
- 61**     *Evaluation of Anxiolytic Effect of the Essential Oil of Myrtus Communis in Mice*  
Eyob Kebede
- 62**     *The Association of 5-HT<sub>3</sub> Receptor Gene Polymorphisms with Obsessive-Compulsive Disorder*  
Min Jung Koh, Se Joo Kim, Jee In Kang, Kee Namkoong, Chan-Hyung Kim
- 63**     *Investigating Telomere Length and Psychological Stress in South African Rape Victims*  
Stefanie Malan, Lindi Martin, Martin Kidd, Soraya Seedat, Sian Hemmings
- 64**     *The Role of Serotonergic Genes and Environmental Stress on the Development of Depressive Symptoms and Neuroticism*  
Niky Antypa, Laura Mandelli, Finiki Nearchou, Chrysostomos Vaiopoulos, Costas N. Stefanis, Alessandro Serretti, Nikos Stefanis
- 65**     *Genetic Studies of Oxidative Stress Reveal the Mechanism by Which GLO1 Influences Behavior*  
Abraham Palmer, Margaret Distler, Leigh Plant, Greta Sokoloff, Andrew Hawk, Ivy Aneas, Gerald Wuenschell, John Termini, Marcelo Nobrega, Stephen Meredith
- 66**     *Individual Differences in Presentation of Anxiety and Affective Disorders Predict Genetically Determined Differences of Brain Limbic System: The Three Human Personality Type Model as a Guide for Clinicians and Researchers*  
Anastasia Stathopoulou, George Paschalidis

## POSTERS

- 67**     *Investigating the Effect of Early Postnatal Maternal Separation and Adult Restraint Stress on Gene Expression and DNA Methylation in the Rat Ventral Hippocampus*

Ilze Uys, Sian Hemmings, Soraya Seedat, Vivienne Russell, Jacqueline Dimatelis

- 68**     *Allelic Variation in CRHR1 Predisposes to Panic Disorder*

Heike Weber, Katharina Domschke, Jürgen Deckert, Andreas Reif

## AUTISM

- 69**     *Strong Genetic Evidence of Protocadherin-alpha (PCDHA) as a Susceptibility Gene for Autism*

Anitha Ayyappan, Ismail Thanseem, Kazuhiko Nakamura, Kazuo Yamada, Yoshimi Iwayama, Tomoko Toyota, Toshiro Sugiyama, Masatsugu Tsujii, Takeo Yoshikawa, Norio Mori

- 70**     *Study of Single Nucleotide Polymorphism in Chromosomes 11 and 15 in Autism Spectrum Disorder*

Daiga Bauze, Linda Piekuse, Laura Keverē, Zane Kronberga, Iveta Vaivade, Kristine Viksne, Arnis Rizevs, Raisa Andrezina, Janis Klovins, Baiba Lace

- 71**     *The Brain and Body Genetic Resource Exchange (BB-GRE): A Recall by Genotype Bioresource for Translational Research into Neurodevelopmental Disorders*

Sarah Curran, Joo Wook Ahn, Richard Dobson, Abhishek Dixit, Johan Thygesen, Maria Tropeano, Christine Patch, Shelha Mohammed, Paul Gringras, Patrick Bolton, Caroline Mackie Ogilvie

- 72**     *Mutation Screen and Copy Number Detection of NLGN4 in a Chinese Population with Autism Spectrum Disorder*

Xiaohong Gong, Yanyan Liu, Hongyan Wang

- 73**     *Association between the CLOCK Gene and Autism Symptoms in a Swedish Twin Sample*

Lina Jonsson, Anna Zettergren, Lars Westberg, Henrik Anckarsäter, Paul Lichtenstein, Jonas Melke

- 74**     *OPEN BOARD*

## POSTERS

**75**     *Detection and Characterization of Copy Number Variations in Jewish Israeli Autistic Patients*

Yoav Kohn, Lior Greenbaum, Omri Teltsh, Noa Vardi, Dexter Hadley, Cecilia Kim, Bernard Lerer, Ditzza Zachor, Hakon Hakonarson

**76**     *The Association between Autism Spectrum Conditions and Psychosis: Investigating the Importance of Copy Number Variants*

Felicity Larson, Digby Tantam, Tessa Webb, John Arrand, Peter Jones, Tony Holland

**77**     *The Metabotropic Glutamate Receptor Theory in Fragile X Syndrome: Testing the Safety and Efficacy of AFQ056/Mavoglurant in Adults and Adolescents*

Julien Lustig, Angel Angelov, Barbara Koumaras, Carole Collober, Farah Hossain, Marc Brinkman, George Apostol, Ana Graf, Florian von Raison, Thomas Jaecklin

**78**     *Rare Variant Analyses Show Association with Autism Spectrum Disorder*

Eden Martin, Nicole Dueker, Michael Schmidt, Michael Cuccaro, John Gilbert, Johnathan Haines, Margaret Pericak-Vance, Anthony Griswold, Holly Cukier

**79**     *Rare De Novo Copy Number Variations in Japanese Autism Subjects*

Ismail Thanseem, Kazuhiko Nakamura, Masafumi Ohtusubo, Ayyappan Anitha, Katsuaki Suzuki, Masatsugu Tsujii, Shinsei Minoshima, Norio Mori

**80**     *Case-control Mapping of 16p13.11 Copy Number Variation in Neurodevelopmental Disorders Implicates a Core Pathogenic Region Including the Genes NDE1 and ABCC6*

Maria Tropeano, Joo Wook Ahn, Richard Dobson, Gerome Breen, James Rucker, Peter McGuffin, Evangelos Vassos, Caroline Ogilvie, Sarah Curran, David A. Collier

**81**     *Neurodevelopmental Phenotype in Pitt-Hopkins Syndrome*

Ingrid van Balkom, Raoul Hennekam

**82**     *Glutamatergic Candidate Genes in Autism Spectrum Disorders*

Regina Waltes, Veronika Delcheva, Andreas Chiochetti, Johannes Gfesser, Laura Kämpfer, Tina Kleinböck, Anette Voran, Jobst Meyer, Sabine M. Klauck, Eftichia Duketis, Christine M. Freitag

## POSTERS

- 83**     *Genetic Studies of Consanguineous Pakistani Pedigrees with Pervasive Developmental Disorders*

Lan Xiong, Sirui Zhou, Mehtab Christian, Muhammad Qasim Brohi, Zohair Ali Nanjiani, Marie-Pierre Dubé, Laurent Mottron, Guy Rouleau

- 84**     *Association between Polymorphisms in Sex Steroid Related Genes and Autism Symptoms in a Swedish Population*

Anna Zettergren, Lina Jonsson, Jonas Melke, Henrik Anckarsäter, Paul Lichtenstein, Lars Westberg

- 85**     *Variants of the Oxytocin Receptor Gene Associate with Human Social Behaviors*

Lars Westberg

## BIostatistics/BIOinformatics

- 86**     *Analysis of Genotyping Reliability in Multiplex Technical Replicates of Affymetrix Human SNP Array 6.0 Microarrays*

Bianca Auschra, Christian Vogler, Virginie Freytag, Leo Gschwind, Annette Milnik, Dominique de Quervain, Andreas Papassotiropoulos

- 87**     *Allele Specific Expression Analysis of Human Transcriptome Suggests Distribution of Chromatin States between Homologous Chromosomes*

Maxim Barenboim, Nighat Noureen, Thomas Manke

- 88**     *The Essentials for Schizophrenia Phenomics*

Amy Butler, Desmond Campbell

- 89**     *Family Load Estimation in Schizophrenia, Bipolar and Anxiety Disorders – An Approach to Target the Selection of Families in Genetic Studies*

Dorte Helenius, Hans-Christoph Steinhausen, Povl Munk Jørgensen, Thomas Werge

- 90**     *Linking GWAS and Genetic Heterogeneity of Brain Cells in Neuropsychiatric Diseases: A Meta-analysis*

Ivan Iourov, Svetlana Vorsanova, Yuri Yurov

- 91**     *YAMAS Provides a New Imputation-free Meta-analysis Approach for Differing Genome-wide SNP Panels*

Markus Leber, Christian Meesters, Christine Herold, Marina Angisch, Manuel Mattheisen, Thomas W. Mühleisen, Marcella Rietschel, Thomas G. Schulze, Sven Cichon, Markus M. Nöthen, Tim Becker



## POSTERS

**92**     *Mechanism of Schizophrenia: Bioinformatic Approach*  
Evaristus Nwulia, Maria Hipolito, Narayan Rai, Ayalew Muluneh

**93**     *GWAS on a Desktop: Using Next-gen Sequencing to Support Assembly, Analysis and GWAS Comparisons on a Desktop Computer*  
Thomas Schwei, Timothy Durfee Durfee, Amber Pollack-Berti, Katherine Maxfield, Matthew Kevser, Daniel Nash, Jennifer Stieren, Schuyler Baldwin, Richard Nelson, Frederick Blattner

## SUBSTANCE ABUSE

**94**     *Association Study of the Serotonin Transporter Polymorphism rs12150214 with Heroin Addiction in Bulgarian Roma*  
**ECIP** Olga Beltcheva, Gyulnas Cebir, Momchil Nikolov, Emilia Boiadjieva, Antoaneta Galabova, Dorita Krasteva, Elena Jankova, Vanio Mitev, Ivo Kremensky, Radka Kaneva, Alexandre Todorov

**95**     *Alterations in Hippocampal Gene Expression and Epigenetic Methylation in a Mouse Model of Fetal Alcohol Spectrum Disorder: Towards Understanding Cognitive Deficits*  
**ECIP** Eric Diehl, Ben Laufer, Katherine Mantha, Morgan Kleiber, Shiva Singh

