



IN THIS ISSUE

1 GENEROUS GIVING
NEW SEAVER FELLOWS

2 SEAVER CENTER HAPPENINGS

3 RECENT PUBLICATIONS

4 UPCOMING EVENTS

Seaver Foundation Continues Tradition of Generous Giving

As the Seaver Autism Center nears the end of its twentieth year, we would like to take the opportunity to share with our community the story of how we began. In the early 1990s, a long-time client of Eisner & Lubin, the accounting firm of which Mr. Hirschell Levine was the managing partner, left her entire estate to the Beatrice and Samuel A. Seaver Foundation. She named Mr. Levine and Mr. John D. Cohen, of the law firm Tenzer, Greenblatt, Fallon & Kaplan, as the trustees and stipulated the two must agree on the funding of grants from the foundation.

The trustees' client wanted to commit her estate to medical research in New York. Mr. Levine and Mr. Cohen both felt strongly about autism as a worthy cause, but they had trouble finding a research hospital that felt the same way. **"Mount Sinai was the only research hospital willing to take on the challenge of establishing an autism research and treatment center,"** says Mr. Levine. At the time, there was virtually no publicity about autism and no research dedicated to it, but Mount Sinai was willing to



(front row, L-R) Dr. Kenneth Davis, Mr. John Cohen, Mr. Hirschell Levine and (back row) Dr. Joseph Buxbaum after Mr. Levine and Mr. Cohen presented the \$1 million gift to Drs. Davis and Buxbaum.

undertake the project from the start.

The Seaver Autism Center began in 1993 with Dr. Kenneth Davis, currently the Chief Executive Officer and President of the Mount Sinai Health System, as the founding director. Since the founding of the Center, the group has grown from less than ten people to over 40 in 2013. We are part of two of the ten prestigious National Institutes of Health Autism Center of Excellence

Continued on page 3

New Seaver Fellows

Each year, the Seaver Foundation continues to support new researchers at the Seaver Autism Center. Most recently we have been joined by Paige M. Weinger, PhD, Megan Young, PhD, Nancy Francoeur, MSc, and Aslihan Dincer, MSc.

► PAIGE M. WEINGER, PHD

Dr. Weinger is a Seaver Postdoctoral Fellow and a recipient of the Autism Speaks Meixner Translational Research Postdoctoral Fellowship. She graduated from Cornell University with a Bachelor of Science and earned her PhD in clinical psychology from Yeshiva University. Dr. Weinger spent three years at the Seaver Center as a psychology extern prior to

her clinical internship at the University of Miami Miller School of Medicine. Her research focuses on visual processing in children with autism spectrum disorder (ASD) and unaffected siblings using a type of brainwave measurement known as a Visual Evoked Potential (VEP). Dr. Weinger is currently using VEPs to identify biological markers of ASD. She

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New Seaver Fellows *continued*

also provides neuropsychological evaluations and individual therapy as part of the Seaver Center's clinical program.

► MEGAN YOUNG, PHD

Dr. Young is a Seaver Postdoctoral Fellow, and she received her PhD in Neuroscience from Mount Sinai in 2013. She received a Bachelor of Arts degree in Neuroscience and Physics from Johns Hopkins University, where her research was focused on the construction of microdialysis probes for use in measuring dopamine concentrations in the dentate nucleus of the cerebellum during dystonic episodes in the Tottering mouse model of dystonia. Her doctoral research was focused on the measurement of spine density and morphology using confocal microscopy, and the quantification of synapse density and post-synaptic density length using serial-section electron microscopy. Working with Matthew Shapiro, PhD, Professor in the Department of Neuroscience at Mount Sinai, as a Seaver Fellow she will investigate the effects of the SHANK3 mutation on neural coding by frontal and temporal cortex.

► ASLIHAN DINCER, MSc

Ms. Dincer is a Seaver Graduate Fellow and a PhD student in the Department of Genetics and Genomics Sciences at Mount Sinai. She graduated from Bogazici (Bosphorous) Univer-

sity in Istanbul, Turkey with a Bachelor of Science degree in Chemistry and a Master of Science degree in Biomedical Engineering. Since joining Mount Sinai, she has been working under the supervision of Dr. Schahram Akbarian, focusing on epigenomics and genetic risk architecture of neurodevelopmental disorders. The overall goal of her research is to understand the molecular basis of autism and related psychiatric disorders through robust computational and statistical methods to analyze and interpret genome-scale datasets for the transcriptome and epigenome of the normal and diseased human brain.

