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HIGHLIGHTS FROM THE 21ST ANNUAL ADVANCES IN AUTISM CONFERENCE

On September 10, 2017, the Seaver Autism Center hosted the 21st Annual Advances in Autism Conference. The conference was held at the beautiful and historic New York Academy of Medicine and it brought together academic experts in the field of autism spectrum disorder, individuals with autism and their families as well as community groups. As our knowledge of the field grows year after year, so does the number of individuals who are interested in learning more. We once again celebrated with record attendance from a diverse audience of researchers, healthcare professionals, educators, and individuals with autism and their families.



John D. Cohen, Esq., Co-Trustee of the Seaver Foundation gives opening remarks.

Opening remarks of the conference were made by John D. Cohen, Esq. co-trustee of the Beatrice and Samuel A. Seaver Foundation, and Joseph D. Buxbaum, PhD, Director of the Seaver Autism Center. The first talk of the day was given by Dr. Catalina Betancur, Director of Research at French National Institute of Health and Medical Research. She discussed the genetics of autism, from gene discovery to understanding the underlying neurobiological mechanisms. Following Dr. Betancur was Alex Kolevzon, MD, who is the Clinical Director at Seaver Autism Center for Research and Treatment. Dr. Kolevzon discussed

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Speaker Panel moderated by Joseph D. Buxbaum, PhD, Director of the Seaver Autism Center

NEW STEM CELL GRANT

Similar to autism spectrum disorder, understanding the biology of schizophrenia has been difficult as it is etiologically and clinically heterogeneous. The Seaver Center has recently been awarded a study titled “Large-scale reprogramming and expression analysis of patient-derived neural cells in schizophrenia” (NIMH, R01MH111679).

This project involves a collaboration with the New York Stem Cell Foundation (NYSCF) to generate the first large scale, highly standardized library of induced pluripotent stem cells (iPSCs) and neurons derived from patients with schizophrenia. iPSCs are somatic cells from a simple patient biopsy that have been reprogrammed into

pluripotent stem cells. They are similar to embryonic stem cells, and therefore self-renew and can be differentiated into other cell types, including neural cells. Seaver scientists will perform gene expression profiling on the schizophrenia and control iPSC-derived neurons and use innovative systems biological analyses to achieve a

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CONFERENCE HIGHLIGHTS *Continued*



"From Genes to Treatment: Using Rare Genetic Disorders to Develop Novel Therapeutics" Alex Kolezvon, MD, Clinical Director of the Seaver Autism Center



"Fact and Fiction: My Daughter, Autism and Me" Elizabeth Burns, PhD, Family Keynote Speaker

the usage of rare genetic disorders to develop novel therapeutics. The final speaker of the morning was Elizabeth Burns, PhD. Dr. Burns served as our family note speaker, giving a remarkable presentation entitled "Fact and Fiction: My Daughter, Autism and Me". After lunch, Carissa Cascio, PhD, Associate Professor of Psychiatry and Behavioral Sciences at Vanderbilt University Medical Center took the podium.

She spoke about sensory differences in autism from clinical and neuroscience perspectives. Rounding out the list of speakers was Shelli Avenevoli, PhD. Dr. Avenevoli delivered the Scientific Keynote presentation with a discussion surrounding the advances in and future directions of autism research. We closed out the conference with a panel of the day's speakers, moderated by Dr. Buxbaum, who took time to answer questions from the audience.

We want to thank our community of supporters for continuing to join us each year to share knowledge and create a center for support and learning.

NEW STEM CELL GRANT *Continued*

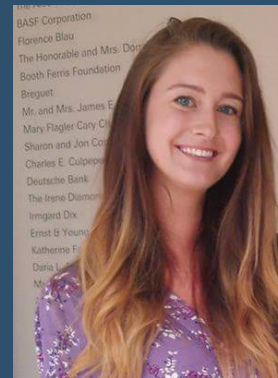
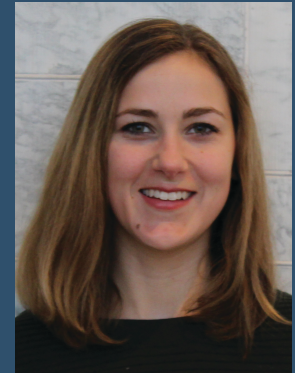
deeper understanding of the neuronal pathways that are disrupted in schizophrenia and to potential novel drug targets.

These approaches are significant because they will provide better understanding of the neurobiology of schizophrenia and facilitate drug discovery. Moreover, this project will allow us to develop a new area of expertise. As we start collecting samples and generating iPSC lines for several forms of syndromic ASD, this project will allow us to build strong expertise on creating and analyzing iPSC-derived neuronal models of autism.

INTRODUCING NEW FACULTY AND STAFF

EMMA WILKINSON

Emma Wilkinson joined the Seaver Center in July 2017 as a Research Coordinator after graduating from Middlebury College in May with a major in psychology. She will be working on studies investigating attention deficits in autism spectrum disorder as well as improving access to care for minority families.

