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FBI Scholars Award to Support Phelan-McDermid Syndrome Research



Assistant Professor, Hala Harony-Nicolas, PhD was awarded a 2019 Friedman Brain Institute Scholars Award. This pilot grant will support her study to examine the effect of a mutation in an autism related gene, SHANK3, on the brain oxytocin system, which modulates social behavior.

Funded entirely through philanthropy, the goal of the Friedman Brain Institute Scholars Partnership is to encourage innovative brain research and offer young pioneers who are venturing into a new area of investigation the freedom to follow their science.

Dr. Harony-Nicolas' study will assess how SHANK3 mutations in rodent models affect the function of oxytocin-producing neurons in the brain and the central release of the oxytocin hormone. This research will also test if the impaired function of the oxytocin system, caused by the SHANK3 mutation, triggers social behavior deficits.

Meta-Analysis Highlights Important Challenges In Cognitive Processing For Adults With Autism Without Overall Intellectual Disability

The first comprehensive, systematic review and meta-analysis of adults with autism and without intellectual disability shows that despite having an intact IQ, these adults have medium to large impairments in four key social- and non-social cognitive domains: theory of mind, emotion perception and knowledge, processing speed, and verbal learning and memory.

To directly compare the relative severity of impairments across cognitive domains in adults, researchers at the Seaver Autism Center in collaboration with City University London aggregated all available autism

literature and conducted a systematic review and analysis.

The meta-analysis was published in JAMA Psychiatry.

Autism affects functioning in many domains throughout an individual's lifespan. These results may help create a roadmap for improved treatment for adults and even children.

"While our results support the key social cognitive theories of autism treatments, they also highlight the importance of a broader approach when studying cognition

and support interventions that also include non-social cognitive domains," says Tjasa Velikonja, PhD, a postdoctoral research fellow at the Seaver Autism Center and first author on the paper.

This study was funded by the Beatrice and Samuel A. Seaver Foundation, the Netherlands Organization for Scientific Research and the Brain & Behavior Research Foundation.

For more information about this study visit: <http://bit.ly/ASDcognition>

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 their ongoing support and contribution to the research and treatment of autism.

FACULTY SCHOLAR

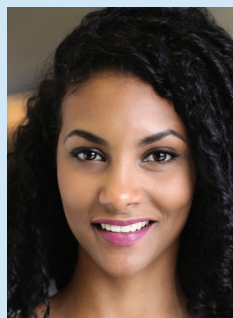
LAURA HUCKINS, PHD



Dr. Huckins is an Assistant Professor in the Pamela Sklar Division of Psychiatric Genomics, and the Seaver Autism Center. Her work focuses on the genetics and genomics of psychiatric disorders. She develops and applies QTL-based machine learning algorithms to identify genes and mechanisms involved in disease risk.

POSTDOCTORAL FELLOWS

AYA OSMAN, PHD



Dr. Osman currently investigating the role of the gut microbiome in a mouse model of Phelan-McDermid Syndrome. She aims to use a multi-disciplinary approach to help elucidate the exact bacterial populations and mechanisms by which gut bacteria may be interacting with the brain to influence autistic-like behavior. The end goal of this project is the identification of a gene x environment interaction in the development of autism which will aid our understanding of the disorder and help identify the gut microbiome as a new potential target for treatment.

MENTOR: Drew Kiraly, MD, PhD

KEERTHI RAJAMANI, PHD



Dr. Rajamani's work focuses on studying the neural circuitry of social behaviors, with an emphasis on the oxytocin system and how they might be altered in autism. In order to do this,

he uses a rat model of Phelan-McDermid Syndrome. He hopes the findings from his project will improve our understanding of the mechanisms that underlie the therapeutic effects of oxytocin in treating social behaviors deficits in autism.

MENTOR: Hala Harony-Nicolas, PhD

DÉVINA UNG, PHD



Dr. Ung focuses her work on studying the neurobiology of DDX3X, a novel sex-specific gene associated with intellectual disability and autism. She will use translational

approaches to characterize the role and the pathophysiology of DDX3X during brain cortical development using a new DDX3X mouse model.

MENTOR: Silvia De Rubeis, PhD

Seaver Foundation \$5M Gift

At the 2018 annual Seaver Foundation Site Visit this past October, the Trustees of the Beatrice and Samuel A. Seaver Foundation, Hirschell E. Levine, and John D. Cohen,

presented a generous donation of \$5 million to the Seaver Autism Center to support of the Center's growing initiatives and this year's Seaver Foundation Fellows.

