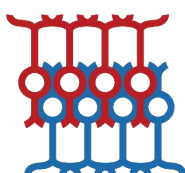


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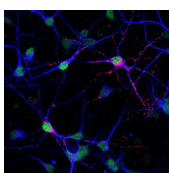


HOCK E. TAN AND K. LISA YANG
CENTER FOR AUTISM RESEARCH
AT HARVARD UNIVERSITY

Summer 2021 Newsletter

Bringing you updates on papers, awards, and events from the [Hock E. Tan and K. Lisa Yang Center for Autism Research at Harvard](#) and beyond! You can read more articles and the last edition of this newsletter [here](#).

News from Center Labs



New Insights on Activity-Dependent Gene Expression and the Developing Brain

The activity patterns of neurons orchestrate changes in gene expression that are critical for brain development and may be disrupted in neurodevelopmental disorders. This story by Center staff member Jonathan Schneiderman highlights two new studies from the Greenberg lab (Boulting et al., Stroud et al.), investigating the DNA regulatory elements that drive activity-dependent gene expression in the developing brain. [Read more.](#)



Shedding Light on How the Brain Controls the Emotion in Your Voice

When we speak to each other, we communicate both through what we say and how we say it—for instance, whether something is whispered at an indoor volume, or shouted as a loud command. This story by Center postdoc Jeffrey Markowitz highlights a new study from the Datta lab, Stowers lab at Scripps Research and colleagues (Chen et al.), with relevance for understanding social disorders. The team used a combination of experimental tools and machine learning to identify a specific population of cells in the brain which controls how a mouse modulates its imperceptibly high-pitched vocalizations. [Read more.](#)



'Mosaic' Gene Mutations Could Explain Some Cases of Autism

This Boston Children's Hospital news piece by Nancy Fliesler highlights two recent studies of the genetics of autism, from labs of Center faculty member Christopher A. Walsh, Peter J. Park, Po-Ru Loh and colleagues at Boston Children's Hospital, Brigham and Women's Hospital and MIT. These studies suggest that 'mosaic' mutations --which occur post-conception and may affect only a fraction of an individual's brain cells -- play a role in some cases of autism. [Read more.](#)

Awards and Honors

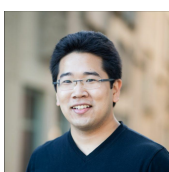
Congrats to **Christopher A. Walsh** on receiving the [2021 Gruber Neuroscience Prize](#), along with Christine Petit!

Congrats to **Catherine Dulac** on receiving a [2021 NOMIS Distinguished Scientist and Scholar Award](#)!

Congrats to **Lauren Orefice** on receiving her [first RO1 grant](#) this June, as well as a [SFARI pilot grant](#) for autism research!

Congratulations to **Caleb Weinreb**, postdoctoral fellow in the Datta lab, on receiving a three year fellowship from the [Jane Coffin Childs Memorial Fund for Medical Research](#)!

Young Scientist Highlight



Takuma Sonoda, PhD
Postdoctoral Researcher
[Chen Lab](#), Harvard Medical School

Understanding critical periods of brain development and their role in sensory circuit refinement is critical for unraveling the neurobiology of autism. Takuma, who started his postdoc in the Chen lab in April 2020, studies how experience shapes plasticity in the developing thalamus—a subcortical region of the brain that is important for integrating sensory information. Neurons in the thalamus are "tuned" to specific stimuli – for instance, in the visual part of thalamus, they may be tuned to visual features such as motion or orientation. Using behavioral, physiological and genetic approaches in mice, he examines how these tuning properties change with visual experience during critical periods of brain development. Outside of the lab, Takuma enjoys reading, fishing and playing with his daughters.

Center Members on YouTube

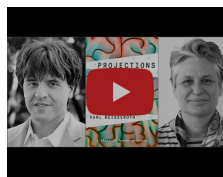
Autism Genetics, Cognition and Human Brain Evolution

On May 13, 2021 Christopher A. Walsh delivered a lecture on the topic of *Autism Genetics, Cognition, and Human Brain Evolution*. The Q+A session was moderated by Chinfei Chen. [Click here](#) to watch the recording.



Catherine Dulac Interviews Karl Deisseroth

Catherine Dulac chatted with Karl Deisseroth on June 21st as a part of a Harvard Book Store event on his new book, *Projections: A Story of Human Emotions*. [Click here](#) to watch the recording.



Stories from our Sister Center at MIT

[Some Brain Disorders Exhibit Similar Circuit Malfunctions](#)

Study suggests a common mechanism underlies some behavioral traits seen in autism and schizophrenia.

[New Technique Corrects Disease-Causing Mutations](#)

Novel method of gene editing may lead to development of safer, more efficient gene therapies.

Questions? Comments? Feel free to reach out to us
at TanYangAutismCenter@hms.harvard.edu.

