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Make a Gift to the Seaver Center

Autism is the fastest growing developmental disorder, yet still underfunded.

Charitable donations drive our progress like no other source of funding, giving our scientists the flexibility and freedom they need to rapidly conduct trailblazing studies and develop new treatments.

We hope you will partner with us in this work by making a gift today, so the countless individuals

affected by autism can go on to live their very best lives.

Please contact Tatiana Stola, Associate Director of Development, at Tatiana.Stola@mountsinai.org or (646) 627-2663 with any questions or for assistance in making a gift. In addition, please consider joining the Seaver Associates Board, described below.

Cultivation Event

On November 29, we were thrilled to welcome community members to our first in-person event in three years.



We enjoyed an evening of catching up followed by a panel discussion featuring Drs. Alexander Kolevzon, Paige Siper, and Ana Kostic.

We loved having this opportunity to share the recent advances in our work with our guests, and we appreciated their thought-provoking and insightful questions. We look forward to the next time we'll get to connect with our community! We thank Alison Singer, chair of the Seaver Associates Board, for moderating.



The Seaver Associates Board, a group of committed stakeholders who support the research and clinical mission of the Center through philanthropic and strategic support, co-hosted this panel discussion. The Associates Board serves to fully realize the Seaver Autism Center's scientific mission and drive it forward, providing funding that is used to pursue novel findings, fund important pilot research, and seize scientific opportunities swiftly in order to move the field forward. For more information about joining the Seaver Associates Board, please contact Thom Harmon at Thomas.Harmon@mountsinai.org.

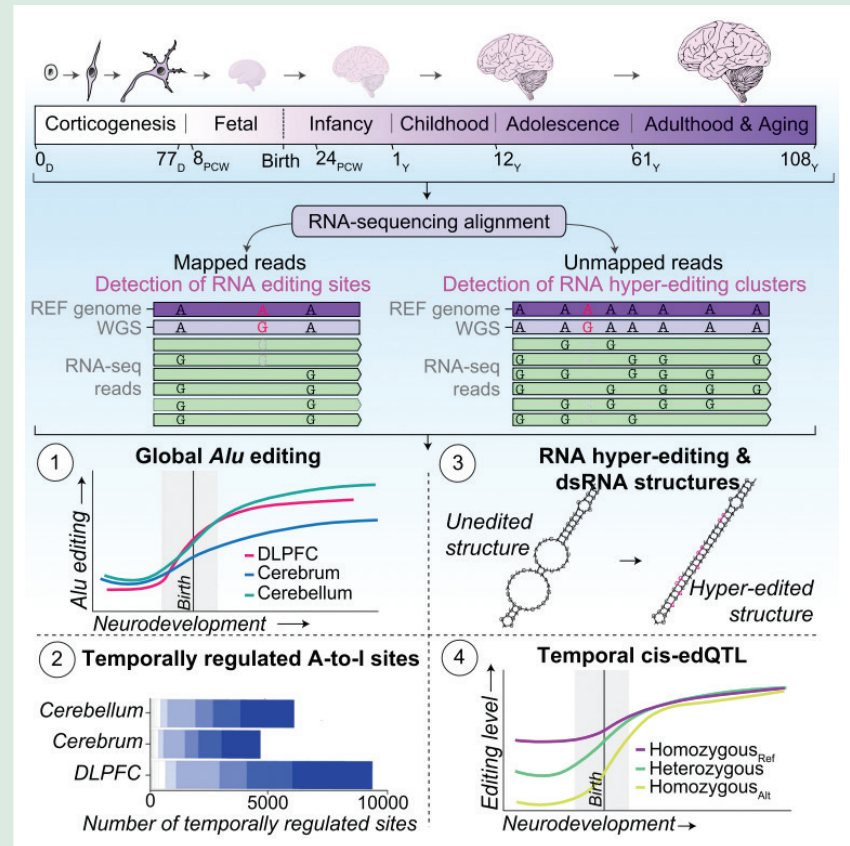


Social Skills Training

The Seaver Autism Center has maintained consistent funding through the UJA for over 15 years. This grant allows us to offer our expertise to create, execute and evaluate psychosocial intervention programs for children, adults and families impacted by autism. Our team provides training, supervision, and consultation for social skills groups across a number of community centers in the tri-state area, including the dissemination of several evidence-based curriculum developed at the Seaver Autism Center (i.e., Nonverbal communication, Emotion recognition, and Theory of mind Training (NETT) and Job-Based Social Skills Program (JOBSS)). We are also offering a parent training webinar series including topics such as *Positive Parenting Practices* and *Fostering the Development of Language and Social Communication*. In addition, the Seaver Center is currently modifying a training model we developed for physicians and clinical staff for employers outside of the medical community to teach proactive and positive social-emotional and behavioral skills for employers to optimize work environments for neurodiverse populations. We recently received a generous donation from RVC Blue Speaks to run a free evidence-based social skills group at the Seaver Autism Center in the Spring for children between the ages of 8-11. If you are interested, please contact Dr. Jessica Zweifach at jessica.zweifach@mssm.edu.