We are honored to have the unwavering support of the Seaver Foundation, who are the underpinning of our progress, and are forever grateful for their advocacy.

If you would like to support active research and programs at the Seaver Autism Center, please visit: <http://bit.ly/DonateToSeaver>.

INSAR 2019 Preview

The International Society for Autism Research (INSAR) fosters scientific collaboration and education to better the lives of the individuals and families affected by autism.

Each spring, INSAR hosts the premier international autism research conference (formerly IMFAR). At the annual scientific meeting, researchers from around the world present progress made in the field of autism research and treatment.

Seaver Autism Center Director, Joseph D. Buxbaum, PhD, has been appointed the annual meeting's Co-Program Chair for the next two years and Chair of the

Program Executive Committee for the next three years. The meeting will be further enhanced with the highest quality presentations from the latest research in biological and medical sciences - adding to the already excellent work in psychology and other disciplines.

The 2019 Annual Meeting will be held in Montreal from May 1-4 and will include multiple panel and keynote sessions representing expanded topics areas. Members from the Seaver Autism Center will deliver more than a dozen presentations at the meeting.

NEW EMPLOYEE



NATALIA KIM

Natalia Kim joined the Seaver Autism Center in January 2019 as a Research Associate.

She has a Master's degree in biology and previously worked at SUNY Downstate Medical and Research Center where she gained experience in molecular and behavioral neuroscience and translational genome.

Annual Seaver Celebration



Seaver Autism Center team at annual celebration

The Seaver team came together at Two Door Tavern on the Upper East Side on January 23rd to toast to another year of advancing autism research.

We had plenty of things to celebrate from the 25th year of the Seaver Center. In 2018 we initiated special programs that target two new rare genetic disorders related to

autism – ADNP and DDX3X syndromes, and continued our groundbreaking work in Phelan-McDermid, FOXP1 and Fragile X syndromes. We launched the Seaver-Els Institute in partnership with the Els for Autism Foundation, hosted our first fundraising luncheon and published over 50 papers in scientific journals.

As we enter into 2019, we are determined to build on our past accomplishments and focus our efforts on a precision medicine approach to autism treatment.

Thank you to all of our supporters and families who continue to make our research possible.



Mount Sinai

Seaver Autism Center for Research and Treatment

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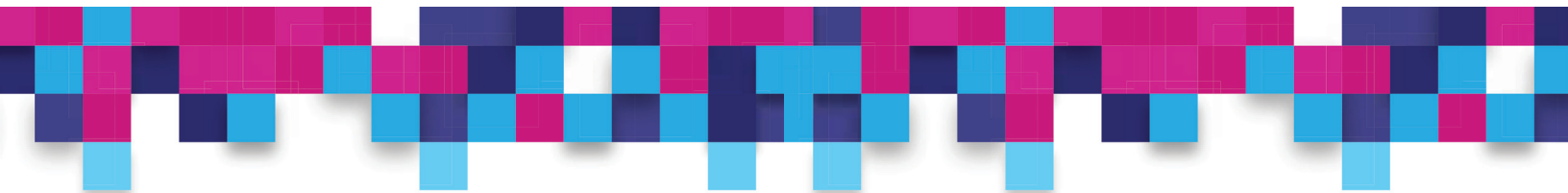


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- THE SEAVER AUTISM CENTER NEWSLETTER brings you timely updates about new developments related to research and treatment of autism spectrum disorders, as well as activities at the Seaver Autism Center. To be placed on our mailing list, please contact 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.



Please Join Us

to learn more about how the

Seaver Autism Center is Enhancing Autism Research With Technology

Meet the Center's experts and learn how they are utilizing technologic advances to better understand autism and related neurodevelopmental disorders. Find out how technologies are supporting the translation of breakthroughs in the lab to cutting-edge treatments.

Hosted by Marilyn and Jerry Blaine
along with The Seaver Autism Center Associates Board

Thursday, May 16, 2019

6:00 – 7:30 PM

Cocktails and hors d'oeuvres

LDI Color ToolBox, 1500 Broadway
(10th floor), New York City

SPACE IS LIMITED – RSVP IS REQUIRED

Contact Sarah Lynch for more details:
Sarah.lynch@mssm.edu | 212-241-0349



seaver autism center for research & treatment @ mount sinai