**96**     *mGluR5 Receptors Located on Dopamine D1-expressing Neurons Mediate Natural and Drug Conditioned Seeking Behaviours through the Endocannabinod System*  
**ECIP** Manuela Eisenhardt

**97**     *Association of NPY Receptor 2 Polymorphism with Alcohol Dependence*  
**ECIP** Josef Frank, Sven Cichon, Jens Treutlein, Monika Ridinger, Michael Soyka, Norbert Scherbaum, Markus M. Nöthen, Karl Mann, Falk Kiefer, Marcella Rietschel

**98**     *Novel Quantitative Trait Locus for an Alcoholism-related Phenotype*  
**ECIP** Mark Kos, David Glahn, Melanie Carless, Rene Olvera, Jack Kent, Tom Dyer, Harald Goring, Joanne Curran, Ravindranath Duggirala, John Blangero, Laura Almasy

## POSTERS

- 99** *Alterations in Genomically Imprinted miRNA and snoRNA Clusters in a*  
**ECIP** *Mouse Model of Fetal Alcohol Spectrum Disorders (FASD)*

Benjamin Laufer, Katherine Mantha, Morgan Kleiber, Eric Diehl, Sean Addison, Shiva Singh

- 100** *Elevated Exhaled Carbon Monoxide in Interaction with Serotonin*  
**ECIP** *Transporter Gene is Associated with Depressive Symptoms in Smokers*

Judit Lazary, Iren Csala, Peter Dome, Gabor Faludi

- 101** *Heterogeneous Behavioral Manifestations in a Mouse Model of Fetal*  
**ECIP** *Alcohol Spectrum Disorders (FASD): Assessing the Effects of*  
*Gestational Time and Gene Expression*

Katarzyna Mantha, Morgan Kleiber, Benjamin Laufer, Shiva Singh

- 102** *Pathway-based Analysis for Alcohol Dependence*

**ECIP**

Jens Treutlein, Dilafruz Juraeva, Sven Cichon, Josef Frank, Manuel Mattheisen, Falk Kiefer, Markus M. Nöthen, Benedikt Brors, Marcella Rietschel, German Study of the Genetics of Addiction (Alcoholism)

- 103** *A Case-control Genetic Study of ZNF699 Gene Markers*  
**ECIP** *in the University College London Alcohol Dependence Sample*

Michael Way, Marsha Morgan, Hugh Gurling, Marsha Morgan, Andrew McQuillin

- 104** *Profiling DNA Methylation in PERIOD 1, Negative Life Events and*  
**ECIP** *Alcohol Intake in Adolescents*

C. Peng Wong, Tianye Jia, Steven Lubbe, Anna Cattrell, Barbara Ruggeri, David Stacey, Fabiana Carvalho, Eva Loth, Jonathan Mill, Sylvane Desrivieres, Gunter Schumann

## BIostatistics/Bioinformatics

- 105** *High Density Imputation of the ASD-associated MACROD2 Gene Region*  
*Identifies eQTL for Plausible ASD-related Genes*

Kenny Graham, Anke Hinney

- 106** *Genotyping Accuracy in a Series of Technical Replicates of Affymetrix*  
*Human SNP Array 6.0 Microarrays*

Christian Vogler, Bianca Auschra, Virginie Freytag, Leo Gschwind, Annette Milnik, Dominique de Quervain, Andreas Papassotiropoulos

## POSTERS

### DEMENTIA

**107** *Genetic Risk Factors for Depression in Alzheimer's Disease Patients*  
Holger Jahn, Cüneyt Demiralay, Jan Lehmbeck, Sonke Arlt

**108** *Impaired Cognitive Function in a Non-aging Non-demented Population is Associated with an Interaction Between Major Depressive Disorder and the TOMM40 Risk Allele*

Martyn McFarquhar, Rebecca Elliott, Ian Anderson, J. F. William Deakin, Gabriella Juhasz

### ELSI, COUNSELING AND GENETIC TESTING

**109** *Genetic Services and Autism Spectrum Disorder: Parental Knowledge, Awareness and Attitudes*

Michael Cuccaro, Joycelyn Lee, Kayla Czape, Abigail Rupchock, Susan Hahn, Eden Martin, Michael Alessandri, Margaret Pericak-Vance

### ENDOPHENOTYPES

**110** *Family Based Genome-wide Association Study (GWAS) of Externalizing Disorders*

Fazil Aliev, Bradley Todd Webb, Marc Schuckit, Bernice Porjesz, Madhavi Rangaswamy, Tatiana Foroud, Danielle M. Dick, Jessica Salvatore, Leah Wetherill Flury, COGA Collaborators

**111** *Studying Brain-based Intermediate Phenotypes in Schizophrenia: From Candidate Genes to Genome-wide Approaches*

Stefan Ehrlich, Johanna Hass, Esther Walton, Stefan Brauns, Holger Kirsten, Veit Rößner, Tonya White, Markus Scholz, Sven Cichon, Randy Gollub, Vince Calhoun

**112** *A Joint Endophenotype and Polygenic Approach Reveals Association between Neurocognitive Gene Sets and Psychiatric Disorders*

Carla Fernandes, Andrea Christoforou, Thomas Espeseth, Sudheer Giddaluru, Thomas Werge, Sven Cichon, Ole A. Andreassen, Vidar M. Steen, Stéphanie Le Hellard

## POSTERS

- 113** *Neuropsychological Profile of Adults with Down Syndrome and Moderate Intellectual Disability: Verbal and Visual-spatial Processing*  
Camino Fernández Alcaraz, Fernando Carvajal Molina
- 114** *Investigating the Association between Rare Copy Number Variation in Neurodevelopmental Disorders: Autism Spectrum Disorders and Schizophrenia*  
Louise Gallagher, Eleisa Heron, Richard Anney, Aiden Corvin, Alison Merikangas
- 115** *Application of MRI Anatomical Changes as Bipolar Disorder Biomarkers*  
Suzanne Gallagher, Hugo Sandoval, Michael Escamilla
- 116** *The Stability of PrePulse Inhibition of the Startle in Schizophrenic Patients: A 6 year Follow-up Study of a Cohort of First-episode Drug-naïve Patients and Matched Healthy Controls*  
Trine Bjørg Hammer, Birte Glenthøj, Bob Oranje
- 117** *A Genome-wide Association Study of a Brain-based Phenotype Related to Schizophrenia*  
Johanna Hass, Esther Walton, Holger Kirsten, Jingyu Liu, Randy Gollub, Veit Rößner, Markus Scholz, Sven Cichon, Vince Calhoun, Stefan Ehrlich
- 118** *Genetic Effects on Basic Human Information Processing are Moderated by Age - Results from Two Genome-wide Association Studies*  
Marcus Ising, Angela Heck, Lieven Schenk, Dan Rujescu, Nicola Armstrong, Karen A. Mather, Perminder S. Sachdev, Simone Reppermund
- 119** *Dopamine-D2 (DRD2) and Type 3 Metabotropic Glutamate Receptor (GRM3) Genotypes are Differentially Associated with Eye Tracking Performance in Untreated Patients with Psychotic Disorders*  
Rebekka Lencer, Jeffrey R. Bishop, Margret S. H. Harris, James L. Reilly, Shitalben R. Patel, Rick Kittles, Konasale M. Prasad, Vishwajit L. Nimgaonkar, Matcheri S. Keshavan, John A. Sweeney
- 120** *Pleiotropic Effects of COMT Val158MET Polymorphism on Working Memory and Emotional Episodic Memory*  
Annette Milnik, Christian Vogler, Klara Spalek, Dominique J. F. de Quervain, Andreas Papassotiropoulos

## POSTERS

**121**    *The Interaction Between a Composite Genetic Risk Score and Birth Weight is Associated with Social Anhedonia*

Johanna Salo, Jaana Suvisaari, Juha Veijola, Jouko Miettunen, Pirjo Mäki, Erika Lauronen, Marjo-Riitta Järvelin, Olli Pietiläinen, Eero Kajantie, Tiina Paunio

**122**    *Association of DRD4\_VNTR and Performance in Speeded Tasks*

Anna Veres-Szekély, Rozsa Katonai, Zsolia E. Horvath, Maria Sasvári

**123**    *Effect of the NCAN Genetic Risk Variant on Cortical Folding in Schizophrenia*

Christoph Schultz, Thomas Mühleisen, Igor Nenadic, Kathrin Koch, Gerd Wagner, Claudia Schachtzabel, Markus M. Nöthen, Sven Cichon, Heinrich Sauer, Ralf Schlößer

**124**    *Association Analysis of Bipolar Risk Variants with mRNA Blood Levels, Neurocognitive Factors and Structural MRI*

Ida Sønnderby, Per Ivar Finseth, Martin Tesli, Ingrid Agartz, Ingrid Melle, Kjetil Sundet, Gunnar Morken, Ole A. Andreassen, Srdjan Djurovic

**125**    *Cumulative Genetic Risk Predicts Dorsolateral Prefrontal Cortex Activity in Schizophrenia Patients*

Esther Walton, Jessica Turner, Randy Gollub, Anastasia Yendiki, Scott Sponheim, Vince Calhoun, Stefan Ehrlich

**126**    *MC4R Gene, Weight Regulation, and Eating Behaviour in Binge Eating Disorder*

Zeynep Yilmaz, Caroline Davis, Allan S. Kaplan, Robert D. Levitan, James Kennedy

**127**    *Literature Mining for the Discovery of Hidden Connections between Endophenotypes and Candidate or Putative Genes in Antisocial Personality Disorder*

Jorge Cuartas Arias, Sebastián Pulido Gómez, Carlos Alberto López Jaramillo

## EPIGENETICS

**128**    *Prenatal Programming of Gene Expression; Effect of Mother's Attachment Style on Offspring's Methylation of DNA*

