



**Boston  
Children's  
Hospital**

**F.M. Kirby  
Neurobiology  
Center**

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# Quarterly Newsletter

SUMMER 2025

## KIRBY CENTER HIGHLIGHTS



### Alexander Rotenberg named a Harrington Scholar-Innovator

Congratulations to **Alexander Rotenberg, MD, PhD** on being named a 2025 Harrington Scholar-Innovator by the Harrington Discovery Institute at University Hospitals.

Dr. Rotenberg's project is titled "Gene therapy for a rare inherited disease, Succinic Semialdehyde Dehydrogenase Deficiency (SSADHD)."

SSADHD is a rare pediatric neurometabolic disorder with no approved treatments and Dr. Rotenberg's groundbreaking work is aiming to change that through targeted gene therapy.

This prestigious award supports physician-scientists advancing breakthrough treatments from bench to bedside. Dr. Rotenberg's recognition is a powerful testament to his visionary science, relentless dedication, and commitment to families facing rare and often overlooked neurological diseases.

We're incredibly proud to celebrate this honor with him and look forward to the impact his work will have on children and families around the world.

**Michael Tri Do named 2025 Alcon  
Research Institute Senior**

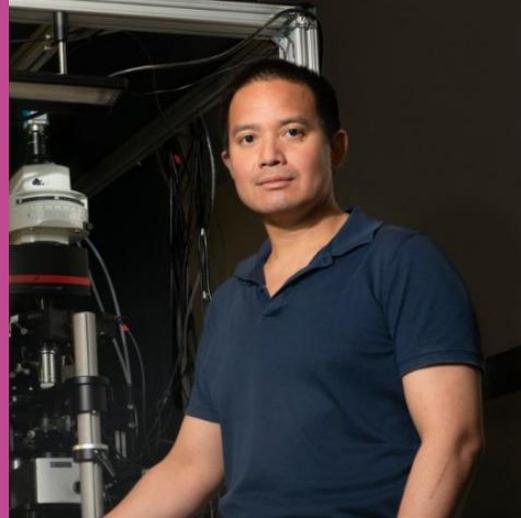
## Investigator Grant Recipient

We are thrilled to share that **Michael Tri Do, PhD**, has been named a 2025 Alcon Research Institute Senior Investigator Grant Recipient. This highly regarded award recognizes outstanding researchers whose work has made a lasting impact on the field of vision science.

Each year the Senior Investigator Grant is awarded to a select group of scientists from around the world who have demonstrated excellence in research and a commitment to advancing knowledge that benefits human health.

Dr. Do's laboratory focuses on understanding the neural basis of vision, exploring how the retina and brain process light to create the vivid images that guide our lives. His work has shed light on fundamental mechanisms of visual function, with implications for both basic neuroscience and the treatment of vision disorders.

Please join us in celebrating this exciting achievement. We are proud to see Dr. Do's contributions recognized and look forward to the continued impact of his work.



## Mustafa Sahin Receives Prestigious Manuel R. Gomez Award from the TSC Alliance

Congratulations to **Mustafa Sahin, MD, PhD** for receiving the Manuel R. Gomez Award from the Tuberous Sclerosis Complex (TSC) Alliance.

The Gomez Award is the highest recognition given by the TSC Alliance and is presented to individuals who have made a lasting impact on advancing research in tuberous sclerosis complex and improving clinical care for individuals living with the condition.

Dr. Sahin's decades of work have significantly advanced our understanding of TSC and shaped the way clinical care is delivered for children and families affected by the disorder. His research has paved new paths for treatments and therapies, while his leadership has fostered collaboration and innovation across the TSC community.

Please join us in congratulating Dr. Sahin on this well-deserved honor and in celebrating his outstanding contributions to neuroscience and patient care.

**Welcome to our new Kirby Affiliate Faculty**

The Kirby Neurobiology Center is excited to welcome **Milena Andzelm, PhD** and **Alissa D’Gama, MD, PhD** as affiliate faculty members. Both have longstanding connections with the Kirby Center, Dr. Andzelm through her past research collaborations and Dr. D’Gama from her training years. We’re delighted to see them continue these collaborations in their new roles. Their expertise in brain development, neurobiology, and neurodevelopmental disorders will further strengthen our community and advance our mission of discovery.



**Milena Andzelm, PhD**

Physician, Department of Neurology, Boston Children’s Hospital & Instructor of Neurology at Harvard Medical School.

Dr. Andzelm’s research explores the cellular and molecular mechanisms that shape neural circuits, with implications for understanding neurological disease.