Publications

Dr. Breen and his laboratory published a study in *Cell Reports*, **Spatiotemporal and genetic regulation of A-to-I editing throughout human brain development**, examining changes in RNA editing profiles across brain development and neurodevelopmental disorders. The study has allowed scientists to understand how individual RNA modifications at adenosine residues change throughout prenatal and postnatal brain development. Dr. Breen found that the rate of RNA editing increases throughout brain development and that many of these residues are also disrupted in the autism brain, providing new pathobiological insights.



Update: Summer Undergraduate Research Scholars!



Our summer Seaver Undergraduate Research Scholars (*Kenzo Senaha Kimura, Alexa von Mueffling, Jenny Chung, Jacqueline Cho, and Winston Li*) were thrilled to present their work at The Summer Data Blitz on August 9th, 2022.

Seaver Promotions

PLEASE JOIN US IN CONGRATULATING Dr. Paige Siper on her promotion to Associate Professor, Dr. Behrang Mahjani on his promotion to Assistant Professor, and Tess Levy, GGS, on her promotion to Assistant Professor.



DR. PAIGE SIPER
Associate Professor



DR. BEHRANG MAHJANI
Assistant Professor



TESS LEVY, GGS
Assistant Professor

Paige works on identifying biological and bio-behavioral markers of idiopathic and single-gene forms of ASD. She is also a developer of the Sensory Assessment for Neurodevelopmental Disorders (SAND).

Behrang's research involves the leveraging of large epidemiological and biological data sets to study ASD and the associated disorders of OCD and ADHD. Tess Levy brings her background in clinical genetics to

clinical research in ASD with an emphasis on genotype-phenotype relations, clinical trial outcomes, and longitudinal trajectories in rare disorders. Congratulations!

GRANTS FOR OUR TRAINEES

YOUNG INVESTIGATOR AWARDS

The Brain & Behavior Research Foundation is one of the top funders of mental health research grants within the United States. Their Young Investigator grant program supports the most promising young researchers in the field of psychiatry and neurobiology. We were very proud to learn that Dr. Adele Mossa and Dr. Aya Osman from the Seaver Center are among them.

DR. OSMAN



Dr. Osman is interested in the role of the early microbiome (i.e., the microbes that naturally live in our bodies) as a contributory factor in autism spectrum disorder (ASD). The microbiome communicates with the brain in multiple ways, one of which is through the production of neuroactive metabolites such as short-chain fatty acids (SCFAs). Peripherally, these metabolites can influence gut wall integrity and gut immune profile. Dr. Osman uses a Shank3 deletion mouse model that lacks all functional isoforms of Shank3 (Shank3KO) to study gene-environment interactions. Shank3KO mice display social deficits in concert with baseline changes in microbiome composition and metabolic profile, and reduced levels of the SCFA acetate. Dr. Osman seeks to elucidate the role of gut-derived metabolites in regulating neuroimmune and epigenetic interactions, by fully understanding how acetate modulates social behavior in Shank3 mice.

DR. MOSSA



Dr. Mossa aims to unravel the functions of the autism risk gene DDX3X in neuronal development. DDX3X mutations cause DDX3X syndrome, a neurodevelopmental disorder mainly affecting females and presenting with intellectual disability often associated with autism spectrum disorder. Using the first mouse model for DDX3X syndrome generated by the Seaver Center and by tagging and tracking RNAs, Dr. Mossa will examine neuronal morphogenesis, synaptogenesis and mRNA translation in nerve cells with DDX3X mutations. The hope is that this work will lead to a better understanding of the mechanisms underlying DDX3X syndrome and autism, especially in females, and pinpoint targets to develop new therapies.

ALFONSO MARTIN ESCUDERO FOUNDATION AWARD

DR. MIGUEL RODRÍGUEZ DE LOS SANTOS



Dr. Miguel Rodríguez de los Santos, member of the Breen Lab and studying A-to-I RNA editing and rare neurodevelopmental disorders, was awarded a grant from the Alfonso Martin Escudero Foundation. The main goal of the project that the grant will support is developing novel mutation-tailored therapeutic approaches for ASD and rare genetic subtypes.



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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 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.

SAVE THE DATE

TUESDAY, MAY 23, 2023

Seaver Autism Center 27TH ANNUAL

Advances in Autism Conference

TOPIC

Precision Medicine in Profound Autism

VIRTUAL EVENT

Join online
from anywhere

COURSE DIRECTOR Joseph D. Buxbaum, PhD

For more information please contact: emma.hempstead@mssm.edu