Antti-Jussi Ämmälä, Jukka Alasaari, Linnea Karlsson, Kaisa Silander, Marjukka Pajulo, Hasse Karlsson, Tiina Paunio

## POSTERS

**129** *Environmental Stress Affects Genome-wide DNA Methylation in a Finnish Nurse Cohort*

Antti-Jussi Ämmälä, Jukka Alasaari, Kaisa Silander, Mikko Härmä, Sampsa Puttonen, Tiina Paunio

**130** *Genome-wide Studies of Methylation in the Mouse Frontal Cortex Reveals Novel Imprinted Differential Methylated Regions and Non-CG Methylation*

Cathy Barr, Wei Xie, Yu Feng, Karen Wigg, Emma Dempster, Lissette Gomez, James Eubanks, Bing Ren

**131** *A Model of Epigenetics Effects on Neuroimmune Mechanisms of Mental Illness*

Bernhard Baune, Catharine Jawahar

**132** *The Nature of the Epigenetic Contribution to Psychosis*

Timothy Crow, Stuart Leask

**133** *Monoamine Oxidase A Gene-environment and Epigenetic Associations with Depression in Females, and Association of Early Parental Death with Hypermethylation of the Glucocorticoid Receptor*

Catharina Lavebratt, Philippe Melas, Yabin Wei, Chloe Wong, Louise Sjöholm, Elin Åberg, Jonathan Mill, Martin Schalling, Yvonne Forsell

**134** *Epigenetic Changes in Alcohol-dependent Individuals: Influence of Withdrawal Characteristics?*

Ulrich Preuss, Gabriele Koller, Brigitta Bondy, Michael Soyka, Peter Zill

**135** *Epigenetic Regulation of Stress Reactivity Genes in Adolescents: The TRAILS Study*

Lisette van der Knaap, H. Riese, A. J. Oldehinkel, J. J. Hudziak, F. C. Verhulst, F. V. A. van Oort

**136** *DNA Methylation of the Glucocorticoid Receptor Gene Promoter is Linked to PTSD Risk in Genocide Survivors*

Vanja Vukojevic, Iris T. Kolassa, Angela Heck, Matthias Fastenrath, Christian Vogler, Phillipe Demougin, Fabian Peter, Attila Stetak, Thomas Elbert, Dominique J. F. de Quervain, Andreas Papassotiropoulos

## POSTERS

**137**    *Epigenetic Alterations in Neuroblastoma Cells after Antipsychotic Treatment*

Peter Zill, Sylvia de Jonge, Hans-Jürgen Möller, Brigitta Bondy

**138**    *Global DNA Methylation Analysis in Major Depression*

Peter Zill, Thomas Baghai, Cornelius Schüle, Hans-Jürgen Möller, Rainer Rupprecht, Brigitta Bondy

**139**    *Epigenetic Investigation of the Angiotensin Converting Enzyme (ACE) Gene in Depression*

Peter Zill, Thomas Baghai, Cornelius Schüle, Christoph Born, Clemens Früstück, Rainer Rupprecht, Gabriella Bedarida, Hans-Jürgen Möller, Brigitta Bondy

**140**    *GWAS Analysis of Polymorphic CpG Sites: Genetic Association in Suicide Attempt and Schizophrenia*

Vincenzo De Luca, Clement Zai, James Kennedy, Carol Borlido, Gina Polsinelli

**141**    *Epistatic Interactions between Histone Deacetylase (HDAC) Genes Influence the Risk of Schizophrenia: A Family-based Association Study*

Oussama Kebir

## FUNCTIONAL GENOMICS AND MODEL ORGANISMS

**142**    *GABAergic Dysfunction in a Genetically Modified Mouse Model of Schizophrenia and Bipolar Disorder*

Jane Christensen, Irina Vardya, Per Qvist, Mette Nyegaard, Ole Mors, Kimmo Jensen, Anders D. Børglum

**143**    *High Throughput Proteomics Analysis of BRD1 Identifies PBRM1 and YWHAE as BRD1 Interaction Partners*

Tue Fryland, Johan Palmfeldt, Jane H. Christensen, Niels Gregersen, Mette Nyegaard, Anders D. Børglum, Thomas J. Corydon, Ole Mors

**144**    *Switching Set is Modulated by NOS1ex1f-VNTR*

Juliane Kopf, Ariana Kamawal, Thomas Dresler, Tim Hahn, Philipp Reicherts, Andreas Reif

## POSTERS

- 145** *Molecular Mechanisms of D-cycloserine in a Fear Extinction Posttraumatic Stress Disorder (PTSD) Animal Model*

Stefanie Malan, Sian Hemmings, Soraya Seedat

- 146** *Conditional Inactivation of the Schizophrenia and Bipolar Disorder Associated Brd1 Gene in the Central Nervous System of Mice*

Veerle Paternoster, Jane H. Christensen, Per Qvist, Anne Hedemand, Mette Nyegaard, Ole Mors, Anders D. Børglum

- 147** *A Novel BRD1 Knock-out Mouse Model for Schizophrenia Exhibits Cognitive Deficits, PPI Disruption and Increased Drug-induced Locomotor Hyperactivity*

Per Qvist, Anto P. Rajkumar, Jane H. Christensen, Mette Nyegaard, Kim Fejgin, Ole Mors, Michael Didriksen, Anders Børglum

- 148** *A Novel Gene Knock-out Mouse Model Exhibits Reversible Depressive Phenotype and Cognitive Deficits*

A. P. Rajkumar, Per Qvist, Jane H. Christensen, Mette Nyegaard, Gudrun Winther, Ole Mors, Gregers Wegener, Anders Børglum

- 149** *SF2/ASF-1 Regulates Pre-mRNA Splicing in Tryptophan Hydroxylase-2*

Xiaodong Zhang, Jing Du, Shiwei Cai, Weidong Li, Lin He

## MISCELLANEOUS OTHER PSYCHIATRIC DISORDERS

- 150** *The Prevalence of Depression and its Associated Factors among Resident Doctors Working in a Training Hospital in Karachi, Pakistan*

Sobia Haqqi

- 151** *Area-specific Distribution of Neuronal Aneuploidy in the Alzheimer's Disease Brain*

Ivan Iourov, Svetlana Vorsanova, Thomas Liehr, Yuri Yurov

- 152** *A Genome-wide Association Study of Suicidal Behaviour in Two Independent Bipolar Disorder Samples*

Clement Zai, James Kennedy, Vanessa Goncalves, Vincenzo de Luca, Arun Tiwari, John Strauss, Jo Knight, John Vincent



## POSTERS

**153**    *Genetic Epidemiological Studies in Twins with Mental Disorders in Cuba*  
Beatriz Marcheco-Teruel, Cabrera-Cruz Niviola, Fuentes-Smith Evelyn, Lage-Castellanos Agustin, Valdés-Sosa Mitchell, Cobas-Ruiz Marcia, Mors Ole

**154**    *The Genes in Irritable Bowel Syndrome Research Network Europe (GENIEUR)*  
Beate Niesler

**155**    *Slc19a3: Screening and Association with Wernicke-Korsakoff's Syndrome*  
Giorgia Quadri, Andrew McQuillin, Sally Sharp, Gregory Lydall, Irene Guerrini, Allan Thomson, Hugh Gurling

**156**    *Genome-wide Association Study of Criminal Behavior in Finnish Cohort of Criminal Offenders*  
Marja-Riitta Rautiainen, Jari Tiihonen, Tiina Paunio

**157**    *Discovery of Clinical and Metabolic Genetic Syndromes Manifesting as Neuropsychiatric Disorders*  
Joyce So, James Kennedy

**158**    *The UST Variant Linked to the Job-related Exhaustion Associates with General Exhaustion in the Large Finnish Population Cohort*  
Sonja Sulkava, Hanna M. Ollila, Kirsi Ahola, Timo Partonen, Johannes Kettunen, Maarit Lappalainen, Veikko Salomaa, Tiina Paunio

**159**    *A Systematic Review and Meta-analysis of Genetic Associations with Violence and Aggression*  
Evangelos Vassos, David Collier, Seena Fazel

## NEUROIMAGING

**160**    *Epistatic Effects of CACNA1C and PCLO Depression Risk Alleles on Subgenual Cingulate fMRI Response during Self-referential Processing*  
Anne Assmann, Joram Soch, Adriana Barman, Sylvia Richter, Susanne Erk, Henrik Walter, Eckart Gundelfinger, Constanze Seidenbecher, Bjoern Schott

## POSTERS

**161**     *Quantitative Genetic Modeling of Cortical Thickness Change in Twin Pairs Discordant for Schizophrenia: A Longitudinal Study*

Marc Bohlken, Caroline van Baal, Neeltje van Haren, Hugo Schnack, René Kahn, Hilleke Hulshoff Pol, Anna Hedman

**162**     *Systematic Search for Genetic Factors Influencing the Thickness of the Cerebral Cortex*

Sven Cichon, Christine Herold, Florian Siedek, Svenja Caspers, Stefan Herms, Per Hoffmann, Markus M. Nöthen, Tim Becker, Katrin Amunts, Thomas Mühleisen

**163**     *Genome-wide Analysis to Identify Genetic Correlates of Brain Imaging Measures and Cognitive Test Performance in the Betula Study*

Sudheer Giddaluru, Anders Lundqvist, Alireza Salami, Sven Cichon, Stéphanie Le Hellard, Lars Nyberg

**164**     *Association of SNPs in the FKBP5 Gene Region with Hippocampal and Amygdala Volume in a Healthy Control Sample*

Leo Gschwind, Annette Milnik, Christian Vogler, Andreas Papassotiropoulos, Dominique de Quervain