**Alissa D’Gama, MD, PhD**

Attending Physician, Division of Newborn Medicine, Boston Children’s Hospital & Assistant Professor of Pediatrics, Harvard Medical School

Dr. D’Gama investigates the genetic and developmental origins of neurodevelopmental disorders, bridging basic science and clinical care.

## IN THE MEDIA

### *Recent News Links*

[New research offers hope to preserve vision in autosomal dominant optic atrophy](#) | Schwarz Lab featured

[A Silent Spinal Pathway Awakens in Chronic Pain](#) | Woolf Lab featured

[Decoding epilepsy dyskinesia syndrome: Clinical clues and genotypic spectrum](#) | Dr. Ebrahimi-Fakhari interviewed

[Breakthrough gene therapy could one day cure genetic hearing loss](#) | Dr. Holt & Dr. Geleoc are mentioned

NIH awards over 8.6 million grant to advance research on rare developmental synaptopathies | Dr. Sahin mentioned

Amid a crackdown on DEI, a group of Black neuroscientists celebrates its growth | Dosh Whye (Human Neuron Core) interviewed

*Dr. Takao Hensch received his Order of the Rising Sun and Gold Rays with Ribbon from the Japanese government at the Japanese Consul General's home in August.*

[More info](#)



## EVENTS

### BHCC Summer Intern Program



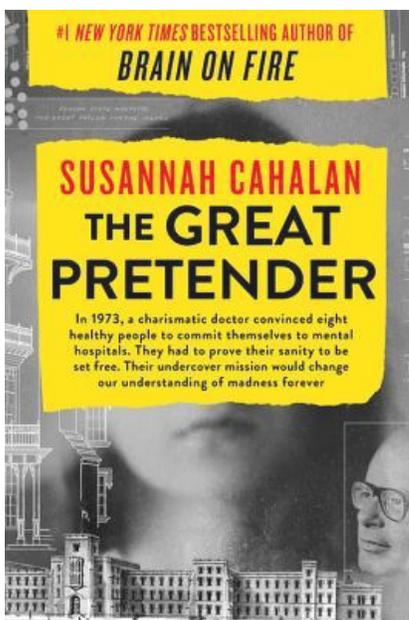
This summer, we had the privilege of hosting an amazing group of interns from Bunker Hill Community College (BHCC), who spent the past seven weeks being trained and working alongside faculty and affiliates of the Kirby Neurobiology Center.

From learning advanced lab techniques to contributing to projects in neuroscience, proteomics, and more, these students embraced every challenge and grew tremendously as young scientists.

At the end of the program, they capped off their internship experience by presenting their research at a poster session—sharing what they’ve learned and accomplished with their mentors, peers, and the BCH community.

We’re so proud of everything they achieved this summer and can’t wait to see what comes next as they continue their journeys in science, medicine, and beyond!

A huge thank you to Bunker Hill Community College, our dedicated mentors & organizers, and of course, our incredible interns for making this summer such a success!



## Brainy Book Club Update

On September 8th, the Brainy Book Club met to discuss Susannah Cahalan's book, *The Great Pretender: The Undercover Mission That Changed Our Understanding of Madness*. Our discussion was focused on the treatment of mental illness and scientific integrity.

## Blood Drive Battle

In August, the Kirby Center, Neurosurgery, and Neurology took place in a blood donation battle to benefit BCH's half pints. In the end, 28 people donated which will benefit up to 112 patients at BCH. The winners of the battle for a second year in a row was Neurosurgery for having the highest proportion of donations!

## 2025-2026 NSS Schedule

We are so excited to have the Neurobiology Seminar Series return for its 2025-26 season. This series is a collaboration between the Kirby Center and Harvard Medical School's Program in Neuroscience to bring accomplished scientists from near and far to discuss their work and meet with our faculty and trainees.

If you have questions about the series, please contact **Katie Rogers**.

