

A microscopic image of neurons, showing green fluorescent structures and red fluorescent spots. The background is dark, and the neurons are illuminated with green and red light.

AUTISM WORKSHOP

Tuesday, December 13, 2016

**Cell and Genome Sciences Building
Edmund and Arlene Grossman Auditorium
400 Farmington Avenue, Farmington, Connecticut**

Sponsored by the Institute for System Genomics

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Autism Workshop

Tuesday, December 13, 2016

- 8:30AM Registration and Continental Breakfast
- 9:00AM Welcoming Remarks
- 9:05AM ***“Genomic and Epigenomic Approaches to Understanding Autism Spectrum Disorder: An Overview”***
Michael O’Neill, University of Connecticut
- 9:40AM ***“Optimal Outcome in Individuals with Autism”***
Deborah Fein, University of Connecticut
- 10:03AM ***“Domain-general, low-level influences on social processes in ASD: Connecting to genetics”***
Inge-Marie Eigsti, University of Connecticut
- 10:26AM Break
- 10:41AM ***“Genomic analysis of 100 children with autism spectrum disorder in a racially and ethnically diverse clinical population”***
Louisa Kalsner, Connecticut Children’s Medical Center
- 11:04AM ***“Next Steps in Genomic Diagnosis of ASD”***
Kathleen Adams, The Jackson Laboratory for Genomic Medicine
- 11:27AM ***“Regulation of autism risk networks by the chromatin remodeler CHD8 during human neurodevelopment”***
Justin Cotney, University of Connecticut

- 11:50AM ***“Chromosomal conformation during human neurogenesis elucidates mechanisms of brain disease and human evolution”***
Hyejung Won, University of California, Los Angeles
- 12:30PM Lunch
- 1:30PM ***“Autism, Information Management, and the Courts”***
Robert Bird, University of Connecticut
- 1:53PM ***“Induced pluripotent stem cells to study neurodevelopmental disorder”***
Stormy Chamberlain, University of Connecticut
- 2:16PM ***“Disrupted neuronal maturation in Angelman syndrome using patient-specific induced pluripotent stem cells”***
Eric Levine, University of Connecticut
- 2:39PM ***“Mouse models of ASD: Social/communicative deficits and splinter acoustic skills”***
R. Holly Fitch, University of Connecticut
- 3:02PM ***“Neural circuit mechanisms of Rett Syndrome: insights from mouse models”***
Zhong-Wei Zhang, The Jackson Laboratory
- 3:25PM Break
- 3:40PM ***“Deciphering the roles of the autism-linked proteins c-Met and IQSEC2 at excitatory synapses”***
Randall Walikonis, University of Connecticut
- 4:03PM ***“Intervention Systems and Services for Young Children with Autism and their Families: Evidence based practice and implementation challenges”***
Mary Beth Bruder, University of Connecticut
- 4:26PM Closing remarks
- 4:30PM Reception



Michael O'Neill, Ph.D.

Department of Molecular and Cell Biology

Michael O'Neill is Assistant Director of the Institute for Systems Genomics and Associate Professor in Genetics and Genome Sciences, Department of Molecular and Cell Biology at the University of Connecticut. He is also an investigator in the Connecticut Institute for the Brain and Cognitive Sciences. Dr. O'Neill obtained his BA and PhD from the University of Texas at Austin with Dorothea Bennett and Karen Artzt studying mouse t-haplotypes. He received post-doctoral training at the University of Melbourne with Dr. Andrew Sinclair studying the genetics of sex determination and at Princeton University with Dr. Shirley Tilghman studying genomic imprinting. Dr. O'Neill's work has focused on the evolution of genomic imprinting in vertebrates and on the role of X-linked imprinted genes in reproductive- and neuro- development.



Deborah Fein, Ph.D.

**UConn Board of Trustees Distinguished Professor
Departments of Psychology and Pediatrics**

Deborah Fein is a clinical neuropsychologist who has been doing autism research since the late 1970's. She is currently Board of Trustees Distinguished Professor in the Departments of Psychology and Pediatrics at the University of Connecticut. She has investigated numerous areas in autism, including neuroimaging, biochemical abnormalities, language and memory, sensory abnormalities, outcome, early detection, and screening. She is an author or editor of 4 books: "The Exceptional Brain (Guilford Press, 1988)", "The Neuropsychology of Autism (Oxford Press, 2011)", "Autism in Your Classroom (Woodbine Press, 2007)", "Activity Kit for Babies and Toddlers at Risk (Guilford Press, 2016)" and the widely used screening tool, "Modified Checklist for Autism in Toddlers (MCHAT)". She has also authored over 150 articles on autism. She was Secretary of the International Society for Autism Research, on the Board of the American Association of Clinical Neuropsychology, and was the Intellectual and Behavior Assessment topic chair for this year's International Meeting for Autism Research.