**165**     *An Association between DISC1 Genotype and White Matter Integrity using DTI*

Kaya Jacobsen, René Westerhausen, Margaretha Dramsdahl, Kerstin von Plessen, Stefan Johansson, Jan Haavik

**166**     *The Effect of Genome-wide Supported Variant in CACNA1C on Functional Correlates of Episodic Memory Encoding and Retrieval*

Tilo Kircher, Stephanie Witt, Markus M. Nöthen, Marcella Rietschel, Axel Krug

**167**     *Common Variants in Psychiatric Risk Genes are Associated with Brain Structure at Birth*

Rebecca Knickmeyer, Jiaping Wang, Hongtu Zhu, Xiujuan Geng, Sandra Woolson, Robert Hamer, Thomas Konneker, Weili Lin, Martin Styner, John Gilmore

## POSTERS

**168** *Effect of Genome-wide Supported Risk Variants for Schizophrenia and Bipolar Disorder on the Cortical Thickness of Healthy Individuals*

Thomas Mühleisen, Florian Siedek, Svenja Caspers, Christian Roski, Christine Herold, Silke Lux, Per Hoffmann, Markus M. Nöthen, Tim Becker, Katrin Amunts, Sven Cichon

**169** *A Complex Interaction of CACNA1C and PCLO Depression Risk Alleles in the Subgenual Cingulate Activity during Associative Memory Encoding*

Björn Schott, Phöbe Schmierer, Maria Garbusow, Sebastian Mohnke, Lydia Pöhlend, Nina Seiferth, Leila Haddad, Constanze Seidenbecher, Eckart Gundelfinger, Sven Cichon, Markus M. Nöthen

**170** *The Neural Correlates of Reward Processing in Major Depressive Disorder: A Meta-analysis of Functional Magnetic Resonance Imaging Studies*

Wei-Na Zhang, Jing Wang

## OTHER CHILDHOOD PSYCHIATRIC DISORDERS

**171** *Serotonin Receptor Promoter Polymorphism 5-HTTLPR does not Interact with Oxytocin Receptor Gene Variants to Predict Childhood-onset Aggression*

Joe Beitchman, Ayesha Malik, Sheng Chen, Clement Zai

**172** *The Association of Genetic Variation in Genes Regulating the Oxytocin-vasopressin in Neurohumoral System with Childhood-onset Aggression*

Joe Beitchman, Ayesha Malik, Sheng Chen, Clement Zai

**173** *The Role of Rarely Studied Serotonin Receptors 1D, 1E, 1F, 2B and 3-7 in Depression Related Traits*

Krisztina Mekli, Gabriella Juhasz, Hazel Platt, Fabio Miyajima, William Ollier, Michael Horan, Neil Pendleton, Anthony Payton

## PHARMACOGENETICS

**174** *Association Between CYP2D6 Gene Dosage and Tardive Dyskinesia in English Caucasians*

Katherine Aitchison, Eva Tsapakis, Pdraig Wright, Shubalade Smith, Andrew Makoff, Robert Kerwin, Maju Koola

## POSTERS

**175**     *Establishing Biological Sampling Methodology for Genetic and Epigenetic Studies in Young People*

Katherine Aitchison, Sarah Curran, Jose Paya-Cano, Stephanie Witt, Amalia Lafuente, Thomas Price, Jonathan Mill, Paramala Santosh, Marcella Rietschel, Ian Craig

**176**     *Early Antidepressant Efficacy Modulation by Glutamatergic Gene Variants in the Star\*d*

Niki Antypa, Antonio Drago, Alessandro Serretti, Chiara Fabbri

**177**     *Association Study of IMPA1, IMPA2 and INPP1 Genes and Lithium Response in Bipolar Disorder: A Pharmacogenetic Study*

Bárbara Arias, Esther Jimenez, Marina Mitjans, J. M. Goikolea, Pilar Saiz, Paz Garcia-Portillo, Julio Bobes, Eduard Vieta, Antonio Benabarre

**178**     *The Pharmacogenomics of Bipolar Disorder - Acute and Longitudinal Treatment Aspects: A Systematic Review*

Monika Budde, Detlef Degner, Juergen Brockmoeller, Thomas Schulze

**179**     *Multiple Single Nucleotide Polymorphisms of Schizophrenia-related DISC1 Gene in Lithium-treated Patients with Bipolar Affective Disorder*

Piotr Czerski, Sebastian Kliwicki, Małgorzata Maciukiewicz, Felix F. Brockschmidt, Joanna Hauser, Wojciech Karłowski, Sven Cichon, Janusz K. Rybakowski

**180**     *Haloperidol in Acute Psychosis: Impact of 544 Genetic Variations among 98 Genes on Treatment Efficacy and Side Effects*

Antonio Drago, Ina Giegling, Beatrice Balzarro, Stefano Porcelli, Martin Schäfer, Annette Hartmann, Philipp Krämer, Hans-Jürgen Möller, Diana De Ronchi, Hans H. Stassen, Alessandro Serretti

**181**     *Quantitative Trait Loci Localized for Spatial Working Memory: General and Family Specific Loci*

David Glahn, Emma Knowles, Joanne Curran, Melanie Carless, Jack Kent, Harald Goring, Rene Olvera, Ravi Duggirala, Laura Almasy, John Blangero

**182**     *Small Candidate Gene Studies of the Acute Response to Amphetamine Fail to Replicate*

Amy Hart, Harriet de Wit, Abraham Palmer

## POSTERS

**183**     *BDNF and NTRK2 Polymorphisms and Antidepressant Treatment Outcome*

Johannes Hennings, Martin Kohli, Anne Eckert, Katharina Domschke, Darina Czamara, Volker Arolt, Bernhard Baune, Maria Giese, Marcus Ising, Susanne Lucae

**184**     *A Potential Role for the Melanocortin-3 Receptor Gene in Antipsychotic Induced Weight Gain in Schizophrenia Patients*

James Kennedy, Arun Tiwari, Eva Brandl, Herbert Meltzer, Jeffrey Lieberman, Nabilah Chowdhury, Daniel Mueller

**185**     *Pharmacogenetics of Twelve Candidate Genes and Antidepressant Response in Obsessive-Compulsive Disorder*

James Kennedy, Gwyneth Zai, Eva Brandl, Jasna Deluce, Margaret Richter

**186**     *Genome-wide Association Study of Weight Development during Antidepressant Treatment*

Stefan Kloiber, Nazanin Karbalai, Bertram Müller-Myhsok, Susanne Lucae

**187**     *Association between Antipsychotics-related Restless Legs Syndrome and CLOCK and NPAS2 Genes in Schizophrenia*

Heon-Jeong Lee, Jin-Sook Jung, Young Min Park, Ho-Kyoung Yoon, Seung-Gul Kang, Hee-Jung Yang, Hyun-Mi Song, Leen Kim

**188**     *Gene-gene Interaction between the SLC6A4 and HTR2A Gene Predicts Treatment Response to Venlafaxine XR in Generalized Anxiety Disorder*

Falk Lohoff, Sneha Narasimhan, Karl Rickels

**189**     *Use of Genetic Polymorphisms as Markers of Resistance to Treatment in Schizophrenia*

Carolina do Prado, Martinus van de Bilt, Elida Ojopi, Alexandre Loch, Marcus Zanetti, Wagner Gattaz

**190**     *The Role of the Pteridine Tetrahydrobiopterin Pathway in Mood Disorders and their Treatment*

Patrick McHugh

## POSTERS

- 191** *The Role of CNR1 Gene in Clinical Response and Remission after Citalopram Treatment (SSRI) in Major Depression: A 12-week Follow-up Study*

Marina Mitjans Niubó, Cristóbal Gastó, Rosa Catalán, Lourdes Fañanás, Barbara Arias, Alessandro Serretti, Chiara Fabbri

- 192** *The Role of Glutamatergic Neurotransmission in Lithium Response in Bipolar Patients: Association with GRIK2 and GABRB2 Genes*

Marina Mitjans Niubó, Esther Jimenez, J. M. Goikolea, Pilar Saiz, Paz Garcia-Portillo, Julio Bobes, Eduard Vieta, Antonio Benabarre, Barbara Arias

- 193** *No Association between Genetic and Epigenetic Variation in the IGF Pathway and Antipsychotic-induced Metabolic Disturbances*

Tim Moons, Marc De Hert, Jim van Os, Wolfgang Viechtbauer, Gunter Kenis, Bart Rutten, Stephan Claes, Ruud van Winkel

- 194** *Medication Induced Obesity in Schizophrenia and the Prominent Causative Role of Appetite/Satiety Regulating Genes in the Hypothalamus*

Daniel Mueller, Arun K. Tiwari, Natalie Freeman, Jeffrey Lieberman, Herbert Y. Meltzer, James Kennedy

- 195** *The rs2522833 (A/C) Polymorphism in the Piccolo Gene might be Associated with Early Improvement in Patients with Depressive Disorders -- Results from Two Independent Patient Samples*

Richard Musil, Peter Zill, Florian Seemüller, Michael Obermeier, Ilja Spellmann, Marcella Rietschel, Dan Rujescu, Rebecca Schennach, Hans-Jürgen Möller, Michael Riedel

- 196** *Pharmacogenetics of Drug Transport at the Blood Brain Barrier: Which Transporters for which Drugs?*

Joao Pereira, Jürgen Brockmüller, Mladen V. Tzvetkov

- 197** *Pharmacogenetic Aspects of QTc Interval Prolongation under Antipsychotic Treatment*

Ilja Spellmann, Richard Musil, Peter Zill, Michael Obermeier, Sandra Dehning, Anja Cerovecki, Bigitta Bondy, Hans Jürgen Möller, Michael Riedel