# 2025 2026 NEUROBIOLOGY SEMINAR SERIES

MONDAYS AT 12:15PM

SEPT. 15 <b>MARKITA LANDRY</b> UC BERKELEY	JAN. 12 <b>NAOSHIGE UCHIDA</b> HARVARD UNIVERSITY	MAR. 16 <b>ANNE TAKESIAN</b> MEEI / HARVARD MEDICAL SCHOOL
SEPT. 29 <b>LAUREN OREFICE</b> MASS GENERAL HOSPITAL/ HARVARD MEDICAL SCHOOL	JAN. 26 <b>ELIZABETH ENGLE</b> BOSTON CHILDREN'S HOSPITAL/ HARVARD MEDICAL SCHOOL	MAR. 23 <b>RUAIDHRÍ JACKSON</b> HARVARD MEDICAL SCHOOL
OCT. 20 <b>RICHARD HUGANIR</b> JOHNS HOPKINS	FEB. 2 <b>FAN WANG</b> MIT	MAR. 30 <b>ANTONIO FERNANDEZ-RUIZ</b> CORNELL UNIVERSITY
NOV. 10 <b>IVO SPIEGEL</b> WEIZMANN INSTITUTE	FEB. 9 <b>DAYU LIN</b> NYU	APR. 27 <b>GABY MAIMON</b> THE ROCKEFELLER UNIVERSITY
NOV. 24 <b>YULONG LI</b> PEKING UNIVERSITY	FEB. 23 <b>WADE HARPER</b> HARVARD MEDICAL SCHOOL	MAY 4 <b>FRANK BRADKE</b> GERMAN CENTER FOR NEURODEGENERATIVE DISEASES
DEC. 8 <b>BAPTISTE LACOSTE</b> UNIVERSITY OF OTTAWA	MAR. 2 <b>SARAH ROSS</b> UNIVERSITY OF PITTSBURGH	MAY 11 <b>ZHIGANG HE</b> BOSTON CHILDREN'S HOSPITAL/ HARVARD MEDICAL SCHOOL
PRESENTED BY:  Boston Children's Hospital   F.M. Kirby Neurobiology Center		
 HARVARD MEDICAL SCHOOL    BLAVATNIK INSTITUTE NEUROBIOLOGY		
 IDDRRC		
MAR. 9 <b>SUSAN KAECH</b> SALK INSTITUTE		MAY 18 <b>MEHRDAD JAZAYERI</b> MIT

## TRAINEE & LAB NEWS



### Schwarz Lab Reunion

In July, Tom Schwarz, PhD hosted lab alumni for a symposium that coincided with his 70th birthday. Lab members both past and present gathered to share their work and celebrate the evolution and legacy of Dr. Schwarz's lab. This year marks his 25th year at BCH! Congratulations and Happy Birthday, Tom!

# Congrats on recent Thesis Defenses



## Devorah Kranz, PhD

*(Fagiolini Lab)*

“EEG-Based Biomarkers of Neural Circuit Function in Rett Syndrome”

## Helena Barr, PhD

*(Stevens Lab)*

“Circadian Regulation of Brain Border Immunity Across the Lifespan”



## Tracy Yang, PhD

*(Andermann/Chen Labs)*

“Noradrenergic Modulation of an Amygdalo-thalamic Circuit”



### Annual Research Admin Retreat

In September, our admin team traded spreadsheets & emails for spatulas & knives at their annual retreat! This year’s outing took them to Third Space Kitchen, where they teamed up to prepare a delicious Mexican meal under the guidance of chef instructors. It was a wonderful chance to connect outside of meetings, share some laughs, and enjoy a

fantastic meal together.

# Osterweil Lab hosts Fragile X Symposium



On May 22, the **Osterweil lab**, with the help of the Rosamund Stone Zander Translational Neuroscience Center (RSZTNC), hosted a one-day meeting devoted to addressing the challenges in research and clinical translation of Fragile X Syndrome. Researchers, clinicians, patient advocacy groups and parents discussed their experiences and brainstormed about overcoming hurdles to translation. Keynote speakers included Dr. Mike Tranfaglia, head of the FRAXA foundation, who spoke about the history of Fragile X research and current therapeutic strategies under development. Dr. Liz Berry-Kravis (Rush University) gave an overview of the history of clinical trials in Fragile X, explaining the lessons learned from prior experiences and detailing current successes. Professor Mark Bear (MIT) gave a talk outlining the mGluR Theory of Fragile X and discussed the status of ongoing translational pursuits.

The day concluded with important perspectives from parents who spoke about challenges they faced preparing for clinical trials and advised how to improve these experiences for patients. Based on the success of this meeting, an annual workshop is being developed to expand and strengthen the Boston area Fragile X community.



## Celebration of induction to National Academy of Sciences

On September 3rd, members of the Kirby Center and Otolaryngology got together to celebrate the election of Jeffrey Holt, PhD to the National Academy of Sciences this past May.