► NANCY FRANCOEUR, MSc

Ms. Francoeur is a Seaver Graduate Fellow and a PhD student in the Genetics and Genomic Sciences training area at Mount Sinai. She received a Master's degree at New York University where she focused her coursework on Genomics and Bioinformatics, and completed her undergraduate degree in Biochemistry and Molecular Biology at Boston University. Under the supervision of Dalila Pinto, PhD, a Seaver Faculty Fellow, she is working to combine molecular and computational approaches to elucidate the gene regulatory networks in neurodevelopmental disorders that can be affected by single point mutations and/or copy number variants, with a focus on ASD.

Seaver Center Happenings

NEW GRANT AWARD

Ms. Alison Singer, President of the Autism Science Foundation (ASF) and Chair of the Seaver Autism Center Associates Committee, stopped by Mount Sinai to award an ASF grant to Dr. Alex Kolevzon, Clinical Director of the Seaver Center, to study the effects of Insulin-like Growth Factor-1 in autism.



ANNUAL SOCIAL SKILLS GROUPS

HOLIDAY PARTY

Robert Greenfeld along with his team at Connections, Inc. and the Seaver Autism Center jointly hosted the annual Social Skills Groups Holiday Party for participants in the Seaver Center social skills groups, as well as their families. We are very grateful to Mr. Greenfeld and the Connections, Inc. team for their continued support of the Seaver Autism Center.

Seaver Foundation Continues Tradition of Generous Giving *continued*

awards and have published hundreds of papers, with over 40 just within the last year. Our discoveries, accomplishments, and success in obtaining federal funding have roots in Seaver Foundation support and we are profoundly grateful for their continued generosity.

Over the years, the Seaver Foundation, led by Mr. Levine and Mr. Cohen, has given over \$36 million to Mount Sinai. At the annual Seaver Foundation Site Visit in November, Mr. Levine and Mr. Cohen graciously contributed an additional \$1 million on top of the Foundation's annual pledge and support

“It has been an extraordinary experience to watch the Seaver Center grow the way it has,” says Mr. Cohen. “We are looking forward to continued growth and new research discoveries in coming years.”

of faculty, postdoctoral, and graduate Seaver Fellowships.

Dr. Davis was present to receive the gift with Dr. Joseph Buxbaum, current Director of the Seaver Center (see picture). Mr. Levine said “Working with Ken to establish the Center has been an invaluable experience, and under Joseph’s direction the Center has made many exciting discoveries which will become new treatments for people with autism.”

If you would like to support research at the Seaver Autism Center, please visit www.seaverautismcenter.org or call 212-241-0961.

Recent Publications

ANALYSIS OF RARE, EXONIC VARIATION AMONGST SUBJECTS WITH AUTISM SPECTRUM DISORDERS AND POPULATION CONTROLS. Liu L, Sabo A, Neale BM, Nagaswamy U, Stevens C, Lim E, Bodea CA, Muzny D, Reid JG, Banks E, Coon H, Depristo M, Dinh H, Fennel T, Flannick J, Gabriel S, Garimella K, Gross S, Hawes A, Lewis L, Makarov V, Maguire J, Newsham I, Poplin R, Ripke S, Shakir K, Samocha KE, Wu Y, Boerwinkle E, Buxbaum JD, Cook EH Jr, Devlin B, Schellenberg GD, Sutcliffe JS, Daly MJ, Gibbs RA, Roeder K. *PLoS Genet*.

DE NOVO MUTATION IN THE DOPAMINE TRANSPORTER GENE ASSOCIATES DOPAMINE DYSFUNCTION WITH AUTISM SPECTRUM DISORDER. Hamilton PJ, Campbell NG, Sharma S, Erreger K, Herborg Hansen F, Saunders C, Belovich AN; NIH ARRA Autism Sequencing Consortium, Sahai MA, Cook EH, Gether U, McHaourab HS, Matthies HJ, Sutcliffe JS, Galli A. *Mol Psychiatry*.