## POSTERS

- 198** *Association Study between Variants in Histamine Receptor H1 and H3 with Antipsychotic-induced Weight Gain*

Arun Tiwari, Clement Zai, Natalie Freeman, Jeffrey Lieberman, Herbert Meltzer, James Kennedy, Daniel Mueller

### ADHD, ANXIETY DISORDERS, AUTISM

- 199** *Family-based Association Study of Attention-Deficit Hyperactivity*

**ECIP** *Disorder and Genes Increasing the Risk for Smoking Behaviors*

Geeta Thakur, Sarojini Sengupta, Natalie Grizenko, Zia Choudhry

- 200** *Characterization of CACNA1C and ANK3 Risk Alleles for Bipolar*

**ECIP** *Disorder in Hispanics*

Suzanne Gonzalez, Chun Xu, Mercedes Ramirez, Deborah Flores, Robin J. Leach, Alvaro Jerez, Henriette Raventós, Alfonso Ontiveros, Humberto Nicolini, Michael Escamilla

- 201** *NROG: A Novel Gene Interrupted by t(3;11)(p26.1;p15.1) in Father and*

**ECIP** *Son with Manic and Aggressive Behavior*

Joshua Wang, Heather Glatt-Deeley, Carolyn Drazinic

- 202** *Rare Copy Number Variants in Obsessive Compulsive Disorder*

**ECIP**

Carolina Cappi, Thomas Fernandez, Lauren McGranth, Aline Sampaio, Helena Brentani, Euripedes Miguel

- 203** *Glial Cell Line-derived Neurotrophic Factor (GDNF) and Mood*

**ECIP** *Characteristics: An Association Study Among Healthy Adults*

Eszter Kótyuk, Zsuzsanna Elek, Zsolt Ronai, Maria Sasvari-Szekely, Anna Szekely

- 204** *Association Analysis of Serotonin Transporter Promoter Polymorphisms*

**ECIP** *with Heroin Abuse in Bulgarian and Roma Subjects*

Gyulnas Cebir, Momchil Nikolov, Olga Beltcheva, Ivo Kremensky, Antoaneta Galabova, Anna Ljubenova, Elena Jankova, Dorita Krasteva, Vanio Mitev, Radka Kaneva, Alexandre Todorov

- 205** *Synaptic Scaling in Anxiety Disorders*

**ECIP**

Nathaniel McGregor, Jacqueline Dimatelis, Sian Hemmings, Craig Kinnear, Dan Stein, Vivienne Russell, Christine Lochner

## POSTERS

**206** *Meta-analysis of Genome-wide Association Studies for Panic Disorder in ECIP the Japanese Population*

Takeshi Otowa, Yoshiya Kawamura, Nao Nishida, Nagisa Sugaya, Hisanobu Kaiya, Katsushi Tokunaga, Yuji Okazaki, Hisashi Tanii, Tsukasa Sasaki

**207** *DRD4 Gene and Obsessive Compulsive Disorder: Do Symptom ECIP Dimensions Have Specific Genetic Correlates?*

Biju Viswanath, Reshma Jabeen Taj, Meera Purushottam, Thennarasu Kandavel, Janardhan Reddy Y. C., Sanjeev Jain

**208** *Mosaic Chromosome X and Y Aneuploidy in the Autism Prefrontal ECIP Cortex*

Ivan Iourov, Yuri Yurov, Thomas Liehr, Alexei Kolotii

**209** *Rare and Common Variants of MicroRNA Genes in Autism Spectrum ECIP Disorder*

Claudio Toma, Bàrbara Torrico, Amaia Hervás, Alba Tristán, Barbara Franke, Christine Freitag, Marta Maristany, Elena Bacchelli, Ivon Cuscó, Rafael Valdés-Mas, Bru Cormand

## SCHIZOPHRENIA

**210** *Genetic Association Links Receptor Tyrosine Phosphatase-Alpha to Schizophrenia*

Branko Aleksic, Nagahide Takahashi, Itaru Kushima, Masashi Ikeda, Akira Yoshimi, Hiroshi Ujike, Joseph Buxbaum, Jan Sap, Nakao Iwata, Norio Ozaki

**211** *Polymorphisms in Genes Encoding Enzymes in Dopamine, Serotonin and Noradrenaline Pathways are Nominally Associated with Cerebrospinal Fluid HVA, 5-HIAA and MHPG Concentrations in Patients with Psychosis*

Dimitrios Andreou, Erik Söderman, Ingrid Agartz, Lars Terenius, Erik Jönsson

**212** *Clustering Analysis of Low-frequency Risk Variants in the Schizophrenia-associated 1q21.1 Microdeletion Region Suggests CHD1L as Disease-relevant Gene*

Buket Basmanay, Heide Fier, Andreas Forstner, Thomas Muehleisen, Per Hoffmann, Rainal Mössner, Dan Rujescu, Marcella Rietschel, Christoph Lange, Markus M. Nöthen, Sven Cichon



## POSTERS

### **213** *Genetic Contributions to Heterogeneity in Schizophrenia*

Sarah Bergen, Colm O'Dushlaine, Douglas Ruderfer, Kimberly Chambert, Jennifer Moran, Jordan Smoller, Pamela Sklar, Shaun Purcell, Aiden Corvin

### **214** *Concordance Differences in Twins with Schizophrenia According to the Presence or Absence of Other Psychotic Syndromes*

Alastair Cardno, Edward Pepper, Fruhling Rijdsdijk, Irving Gottesman, Robin Murray, Peter McGuffin

### **215** *Beyond Individual Analysis of Common SNPs in GWAS: Rare Variant Analysis and Hypothesis-driven Gene Set Analysis in a Genome-wide Missense SNPs Association Study in Schizophrenia*

Noa Carrera, Manuel Arjojo, Ramón Ramón-Ríos, Eduardo Paz, Mario Páramo, Santiago Agra, Julio Brenlla, Silvia Martínez, Ángel Carracedo, Javier Costas

### **216** *Identification of Rare Functional Variants in Putative Schizophrenia Risk Genes by Targeted Resequencing of a Galician (Northwest Spain) Sample*

Javier Costas, Jose Javier Suárez-Rama, Jorge Amigo, Beatriz Sobrino, Ramón Ramos-Ríos, Eduardo Paz, Julio Brenlla, Santiago Agra, Mario Páramo, Manuel Arjojo, Ángel Carracedo

### **217** *Psychosis is XY Linked and Epigenetic*

Timothy Crow, Thomas Priddle, Stuart Leask, Wen Ha Lee

### **218** *A Genome-wide Pathway Mega-analysis Suggests that the DISC1 and Dopaminergic Pathways are More Genetically Disrupted in Schizophrenic Patients Compared to Controls*

Antonio Drago, Alessandro Serretti

### **219** *Pathway Analysis of Six PGC Datasets using MAGENTA, One of the Five Pathway Analysis Methods used by the PGC Network and Pathway Analysis (PGC-NPA) Group*

Laramie Duncan, Peter Holmans, Lee Phil, Colm O'Dushlaine, Liz Rossin, Ayellet Segre, Jordan Smoller, Psychiatric GWAS Consortium, Gerome Breen

### **220** *BCL9 and C9orf5 Are Associated with Negative Symptoms in Schizophrenia: Meta-analysis of Two Genome-wide Association Studies*

Michael Escamilla, Chun Xu, Nagesh Aragam, Xia Li, ChunXiang Mao, Nagesh Aragam, Liang Wang, Cynthia Camarillo, KeSheng Wang

## POSTERS

- 221**     *Analysis of the Hexonucleotide Repeat Expansion at C9ORF72 in an Irish Psychosis Case-control Sample*  
Ciara Fahey, Derek Morris, Susan Byrne, Orla Hardiman, Aiden Corvin, Michael Gill
- 222**     *Genome-wide Association Study of Schizophrenia Modifier Loci in the Psychiatric Genomics Consortium (PGC)*  
Ayman Fanous, Stephan Ripke, Aiden Corvin, Kenneth Kendler
- 223**     *Genome-wide Association Study on Attention*  
Marion Friedl, Ina Giegling, Annette Hartmann, Bettina Konte, Dan Rujescu
- 224**     *Activation of the Immune System with Respect to TMT and STROOP Test Performance in Schizophrenia*  
Dorota Frydecka, Karabon Lidia, Edyta Pawlak, Aleksander Beszlej, Andrzej Kiejna
- 225**     *An Association Analysis of the Cardiomyopathy-associated 5 (CMYA5) Gene with Schizophrenia in a Japanese Population*  
Masaomi Furukawa, Mamoru Tochigi, Takeshi Otowa, Chihiro Kakiuchi, Kiyoto Kasai, Tsukasa Sasaki, Japanese Genetics Initiative for Replicating Association of Schizophrenia (JIRAS)
- 226**     *The Clinical Research Group 241: Genotype-phenotype Relationships and Neurobiology of the Longitudinal Course of Psychosis*  
Katrin Gade, Monika Budde, Heike Anderson-Schmidt, Urs Heilbronner, Heike Bickeböller, Jürgen Brockmüller, Andre Fischer, Moritz Rossner, Oliver Gruber, Peter Falkai, Thomas Schulze
- 227**     *Are Gap-junction Proteins Associated with Schizophrenic Psychoses?*  
Micha Gawlik, Bruno Pfuhlmann, Gerald Stöber
- 228**     *Association of Shank3 with Schizophrenic Psychoses*  
Micha Gawlik, Bruno Pfuhlmann, Gerald Stöber
- 229**     *Schizophrenic Psychoses and Epigenetic Regulation: A Case Control Study*  
Micha Gawlik, Bruno Pfuhlmann, Gerald Stöber