Biographies



Inge-Marie Eigsti, Ph.D.
Department of Psychological Sciences

Inge-Marie Eigsti's research addresses a fundamental challenge in ASD: how to map complex behavioral constructs, such as social communication deficits, onto mechanistic processes in the brain. We primarily target low-level (especially non-social) cognitive processes, such as working memory and auditory processing, that may not be specific to the ASD diagnosis, but that can be linked to genetic, neurophysiological or neuroanatomical domains, and that impact socio-communicative behavior. The aim is to better understand the pathology of ASD by linking research at the molecular level (genetics), at the neurofunctional level (brain imaging), and at the behavioral level (symptomatology): We aim to connect complex behaviors to underlying genetic mechanisms.



Louisa Kalsner, M.D.
Connecticut Children's Medical Center

Louisa Kalsner is a board-certified physician in Pediatric Neurology and Clinical Genetics at Connecticut Children's Medical Center and an assistant professor of Pediatrics and Neurology at UCONN School of Medicine. She is the head of the ASAP Neurogenetics clinic, a program designed to offer genetic evaluation, testing and counseling for children with autism spectrum disorder and their families. Dr. Kalsner is a co-PI for an Affinity Research Collaborative Grant (ARC) and UConn Academic Plan grant, both involving genomic characterization of a diverse clinical population with autism spectrum disorder.



Kathleen Adams
Program Lead, Clinical Innovation
The Jackson Laboratory for Genomic Medicine

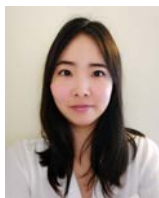
Kathleen Adams is the Program Lead for Clinical Innovation at JAX Genomic Medicine. She works with faculty to identify scientific discoveries that may have application in the healthcare arena and to construct a path to the clinic for those innovations. Kate has more than a decade of experience in leadership positions at diagnostics and clinical laboratory companies, with a focus on healthcare strategy including product development and marketing. Prior to her diagnostics work, Kate began her career in the pharmaceutical industry. She has an undergraduate degree in biology from Bryn Mawr College and a master's in management from Yale School of Management.



Justin Cotney, Ph.D.
Department of Genetics and Genome Sciences

Justin Cotney earned his doctoral degree in Genetics and Molecular Biology from Emory University in the laboratory of Dr. Gerald Shadel. He then joined the laboratory of Dr. James Noonan in the Department of Genetics at Yale University School of Medicine. There he developed functional genomics techniques and computational pipelines to profile active chromatin states, chromatin remodelers, and long-range interactions in small amounts of embryonic material. Dr. Cotney joined the faculty of the Department of Genetics and Genome Sciences at UConn Health in May of 2015. His lab is focused on identifying gene regulatory networks that likely contribute to a variety of developmental disorders ranging from craniofacial abnormalities to Autism Spectrum Disorders.

Biographies



Hyejung Won, Ph.D.
University of California, Los Angeles

Hyejung Won is a postdoctoral fellow in the laboratory of Dr. Dan Geschwind at UCLA. Hyejung received her PhD in Molecular Neurobiology from KAIST under the supervision of Dr. Eunjoon Kim, where she conducted research revealing the underlying mechanism of neuropsychiatric disorders using genetically modified mice. In Dr. Geschwind's lab, Hyejung performed Hi-C, genome-wide chromatin conformation capture technology, in developing human brain to permit the large-scale annotation of previously uncharacterized gene regulatory relationships relevant to brain disease.



Robert Bird, J.D., MBA
Professor of Business Law
Eversource Energy Chair in Business Ethics

Robert Bird is a Professor of Business Law in the School of Business at the University of Connecticut. Robert specializes in business law and the four pillars of values-driven management - business law, business ethics, sustainability, and business and human rights. Robert's work specializes in finding market and collaborative solutions to social problems, including sustainable global supply chains, corporate voluntary engagement, and finding value in corporate social activities. Robert has authored over seventy academic publications, including articles in the Journal of Law and Economics, American Business Law Journal, Journal of Business Ethics, Connecticut Law Review, University of Pennsylvania Journal of Business Law, and the Harvard Journal of Law and Public Policy. Robert has received sixteen research-related awards, including the Academy of Legal Studies in Business best conference paper award and the Junior Faculty of the Year award. Robert has also received awards for excellence in teaching, including the student-selected Alpha Kappa Psi Teacher of the Year award. Before joining UConn, Robert was an Assistant Professor of Business Law at Seton Hall University and served as an Adjunct Professor at Fairfield University and Sacred Heart University.



