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Autism Science Foundation Announces Recipients of 2019 Spring Pre and Postdoctoral Fellowships

Six Early Career Scientist and Mentor Teams Receive Funding

NEW YORK, NY (April 16, 2019) – The Autism Science Foundation, a not-for-profit organization dedicated to catalyzing innovative autism research, today announced the 2019 recipients of its annual pre- and postdoctoral fellowship grants. Four predoctoral and two postdoctoral fellowship grants will be awarded to student and mentor teams conducting research to develop better biomarkers that will help identify autism even earlier, improve individualized treatments, discover a novel gene-based intervention, uncover heritable causes of autism using both human and animal models, and interpret early markers of obesity in children with autism.

“We are thrilled to be able to support these important projects that will help improve the lives of people with autism“ said Autism Science Foundation Chief Science Officer Dr. Alycia Halladay. “These impressive young scientists have cutting-edge research ideas that hold incredible promise and these fellowships will provide the resources to allow junior level scientists the ability to complete the research faster and keep them in the autism field longer.”

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“Each research project selected has the potential to benefit the lives of those living with autism in tangible ways, and we are eager to see the discoveries and insights that result from this work” added Autism Science Foundation president Alison Singer.

Since its founding in 2009, the Autism Science Foundation has funded more than $3.5 million in grants, including pre- and postdoctoral fellowships, medical school gap year research fellowships, three-year early career awards, treatment grants, undergraduate summer research grants, research accelerator awards, and travel scholarships to enable stakeholders to attend the International Society for Autism Research (INSAR) Annual Meeting. In addition, the Autism Science Foundation provides support to the Alliance for the Genetic Etiology of Neurodevelopmental Disorders and Autism, the Autism Baby Siblings Research Consortium, The Autism Sisters Project and the Autism BrainNet.

The following pre- and postdoctoral projects were selected for spring 2019 funding:

**Autism Science Foundation’s 2019 Predoctoral Fellowship Grant Recipients**

**Zoe Hawks | Washington University School of Medicine at St. Louis**
**Mentor: John Pruett, MD, PhD**
**Testing candidate cerebellar presymptomatic biomarkers for autism**

In order to develop better interventions for autism we need objective biomarkers to diagnose autism and to monitor treatment response. This fellow will investigate a cerebellum-based biomarker and an eye-tracking biomarker together, to see if they may be...
useful in clinical settings. These biomarkers might also be used to predict changes in features of autism across time, providing information about the course of autism symptoms across the lifespan.

**Ileena Mitra|University of California at San Diego**  
**Mentor: Melissa Gymrek, PhD**  
*Interpreting the role of “short tandem repeats” in the genes of people with autism*

By looking at the entire genetic sequence, researchers at UCSD have identified a specific type of mutation called “short tandem repeats” in brain tissue associated with neurodevelopmental disorders. This project will be the first to study the role of these short tandem repeats in autism spectrum disorder. This will uncover new areas and types of genetic influences in autism and provide families with more accurate information about the potential heritable causes of ASD and the pathways involved.

**Serena Tamura|University of California at San Francisco**  
**Mentor: Nadav Ahituv, PhD**  
*Activating the healthy copy of SCN2A as potential treatment for SCN2A haploinsufficiency in autism*

About 0.3% of people with autism show mutations in the SCN2a receptor, with one type of mutation leading to autism and the other causing infantile seizures. Using an animal model, a specific gene therapy will be delivered to attempt to repair the unhealthy copy of the SCN2a gene. This may open up new opportunities to treat autism.

**Lisa Yankowitz|Children’s Hospital of Philadelphia**  
**Mentor: Robert Schultz, PhD**  
*Analyzing baby talk to better understand brain development in autism*

Early analysis of cooing, crying and babbling in infants is helpful in identifying infants who are more likely to go on to receive a diagnosis of autism, which means this might be used as an early marker of ASD. This study will examine how these differences in early vocalizations are linked to brain development and language in toddlerhood. Because this study will include those without an autism diagnosis, it will also help predict those who may have autism as opposed to other language impairments.

**Autism Science Foundation 2019 Postdoctoral Fellowship Grant Recipients**

**Laura Kinlin, MD, MPH, FRCPC|Hospital for Sick Kids, Toronto, Canada**  
**Mentor: Catherine Birken, MD, MSc, FRCPC**  
*Understanding growth patterns and early markers of obesity in children with autism*

Children with autism are at risk for obesity with increased body size seen as early as 5 years of age. However, there is little understanding of how the body weight of individuals with autism changes over time. Using hundreds of thousands of data points from children from...
birth to 19 years of age, the results of this study will be used to help identify periods when obesity may begin in kids with autism. The goal is to have more information to develop effective methods to help prevent obesity in ASD.

Emily Warren, PhD | Brown University
Mentor: Eric Morrow, MD, PhD

Molecular Mechanisms of 17q12 deletion syndrome: Developing a novel mouse model of polygenic ASD

Changes in expression in genes in a relatively large section of chromosome 17 have been associated with a variety of abnormalities in multiple organ systems, as well as neurodevelopmental disorders. This study will use an animal model to determine which genes on this area of chromosome 17 are responsible for autism vs. other physical issues including kidney problems and diabetes. Further knowledge of the function of multiple genes on this region will help develop better targeted therapies for autism based on genes on chromosome 17.

About the Autism Science Foundation:
The Autism Science Foundation (ASF) is a 501(c)(3) public charity. Its mission is to support autism research by providing funding to scientists and organizations conducting autism research. ASF also provides information about autism to the general public and serves to increase awareness of autism spectrum disorders and the needs of individuals and families affected by autism. To learn more about the Autism Science Foundation or to make a donation, visit www.autismsciencefoundation.org.

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