## POSTERS

- 230** *Rethinking Checkerboard Pattern Reversal Evoked-potential as (Universal) Biomarker in Schizophrenia and Other Mental Disorders*  
Jose Gonzalez-Hernandez, Concepcion Pita-Alcorta, Milagros Marot, Ana Padron, Agustin Finale, Lidice Galan, Eduardo Aubert-Vasquez, Werner Scherbaum
- 231** *Integrity of the Visual System at First Stages: Diagnostic Validation and Pathophysiological Implication in Schizophrenia: An Endophenotype?*  
Jose Gonzalez-Hernandez, Concepcion Pita-Alcorta, Milagros Marot, Ana Padron, Agustin Finale, Lidice Galan, Lourdes Diaz-Comas, Jorge Samper-Gonzalez, Werner Scherbaum
- 232** *Cytochrome P450 Genotypes are not Associated with Refractoriness to Antipsychotic Treatment*  
Carolina do Prado, Martinus van de Bilt, Rafael Souza, Alexandre Loch, Marcus Zanetti, Wagner Gattaz
- 233** *Behavioural Characterisation of the NRXN1 Knockout Mice: A Model for Neurodevelopmental Disorders*  
Hannah Grayton, Cathy Fernandes, Markus Missler, David Collier
- 234** *Set Based Analysis of Epigenetic-related Genes in Genome-wide Association Data of Neuropsychiatric Phenotypes*  
Britta Haenisch, Osman El-Maarri, Michael Steffens, Stefan Herms, Manuel Mattheisen, Jana Strohmaier, Bertram Müller-Myhsok, Markus M. Nöthen, Marcella Rietschel, Sven Cichon
- 235** *Neuropsychological Intermediate Phenotypes as Tools for Genetic Studies in Schizophrenia*  
Annette Hartmann, Ina Giegling, Bettina Konte, Marion Friedl, Dan Rujescu
- 236** *Trajectories of Schizophrenia: Evaluation of Empirical Evidence and Their use in Genetic Studies*  
Urs Heilbronner, Peter Falkai, Thomas Schulze
- 237** *The Genetic Basis of Co-Morbidity between Schizophrenia and Autoimmune Diseases*  
Louise Hoeffding, Thomas Hansen, The Schizophrenia Genetic Consortium, The Schizophrenia Psychiatric Genome-wide Association study Consortium, Thomas Werge

## POSTERS

**238**     *Using Polygenic and Pathway Analyses to Identify Sources of Shared Genetic Variance in Schizophrenia and Cognition*

Leon Hubbard, Giancarlo Russo, Dan Rujescu, Michael O'Donovan, Mike Owen, James Walters, Andrew Pocklington

**239**     *Association Study of Nogo-related Genes with Schizophrenia in a Japanese Case-control Sample*

Daisuke Jitoku, Eiji Hattori, Yoshimi Iwayama, Kazuo Yamada, Tomoko Toyota, Motoko Maekawa, Toru Nishikawa, Takeo Yoshikawa

**240**     *Genetic Determinants of Disease Severity and Treatment Outcome in Schizophrenia*

Anna Kähler, Patrik Magnusson, Stephan Ripke, Colm O'Dushlaine, Susanne Akterin, Shaun Purcell, Pamela Sklar, Patrick Sullivan, Christina Hultman

**241**     *Val66Met Polymorphism of Brain-derived Neurotrophic Factor (BDNF) Gene is Associated with Depressive Symptoms in Schizophrenia in the Polish Population*

Pawel Kapelski, Maria Skibinska, Aleksandra Rajewska, Anna Leszczynska-Rodziewicz, Agnieszka Slopień, Agata Groszewska, Monika Dmistrz-Weglarz, Piotr Czerski, Joanna Twarowska-Hauser

**242**     *DRD4 Gene is Associated with Age at Onset of Severe Mental Illnesses and it has an Active Estrogen Responsive Element*

James Kennedy, Vanessa Gonçalves, Arun Tiwari, Vincenzo de Luca, Say Li Kong, Clement Zai, Maria Tampakeras, Browyn Mackenzie, Lei Sun

**243**     *Genome-wide Linkage Scan of Quantitative Traits Representing Symptom Dimensions in Multiplex Schizophrenia Families*

Jisun Kim, Seunghyong Ryu, Hong-Hee Won, Eun-Young Cho, Sohee Oh, Taesung Park, Hee Jung Name, Yu-Sang Lee, Jong-Won Kim, Kyooseob Ha, Kyung Sue Hong

**244**     *Cross-phenotype Analysis for Schizophrenia Susceptibility Genes Based upon Type II Diabetes GWASs*

Kenji Kondo, Masashi Ikeda, Yusuke Kajio, Takeo Saito, Yasuhisa Fukuo, Nakao Iwata

## POSTERS

- 245** *Genome-wide Association Study on IQ in Schizophrenia Patients and Unaffected Healthy Volunteers*

Bettina Konte, Ina Giegling, Annette Hartmann, Marion Friedl, Dan Rujescu

- 246** *Definition and Refinement of the VIPR2 Duplication Region Associated with Schizophrenia*

Itaru Kushima, Branko Aleksic, Ohye Tamae, Masashi Ikeda, Shuji Iritani, Hiroki Kurahashi, Nakao Iwata, Norio Ozaki

- 247** *Heritability and Familiality of Mental Dimensions in the Korean Psychotic Families*

Byung Dae Lee

- 248** *Whole Genome Sequencing of Schizophrenia in a Founder Population*

Todd Lencz, Semanti Mukherjee, Saurav Guha, Anil Malhotra, Shai Carmi, Itsik Pe'er, Ariel Darvasi

- 249** *Impact of the Functional Coding Variant Asn107Ile of the Neuropeptide S Receptor Gene (NPSR1) on Schizophrenia and Related Endophenotypes*

Leonhard Lennertz, Boris Quednow, Anna Schuhmacher, Wolfgang Maier, Michael Wagner, Rainald Mössner

- 250** *Meta-analysis of the Association between Single Nucleotide Polymorphisms in Neuregulin-1 (NRG1) and Schizophrenia*

Han Chern Loh, Shiau Foon Tee, Tze Jen Chow, Pek Yee Tang

- 251** *Weak Positive Association of the AKT1 Gene with Schizophrenia: Evidence from Haplotype and Meta Analyses*

Han Chern Loh, Tze Jen Chow, Pek Yee Tang

- 252** *Targeted Resequencing of the NKAPL Gene in Schizophrenia*

Erik Loken, David Brohawn, Dermot Walsh, F. Anthony O'Neill, Kenneth Kendler, Brien Riley

- 253** *Familial Aggregation of Schizophrenia in the Cuban Population*

Beatriz Marcheco-Teruel, Evelyn Fuentes-Smith, Roberto Lardoezt-Ferrer, Zoe Robaina-Jiménez, Apodaca Ileana Rosado-Ruiz, Ole Mors

## POSTERS

- 254** *Case Report of a Patient with Schizophrenia and a Mutation in the Insulin Receptor Substrate-4 Gene*

Kristina Melkersson

- 255** *Effects of Glutamate Receptor Delta 1 (GRID1) Genetic Variation on Brain Structure in Schizophrenia: A VBM Study*

Igor Nenadic, Raka Maitra, Sigrid Scherpiet, Christoph Schultz, Jens Treutlein, Sven Cichon, Marcella Rietschel, Markus M. Nöthen, Heinrich Sauer, Ralf Schloesser

- 256** *Convergent Functional Genomics of Schizophrenia: From Comprehensive Understanding to Genetic Risk Prediction*

Alexander Niculescu

- 257** *Association Analysis of NCAN Genotype (rs 1064395) with Schizophrenia Phenotype in Sub-population of Bosnia and Herzegovina*

Lilijana Oruč, Lejla Kapur-Pojiskic, Jasmin Ramic, Naris Pojskic

- 258** *Peripheral Blood Expression of Neurotransmitter Receptors and Regulators Genes in First-episode Patients*

Vanessa Ota, Ary Gadelha, Cristiano Noto, Marcos Santoro, Quirino Cordeiro Jr, Maria Melaragno, Marília Smith, Rodrigo Bressan, Sintia Belangero

- 259** *Expression of Neurotransmitter Receptor and Regulator Genes in the Prefrontal Cortex and Nucleus Accumbens of a New Schizophrenia Animal Model*

Vanessa Ota, Camila Santos, Marcos Santoro, Mariana Diana, Ary Gadelha, Jair Mari, Rodrigo Bressan, Vanessa Abilio, Sintia Iole Nogueira Belangero

- 260** *A First Protein-protein Interaction Network for Mood Disorders and Schizophrenia*

Tamás Raskó, Britta Haenisch, Attila Szvetnik, Martin H. Schaefer, Zsuzsanna Izsvák, Sven Cichon, Markus M. Nöthen, Miguel A. Andrade-Navarro, Erich E. Wanker

- 261** *Analysis of Compound Heterozygous Mutation in Schizophrenia*

Elliott Rees, Douglas Ruderfer, Menachem Fromer, Hywel Williams, Aarno Palotie, Jennifer Moran, Pamela Sklar, Shaun Purcell, Michael Owen, Michael O'Donovan, George Kirov

## POSTERS

### **262** *Mir-183 as a Biomarker for Schizophrenia and Cancer*

Emmanouil Rizos, Nikolaos Siafakas, Anna Koumarianou, Eleni Katsantoni, Anastasia Kastania, Vasilios Zoumpourlis

### **263** *Stratification of Individuals with Psychiatric Disorders Based on Nationwide Health Registries*

Anders Rosengren, Johan Hilge Thygesen, Line Olsen, Thomas Werge

### **264** *Metalloproteinase-9 (MMP9) in Schizophrenia and Depression: A Common Susceptibility Factor?*

Rebecca Schennach, Richard Musil, Michael Obermeier, Michael Riedel, Norbert Müller, Peter Zill