DSM-5: THE DEBATE CONTINUES. Buxbaum JD, Baron-Cohen S. *Mol Autism*.

IDENTIFICATION OF SMALL EXONIC CNV FROM WHOLE-EXOME SEQUENCE DATA AND APPLICATION TO AUTISM SPECTRUM DISORDER. Poultney CS, Goldberg AP, Drapeau E, Kou Y, Harony-Nicolas H, Kajiwara Y, De Rubois S, Durand S, Stevens C, Rehnström K, Palotie A, Daly MJ, Ma’ayan A, Fromer M, Buxbaum JD. *Am J Hum Genet*.

INSULIN-LIKE GROWTH FACTOR-1 RESCUES SYNAPTIC AND MOTOR DEFICITS IN A MOUSE MODEL OF AUTISM AND DEVELOPMENTAL DELAY. Bozdagi O, Tavassoli T, Buxbaum JD. *Mol Autism*.

PROSPECTIVE INVESTIGATION OF AUTISM AND GENOTYPE-PHENOTYPE CORRELATIONS IN 22Q13 DELETION SYNDROME AND SHANK3 DEFICIENCY. Soorya L, Kolevzon A, Zweifach J, Lim T, Dobry Y, Schwartz L, Frank Y, Wang AT, Cai G, Parkhomenko E, Halpern D, Grodberg D, Angarita B, Willner JP, Yang A, Canitano R, Chaplin W, Betancur C, Buxbaum JD. *Mol Autism*.

SHANK3 HAPLOINSUFFICIENCY: A “COMMON” BUT UNDERDIAGNOSED HIGHLY PENETRANT MONOGENIC CAUSE OF AUTISM SPECTRUM DISORDERS. Betancur C, Buxbaum JD. *Mol Autism*.

THE AUTISM MENTAL STATUS EXAM: SENSITIVITY AND SPECIFICITY USING DSM-5 CRITERIA FOR AUTISM SPECTRUM DISORDER IN VERBALLY FLUENT ADULTS. Grodberg D, Weinger PM, Halpern D, Parides M, Kolevzon A, Buxbaum JD. *J Autism Dev Disord*.

THE EFFECT OF DIAGNOSIS, AGE, AND SYMPTOM SEVERITY ON CORTICAL SURFACE AREA IN THE CINGULATE CORTEX AND INSULA IN AUTISM SPECTRUM DISORDERS. Doyle-Thomas KA, Kushki A, Duerden EG, Taylor MJ, Lerch JP, Soorya LV, Wang AT, Fan J, Anagnostou E. *J Child Neurol*.

If you would like to read these publications and others by Seaver researchers, please visit www.tiny.cc/seaverpublications.



• **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 web site is www.SeaverAutismCenter.org.

• **SEAVER IS CONTINUING TO GO GREEN!** Please send your email address to seavercentereditor@mssm.edu to receive this newsletter electronically.



Upcoming Events

Unlocking the Mystery of Autism: From Genes to Novel Treatments

In early 2014, the Seaver Center will host a panel discussion and reception to launch the Seaver Autism Center Associates Committee, chaired by Alison Singer, MBA, President of the Autism Science Foundation. This Committee is a group of dedicated

stakeholders: parents, grandparents, siblings, and others, who want to learn more and do more to support their loved ones with autism and to support the great work being done here at the Seaver Center.

Distinguished Lecturer Series

On January 22, 2014, Dr. Christina Hultman (Karolinska Institute, Sweden) will be presenting, as part of the Distinguished Lecturer Series, on “Swedish National Samples in Psychiatric Epidemi-

ology and Psychiatric Genetics.” The lecture will be held at 5:30pm and is open to the entire community, both parents and professionals. A reception will follow the lecture, and this event is free of charge.

If you would like to attend either event, please visit <http://tiny.cc/seaverevents> to register. If you have any questions, please call 212-241-0349 or email jessica.brownfeld@mssm.edu.