*The Kirby Center is now on LinkedIn*

**Be sure to follow our page to stay up-to-date on all the Kirby news!**

## Support for Fellows Entering the Job Market

If you are entering the market and would like assistance preparing to do so, please email [SJ Cunningham](#) and [Mike Do](#) well in advance of your first deadline. If you communicate your particular needs/research interests (e.g., "I am a biophysicist with neuroethological leanings for whom English is a second language"), we will convene a Practice Committee of Kirby faculty members who are appropriate for your research. This Committee will:

1. Review a draft of your application.
2. Provide coaching on preliminary interviews.
3. Offer feedback on your job talk.
4. Take you through a mock chalk talk.
5. Provide advice on closing the deal.

When reaching out to us, please copy your advisor and ask them to give the green light for this process. We are most effective when your application, talk, and chalk talk are each at the fine-tuning stage.

Note that BCH offers a related service. Please choose one to avoid overburdening our faculty.

# AWARDS & PUBLICATIONS

## Recent Awards

**Mandana Arbab, PhD** was awarded funding from Cure Spinal Muscular Atrophy.

**Chinfei Chen, MD, PhD** was awarded a competing continuation of her R01 project, "Plasticity of the Retinogeniculate Synapse."

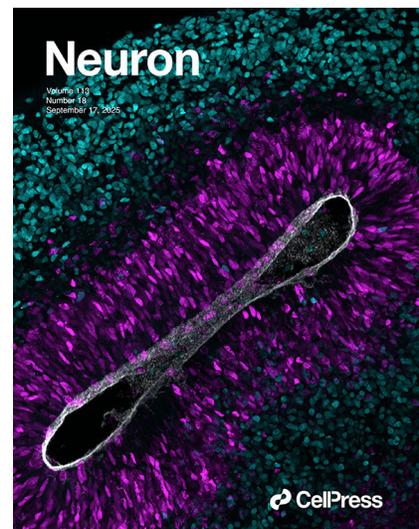
**Michael Crickmore, PhD** received an R01 from the NIH for his project, "Neuroendocrine computations underlying an enduring behavioral state."

**Darius Ebrahimi-Fakhari, MD, PhD** received a grant from EURO-HSP to support his project, "Plasma Proteomics Biomarker Discovery in SPG11 and SPG15 - Toward Clinical Trial Readiness."

**Jordan Farrell, PhD** was awarded a seed grant from the Harvard Brain Science Initiative for his project, "Hypothalamic control of exploratory behavior and excitability in Ank3-deficient mice."

**Jeffrey Holt, PhD** received a competing continuation of his R01 project, "TMC gene function in sensory hair cells."

**Karl Koehler, PhD** was a recipient of a 2025 Emerging Investigator Research Grant from the Pediatric



## Recent Publications

**Rotenberg Lab.** Sex differences in seizure presentation in a Dravet syndrome mouse model. *Neuroreport*. April 2025.

**Schwarz Lab.** SARM1 loss

Dermatology Research Alliance for his project, "Development of Epidermolysis Bullosa Patient-Derived Skin Organoids."

**Wei-Chung Allen Lee, PhD** was awarded a U01 from the NIH for his project "BRAIN CONNECTS: FAST-ET: fast automated serial tape-enabled electron tomography."

**Judith Steen, PhD** received funding from Fundación Pro Hominis to support her Parkinson's research.

**Franklin Caval-Holme, PhD (Do Lab)** was awarded an NIH K99 for his project, "Transformations of photic information in melanopsin pathways."

**Suil Kim, PhD (Lipton Lab)** received an F32 from the NIH for his project, "Investigating BMAL1-RNA interactions and their roles in circadian rhythms."

**Peter Mussells Pires, PhD (Crickmore Lab)** was awarded a Helen Hay Whitney Foundation Fellowship to support his project, "Visualizing the neural determinants of a decision in *Drosophila*."

**Aditi Singh, PhD** received the NextGen Accelerator Grant from the Cell Discovery Network for the project "Full-Length Transcriptomics of FMRP-Deficient Neurons: Insights into Human Fragile X Syndrome."

protects retinal ganglion cells in a mouse model of autosomal dominant optic atrophy. *J Clin Invest*. May 2025.

**Ebrahimi-Fakhari Lab.** ap4b1 <sup>-/-</sup> zebrafish demonstrate morphological and motor abnormalities. *Hum Mol Genet*. June 2025.

**Chen Lab.** Limited transmission of mixed convergent signals at the mouse retinogeniculate synapse. *Neuron*. July 2025.

**Holt/Geleoc Lab.** Structural and functional basis of mechanosensitive TMEM63 channelopathies. *Neuron*. August 2025.

Boston Children's Hospital | Boston Children's Hospital 300 Longwood Ave Center for Life Science | Boston, MA 02115 US

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