### **265** *Recruitment*

Henriette Schmock, Thomas Hansen, Thomas Werge

### **266** *Replication of Schizophrenia GWAS Results in a Large Population from Indonesia*

Sibylle Schwab, WenWen Qin, Mutiara Wildenauer, Nan Dai, Agung Kusumawarhani, Schizophrenia Genetic Consortium Indonesia, Beben Benyamin, Dieter Wildenauer

### **267** *The Effect of Clozapine on mRNA Expression for Genes Encoding G Protein Coupled Receptors and the Protein Components of Clathrin Mediated Endocytosis*

Sally Sharp, Ying Hu, Mie Rizig, Andrew McQuillin, Stephen Hunt, Hugh Gurling, Jonathan Weymer

### **268** *BDNF Val66Met Polymorphism and Polydipsia in Schizophrenia*

Takahiro Shinkai, Kenji Yamada, Hsin-I Chen, Jun Nakamura

### **269** *Characterization of Schizophrenia Patients with Copy Number Variations*

Celina Skjoedt, Line Olsen, Johan Hilge Thygesen, Thomas Werge

### **270** *Detecting Copy Number Variants using Exome Genotyping Chips in 11,000 Schizophrenia Cases and Controls from Sweden*

Jin Szatkiewicz, Benjamin Neal, Jacqueline Goldstein, Jennifer Moran, Kimberly Chambert, Christina Hultman, Pamela Sklar, Shaun Purcell, Mark Daly, Steven McCarroll, Patrick Sullivan

## POSTERS

- 271**    *Family Based Linkage and Sequence Analysis of Thought Disorder in Schizophrenia*  
Johan Thygesen, Andrés Ingason, Thomas Hansen, Josef Parnas, Thomas Werge
- 272**    *Nationwide 22q11 Deletion Syndrome Survey: Estimating Incidence Rates and Clinical Profiles using Danish Health Registers and Biobanks*  
Anders Vangkilde, Line Olsen, Charlotte Olesen, Flemming Skovby, Thomas Werge
- 273**    *Predicting Risk for Schizophrenia using Genetic and Environmental Factors*  
Evangelos Vassos, Cathryn Lewis
- 274**    *Ohnologs are Overrepresented in Pathogenic Copy Number Mutations*  
Evangelos Vassos, Takashi Makino, Hannah Grayton, Kevin Mitchell, David Collier, Aoife McLysaght
- 275**    *Label Free Quantitative Proteomic Analysis Reveals Dysfunction of Complement Pathway in Peripheral Blood of Schizophrenia Patients: Evidence for Immune Hypothesis of Schizophrenia*  
Chunling Wan, Yang Li
- 276**    *NPY Gene and Suicidal Behaviour*  
August Wang, Pernille Koefoed, Anne Sophie Jacoby, Henrik B. Rasmussen, Sally Timm, Merete Nordentoft, Gesche Jürgens, Holger J. Sørensen, Ole Garsdal, Thomas Werge
- 277**    *NPY and Suicidal Behaviour*  
August Wang, Pernille Koefoed, Anne Sophie Jacoby, David Woldbye, Henrik B. Rasmussen, Sally Timm, Henrik Dam, Merete Nordentoft, Gesche Jurgens, Holger J. Sørensen, Ole Garsdal
- 278**    *Plasma MicroRNA Profiling Reveals Altered miR-150 and miR-486-3p in Paranoid Schizophrenia*  
Hui Wei, Longze Sha, Yan Shen, Qi Xu
- 279**    *Genetic Associations between Schizophrenia and Cognition*  
Laura Whitlow, Gerwyn Davies, Sarah Dwyer, Hywel Williams, Elaine Green, Michael Owen, Michael O'Donovan, James Walters



## POSTERS

- 280** *Whole Exome Sequencing of 600 Schizophrenia Trio Samples: Analysis of Functional Point Mutations on Chromosome X*  
Hywel Williams, Pdraigh Gormley, Jennifer Moran, Aarno Palotie, Pamela Sklar, Shaun Purcell, George Kirov, Michael Owen, Michael O'Donovan, Douglas Ruderfer
- 281** *Schizophrenia Associated Polymorphism Regulates PTPRA Transcript Expression in Lymphoblastoid Cell Lines*  
Akira Yoshimi, Branko Aleksic, Nagahide Takahashi, Itaru Kushima, Masashi Ikeda, Hiroshi Ujike, Takeshi Sakurai, Joseph D. Buxbaum, Jan Sap, Nakao Iwata, Norio Ozaki
- 282** *Genetic Studies of Consanguineous Pakistani Multiplex Pedigrees with Schizophrenia*  
Lan Xiong, Sirui Zhou, Mehtab Christian, Muhammad Qasim Brohi, Mike Denton, Ridha Joobor, Lynn DeLisi, Marie-Pierre Dubé, Guy Rouleau
- 283** *Altered Postmortem GABA-ergic Gene Expression in the Anterior Cingulate Cortex in Schizophrenia - Effects of Medication*  
Monsheel Sodhi, John Bostrom, Jakub Tucholski, James Meador-Woodruff
- 284** *Associations of DRD2 and COMT Genes with Theory of Mind in Schizophrenia*  
Margarita Alfimova, Galina Korovaitseva, Tatyana Lezheiko, Galina Lyashenko
- 285** *The Association Study of IL-1beta -511C/T and IL-1RA Polymorphisms with Schizophrenia*  
Margarita Alfimova, Vera Golimbet, Galina Korovaitseva, Tatyana Lezheiko
- 286** *Characterization of an Ultra Rare DISC1 Human Variant R338Q Found in Bipolar Disorder Regarding its Interaction with TNIF*  
Qi Wang, Veronica Reinhart, Kewa Mou, Nicholas Brandon
- 287** *A Genome-wide Association Study of Psychosis - Results from the Psychosis Endophenotypes and WTCC2 Consortia*  
Cathryn Lewis, Elvira Bramon, Kuang Lin, Steven Bakker, David Collier, Rene Kahn, Andrew McIntosh, Dan Rujescu, Jim van Os, Robin Murray, John Powell

## POSTERS

**288**     *Functional Analysis of the Mutations Identified in Neurogranin Gene in Schizophrenic Patients*

Yu-Chih Shen, Chia-Hsiang Chen

**289**     *Gene-based Analysis in PGC Schizophrenia Study*

Valentina Moskvina, Ellis Hannon, Andrew Pocklington, International Schizophrenia Consortium, The Schizophrenia PGC, Peter Holmans, Michael Owen, Michael O'Donovan

## SUBSTANCE ABUSE

**290**     *Genetic Variation in Alcohol Consumption and Binge Drinking of Adolescents*

Csaba Barta, Nora Nemeth, Tibor Nanasi, Zsolt Demetrovics, Robert Urban, Judit Farkas, Noemi Torma, Andrea Eisinger, Anna Magi, Mate Kapitany-Foven, Maria Sasvari-Szekely

**291**     *Variation in the Cannabinoid Receptor CNR1 Gene Modulates the Effect of Trait Impulsivity on Number of Marijuana Problems*

Cinnamon Bidwell, Jane Metrik, John McGeary, Rohan Palmer, Valerie Knopik

**292**     *The AKT1 (rs2494732) Genotype Modifies the Risk of Psychotic Disorders in Cannabis Users*

Marta Di Forti, Conrad Iyegbe, Hannah Sallis, Tiago Reis Marques, Rowena Handley, Valeria Mondelli, Anna Kolliakou, Aurora Falcone, Alessandra Paparelli, Miriam Siriani, Caterina La Cascia

**293**     *Genome-wide Association of Behavioral Disinhibition*

Christian Hopfer, Jaime Derringer, Robin Corley, Brett Haberstick, Susan Young, Daniel Howrigan, Matthew Keller, Sandra Brown, Susan Tapert, Michael Stallings, Thomas Crowley

**294**     *Shared Genetic Risk between Methamphetamine-induced Psychosis and Schizophrenia*

Masashi Ikeda, Yuko Okahisa, Branko Aleksic, Japanese Genetic Initiative for Drug Abuse, Norio Ozaki, Hiroshi Ujike, Nakao Iwata

## POSTERS

- 295** *Pilot Association Study of Heroin and Amphetamine Addiction, Neurocognitive Impulsivity, and Genes Related to Brain Reward and Anti-reward Systems*  
Radka Kaneva, Gyulnas Cebir, Olga Beltcheva, Georgi Vasilev, Reni Tzveova, Mina Ivanova, Dahlia Kancheva, Vanio Mitev, Ivo Kremensky, Alexandre Todorov, Jasmin Vassileva
- 296** *Association of KIAA1324L and GRM3 with Alcohol Dependence in the Irish Affected Sib Pair Study of Alcohol Dependence*  
Brien Riley, F. Aliev, B. T. Webb, D. M. Dick, G. Kalsi, H.J. Edenberg, J. Kramer, C. A. Prescott, K. S. Kendler, A. E. Adkins
- 297** *A Genome-wide Association Study (GWAS) of Alcohol Dependence (AD) and Related Traits using a Hybrid Design*  
Brien Riley, Laura Hack, A. Adkins, B. Webb, B. Maher, D. Patterson, D. Walsh, C. Prescott, D. Dick, K. Kendler
- 298** *TPH2, HTR, and HTT Gene Polymorphisms and Alcohol-related Suicide*  
Alja Videtic Paska, Tomaž Zupanc, Radovan Komel