Stormy Chamberlain, Ph.D.
Department of Genetics and Genome Sciences

Stormy J. Chamberlain is the Raymond and Beverly Sackler Assistant Professor of Genetics and Genome Sciences at the University of Connecticut Health Center. Stormy obtained a B.A. degree in Molecular Biology from Princeton University and a Ph.D. in Genetics from the University of Florida. She performed post-doctoral research at the University of North Carolina-Chapel Hill and the University of Connecticut Health Center prior to joining the faculty at the University of Connecticut Health Center. Her lab uses induced pluripotent stem cell models of Angelman syndrome and 15q duplication syndrome to understand genetic and epigenetic regulation at the imprinted chromosome 15q11-q13 locus.



Eric Levine, Ph.D.
Department of Neuroscience

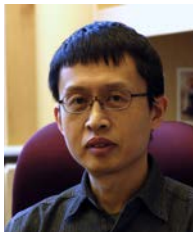
Eric Levine is a Professor of Neuroscience at the University of Connecticut School of Medicine. He received his B.S. in Mechanical Engineering from MIT and his Ph.D. in Neuroscience and Psychology from Princeton University. Dr. Levine did his postdoctoral training with Dr. Ira Black at Rutgers University, carrying out pioneering studies characterizing synaptic modulation by nerve growth factors such as BDNF. Research in Dr. Levine's laboratory explores synaptic plasticity and neuromodulation in the neocortex and hippocampus, focusing on the roles of endogenous cannabinoids and neurotrophins. More recently, his laboratory has also been using induced pluripotent stem cell-derived neurons to study the synaptic pathophysiology of Angelman syndrome and Dup15q syndrome. This work, done in collaboration with Drs. Stormy Chamberlain and Les Loew, is focused on identifying molecular targets and signaling pathways that could lead to novel therapeutic approaches to Angelman syndrome and related neurodevelopmental disorders

Biographies



R. Holly Fitch, Ph.D.
Department of Psychological Sciences

Holly Fitch is Professor of Behavioral Neuroscience in the Department of Psychological Sciences, the Institutes for Systems Genomics and Brain and Cognitive Sciences, and Director of the Murine Behavioral Phenotyping Facility. Her research focuses on rodent models of neurodevelopmental disruptions and cognitive disabilities, including genetic risk factors for cognitive disability, animal models of brain damage typical of premature/term birth insult, and behavioral studies of effects of prenatal teratogens. A variety of behavioral and anatomic assessments are employed, with an emphasis on tasks that tap skills foundational to communicative processes in rodents.



Zhong-Wei Zhang, Ph.D.
The Jackson Laboratory

Zhong-Wei Zhang earned a BA in Biology from Peking University, Beijing China and a PhD in Neuroscience from the University of Strasbourg, France. He did postdoctoral training at University of California San Diego and Laval University in Quebec City Canada. He was an Assistant Professor at Laval University before joining The Jackson Laboratory where he is currently an Associate Professor. Dr. Zhang's laboratory is interested in the development and function of neural circuits in health and disease.



Randall Walikonis, Ph.D.
Department of Physiology and Neurobiology

Randall Walikonis is in the Department of Physiology and Neurobiology. He earned his doctorate at the Mayo Clinic and conducted postdoctoral work with Mary Kennedy at Caltech. His research is focused on identifying and characterizing the functions of proteins in the postsynaptic density of excitatory synapses and in understanding how mutations linked to neurological disorders affects the structure and function of synapses.



Mary Beth Bruder, Ph.D.
Center for Excellence in Developmental Disabilities

For the past 40 years, Mary Beth Bruder has been involved in the design, provision and evaluation of early childhood intervention and special education systems for infants, children, and youth across local, state, national, and international venues. She has directed over 75 research demonstration, outreach, training and technical assistance projects, including those focused on children with autism spectrum disorders. She was the editor of the *Connecticut Guidelines for a Clinical Diagnosis of Autism Spectrum Disorder*, and she is the co-chair of the Act Early Coalition of CT which focuses on early screening and identification of young children with autism. Currently, she is Director of the University of Connecticut A.J. Pappanikou Center for Excellence in Developmental Disabilities Education, Research, and Service, the CT LEND and the Early Childhood Personnel Technical Assistance Center. She is the editor of the journal *Infants and Young Children: An Interdisciplinary Journal of Early Childhood Intervention*.