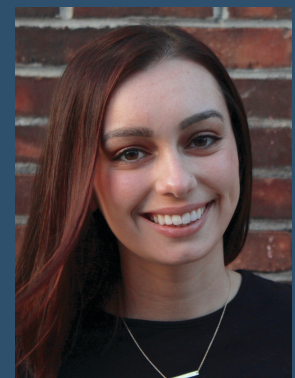


KRISTI NIBLO, B.S. LVT

Kristi Niblo, B.S. LVT, joined the Seaver Center in June 2017 as an Associate Researcher. She has a background in Veterinary Medicine and is excited to translate that to working with rodent models of autism spectrum disorder.

MIKAELA ROWE

Mikaela Rowe joined the Seaver Center in June 2017 as a Research Coordinator assisting in research on neural biomarkers of ASD using visual evoked potentials. She graduated from the University of Pennsylvania in May of 2017 with a degree in Psychology.



SEAVER CENTER WELCOMES NEW FELLOWS AND SCHOLARS

Our 2017 Seaver Fellows and Scholars marked the ninth class to be welcomed by the Seaver Center. With the generous support of the Seaver Foundation, the Seaver Center supports research-based fellowships for graduate students, postdoctoral fellows and junior faculty in areas such as genetic analysis, development

of model systems for autism, neuroimaging studies, and development and assessment of behavioral and pharmacological interventions for autism.

With this early career support from the Seaver Foundation, fellows and scholars are poised to obtain further funding from

a variety of sources, including the National Institutes of Health, and foundations such as Autism Science Foundation, Phelan-McDermid Syndrome Foundation, and Brain and Behavior Research Foundation.

Congratulations to this year's class of Seaver Fellows!

The Seaver Fellowship Program enhances all areas of research at the Seaver Autism Center, and has proven to be a successful launching pad for young scientists.

We are grateful to the Seaver Foundation for this ongoing support and contribution to the research and treatment of ASD.

SEAVER POSTDOCTORAL FELLOW



Michael S. Breen, PhD, is a postdoctoral fellow in the lab of Dr. Joseph D. Buxbaum. Dr. Breen's research applies functional genomics and bio-statistical approaches to gain more nuanced and accurate insights into how key genes and molecular pathways might potentiate risk and/or protection in Phelan-McDermid Syndrome (PMS) and idiopathic autism (iASD). He is also actively investigating the utility peripheral blood gene expression to improve early diagnosis of these conditions.

SEAVER FACULTY SCHOLAR



Eva Velthorst, PhD is a faculty scholar and Assistant Professor in the Department of Psychiatry. Dr. Velthorst's focus is on examining the determinants of different components of poor social outcome across psychiatric disorders. Her long-term goal is to extend knowledge about the causes and treatment of social impairment in mental illness, by bridging several scientific areas, including psychiatry, epidemiology, genetics, and psychology.

SEAVER GRADUATE FELLOWS



Vincent Luo is joining as a Seaver Graduate Fellow in the lab of Dr. Matthew Shapiro. He will be focusing his work on brain oscillations in a rat model of Phelan-McDermid Syndrome.



Josefa Sullivan joins the Seaver Fellowship Program as a graduate fellow in the lab of Dr. Anne Schaefer, a former Seaver Faculty Scholar. She will be working on transcriptional dysregulation of long genes in autism.



Carla Golden is a graduate fellow in the lab of Dr. Joseph D. Buxbaum and Dr. Hala Harony-Nicolas. Her work is focused on characterizing a rat model of Fragile X Syndrome. She will use a multi-level approach in order to better understand brain mechanisms and regions affected in FXS, with the potential of discovering new treatment targets and providing an output measure for screening of potential therapies for both males and females.



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- THE SEAVER AUTISM CENTER NEWSLETTER brings you timely updates about new developments related to research and treatment of autism spectrum disorders, as well as activities at the Seaver Autism Center. To be placed on our mailing list, please contact SeaverCenterEditor@mssm.edu or The Seaver Autism Center, Icahn School of Medicine at Mount Sinai, One Gustave L. Levy Place, Box 1668, New York, NY 10029. Our phone number is 212.241.0961 and our website is www.SeaverAutismCenter.org.
- **SEAVER IS CONTINUING TO GO GREEN!** Please send your email address to seavercentereditor@mssm.edu to receive this newsletter electronically.

2017 SEAVER FOUNDATION SITE VISIT

At the 2017 annual Seaver Foundation Site Visit this past September, the Trustees of the Beatrice and Samuel A. Seaver Foundation, Hirschell E. Levine, Esq., and John D. Cohen, Esq. made a generous donation to the Seaver Autism Center to

support initiatives outlined in the Center's strategic plan. As always, the Seaver Autism Center is extraordinarily grateful to the Seaver Foundation for their unwavering support and generosity since the founding of the Center in 1993.

If you would like to support active research and programs at the Seaver Autism Center, please visit www.seaverautismcenter.org or call 212-241-0349.