## TECHNOLOGY, SEQUENCING

- 299** *Validation of CNVs and De Novo Mutations in Schizophrenia Cases Using a Droplet-based Approach to Digital PCR*  
Samuel Rose, Aswin Sekar, Kimberly Chambert, Jon Madison, Steven McCarroll
- 300** *Deep Re-sequencing of ST8SIA2 in Bipolar Disorder: A Generalized Susceptibility Gene*  
Alexander Shaw, Yash Tiwari Warren Kaplan, Peter Schofield, Janice Fullerton
- 301** *The Neural Correlates of Psychosocial Stress Processing*  
Fabian Streit, Leila Haddad, Andreas Meyer-Lindenberg, Marcella Rietschel, Peter Kirsch
- 302** *Genetic Markers that are Informative for Allelic Non-disjunction in Down Syndrome-related Mental Retardation*  
Krishnadas Nandagopal, Debarati Ghosh

## POSTERS

**303** *Evidence of an Inflammatory Pathway Leading to Psychosis in Bipolar Disorder*

Mikael Landen, Carl Sellgren, Magdalena Kegel, Carl John Ekman, Patrick Sullivan, Pamela Sklar, Shaun Purcell, Jordan Smoller, Christina Hultman, Sophie Erhardt, Göran Engberg

**304** *A Statistical Framework for the Evaluation of De Novo Variation in Psychiatric Disease*

Kaitlin Samocha, Benjamin Neale, Mark Daly

**305** *Testing the Role of Circadian Genes in Conferring Risk to Mood Disorders*

Enda Byrne, Nicholas Martin, Naomi Wray

**306** *Stress-induced DNA Methylation Changes in Rat Brain*

Helen Spiers, Emily Saunderson, Alexandra Trollope, Johannes Reul, Jonathan Mill

**307** *Epigenetic Alteration of the Dopamine Transporter Gene in Alcohol Dependent Patients is Associated with Age*

Vanessa Nieratschker, Martin Grosshans, Josef Frank, Jana Strohmeier, Christoph von der Goltz, Osman El-Maarri, Stephanie Witt, Sven Cichon, Markus M. Nöthen, Falk Kiefer, Marcella Rietschel

**308** *The Histidine Decarboxylase Gene (HDC) is Associated with Gilles De La Tourette Syndrome in a Large Sample of Trios*

Iordanis Karagiannidis, Zachos Anastasiou, Sandra Dehning, Peter Zill, Markus M. Nöthen, Pablo Mir, Renata Rizzo, Norbert Mueller, Cathy Barr, Peristera Paschou, TSGeneSEE

**309** *Pitt-Hopkins Syndrome-associated Mutations in TCF4 Lead to Variable Impairment of the Transcription Factor Function Ranging from Hypomorphic to Dominant-negative Effects*

Mari Sepp, Priit Pruunsild, Tonis Timmusk

## POSTERS

**310** *Association Study of 60 Candidate Genes with Antipsychotic-induced  
ECIP Weight Gain in Korean Schizophrenia Patients*

Seunghyong Ryu, Ik Soo Huh, Department of Statistics, Seoul National University Cho, Taesung Park, Hee Jung Nam, Ji Sun Kim, Kyooseob Ha, Yu-Sang Lee, Yeon Ho Joo, Jun Soo Kwon, Kyung Sue Hong

**311** *A Genome-wide Gene Expression Study Suggests New Candidate  
ECIP Genes for Lithium Response in Bipolar Patients of Sardinian Ancestry*

Alessio Squassina, Donatella Congiu, Mirko Manchia, Andrea Angius, Valeria Deiana, Raffaella Ardu, Caterina Chillotti, Giovanni Severino, Stefano Calza, Maria Del Zompo, Marta Costa

**312** *Differential Expression of microRNAs in Cerebrospinal Fluid in  
ECIP Schizophrenia Patients*

Juan Gallego, Todd Lencz, Marc Gordon, Jason Gentile, Nisha Chitkara, Christopher Morell, Anil Malhotra

**313** *Characterization of Transcriptional and Protein Variations in Major  
ECIP Isoforms of NCAM1, a Pivotal Regulator of Neural Development, in Schizophrenia*

Yash Tiwari, Cyndi Shannon Weickert, Alex Shaw, Peter R. Schofield, Jan Fullerton

**314** *Common Variants on Xq28 Conferring Risk of Schizophrenia in Han  
ECIP Chinese*

Hei Man Wu, Emily H M Wong, Hon-Cheong So, Miaoxin Li, Amy W. Butler, Basil Paul, Qiang Wang, Stacey S. Cherny, Pak-Chung Sham

**315** *The RBFOX1 Gene at 16p13 Is Strongly Associated with Autism  
ECIP Spectrum Disorders in Finnish Families*

Katri Kantojärvi, Jaana Oikonen, Liisa Ukkola-Vuoti, Raija Vanhala, Irma Järvelä, Päivi Onkamo

**316** *Housing Conditions Modulate the Cognitive Performance in Transgenic  
Mice Overexpressing the Schizophrenia Susceptibility Gene Tcf4*

M. M. Brzozka, D. Badowska, P. Falkai, M. J. Rossner

# ACKNOWLEDGEMENT OF SPONSORS AND EXHIBITORS

We would like to thank Supporting Corporate Members of the International Society of Psychiatric Genetics:

Bronze



We would like to thank Sponsors of the XXth World Congress of Psychiatric Genetics:

Bronze



We would like to thank our Sponsor for the special symposia session on Tuesday, October 16th, at 12:15 p.m.



Additional Sponsors:



## **We would like to thank the Exhibitors of the XXth World Congress of Psychiatric Genetics:**

Actelion Pharmaceuticals Deutschland GmbH

Affymetrix UK Ltd

Biocomputing Platforms Ltd Oy

DNASTAR, Inc.

Golden Helix

Life & Brain GmbH

LGC Genomics/KBioscience

NanoString Technologies

PerkinElmer chemagen Technologie GmbH

Steinbrenner Laborsysteme GmbH

TIB MOLBIOL Syntheselabor GmbH

We express our appreciation to the following company for their support of this educational activity by providing an unrestricted, educational grant:

Eli Lilly & Company

## NOTES

[illegible]



## NOTES

## NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

## NOTES

[illegible]

## NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

## NOTES



## **Save the Dates:**

**XXI<sup>st</sup> World Congress of Psychiatric Genetics**

**October 17-21, 2013**

**Boston, Massachusetts**

**XXII<sup>nd</sup> World Congress of Psychiatric Genetics**

**October 12-16, 2014**

**Copenhagen, Denmark**

## SUNDAY, OCTOBER 14, 2012

11:00 am – 7:00 pm	Registration (Entrance Hall, Congress Center Hamburg)
12:00 pm – 6:15 pm	Concurrent Educational Sessions (Halls 6, 8)
6:00 pm – 7:00 pm	Travel Awardee Orientation (Hall 7)
7:00 pm – 9:00 pm	<b>Opening Reception</b> (Hall 4)

## MONDAY, OCTOBER 15, 2012

7:00 am – 6:00 pm	Registration (Entrance Hall, Congress Center Hamburg)
9:00 am – 9:30 am	<b>Opening Session</b> (Hall 3)
9:30 am – 10:30 am	Plenary 1 (Hall 3)
11:00 am – 12:00 pm	Plenary 2 (Hall 3)
12:00 pm – 1:30 pm	ISPG Board Meeting (Hall 12)
1:30 pm – 3:00 pm	Oral Presentations Sessions 1-4 (Halls 3, 6, 8, 13/14)
3:30 pm – 5:00 pm	Symposiums 1-4 (Halls 3, 6, 8, 13/14)
5:00 pm – 7:00 pm	<b>Poster Session I</b> (Hall 3 Foyer)

## TUESDAY, OCTOBER 16, 2012

7:00 am – 6:00 pm	Registration (Entrance Hall, Congress Center Hamburg)
7:30 am – 9:00 am	2013 Program Committee Meeting (Hall 7)
9:00 am – 10:00 am	Plenary 3 (Hall 3)
10:30 am – 11:30 am	Plenary 4 (Hall 3)
11:30 am – 12:15 pm	ISPG Business Meeting and 20th Anniversary of the Society (Hall 6)
12:15 pm – 1:00 pm	Roche Pharmaceutical Sponsored Symposia Session (Hall 3)
1:00 pm – 2:30 pm	Oral Presentations Sessions 5-8 (Halls 3, 6, 8, 13/14)
3:00 pm – 4:30 pm	Symposiums 5-8 (Halls 3, 6, 8, 13/14)
4:30 pm – 6:30 pm	<b>Poster Session II</b> (Hall 3 Foyer)

## WEDNESDAY, OCTOBER 17, 2012

7:00 am – 6:00 pm	Registration (Entrance Hall, Congress Center Hamburg)
7:30 am – 9:00 am	2014 Program Committee Meeting (Hall 7)
9:00 am – 10:00 am	Plenary 5 (Hall 3)
10:30 am – 11:30 am	Lifetime Achievement Award Ceremony and Plenary Session (Hall 3)
1:00 pm – 2:30 pm	Oral Presentations Sessions 9-12 (Halls 3, 6, 8, 13/14)
3:00 pm – 4:30 pm	Symposiums 9-12 (Halls 3, 6, 8, 13/14)
4:30 pm – 6:30 pm	<b>Poster Session III</b> (Hall 3 Foyer)
7:00 pm – 12:00 am	Networking Dinner (Au Quai Restaurant)

## THURSDAY, OCTOBER 18, 2012

8:00 am – 12:00 pm	Registration (Entrance Hall, Congress Center Hamburg)
9:00 am – 10:00 am	Plenary 6 (Hall 3)
10:30 am – 10:45 am	Award Presentations (Hall 3)
11:00 am – 12:00 pm	Plenary 7 (Hall 3)
12:00 pm – 12:30 pm	<b>Program Conclusion</b> (Hall 3)