

# Neurobiology News



**Boston  
Children's  
Hospital**

Until every child is well™

**FM Kirby  
Neurobiology  
Center**

**August 2017**

## Announcements

**Michael Crickmore**, PhD, has been named a [2017 Pew Scholar](#). Congratulations, Mike!

**Robin Kleiman**, PhD, departed the Kirby Center in July to become Senior Director of the Translational Cellular Sciences Group at Biogen. Congratulations, Robin!

**Wei-Chung Lee**, PhD, has been promoted to Assistant Professor of Neurology, Harvard Medical School. Congratulations, Wei!



On Friday, April 28, faculty members gathered for the **2017 Kirby Faculty Retreat**, held at the Museum of Science in Boston. The retreat agenda included several faculty talks and two lightning round sessions.

In the spring and summer of 2017, the following Kirby Center employees received Boston Children's Hospital [Milestone Service Awards](#) for their dedication to BCH. Congratulations!

- In February, **Gong Du** celebrated 10 years of service.
- In March, **Anthony Hill**, PhD, celebrated 10 years of service.
- In July, **Alex Rotenberg**, MD, PhD, celebrated 10 years of service.
- In August, **Marie Boyle** celebrates 25 years of service.

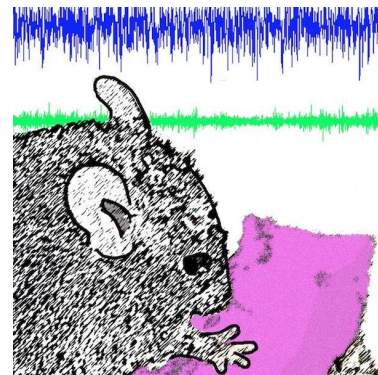
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## Research News

*Technology Networks* article [Stem Cells Used to Create Inner Ear Organoids](#) describes how the work of **Jeff Holt**, PhD, and collaborators has led to the development of "a method to grow inner ear tissue from human stem cells."

**Alban Latremoliere**, PhD, (Woolf lab) suggests pain-relieving alternatives to ibuprofen in *Time's* [Before You Take Ibuprofen, Try This](#).

*Science Signaling's* [A Nap a Day Keeps the Pain Away?](#) highlights the recent *Nature Medicine* publication on the relationship of sleep to pain by **Alban Latremoliere**, PhD, (Woolf lab) and Chloe Alexandre, PhD, (Beth Israel Deaconess Medical Center). This story is also covered in [Daily Mail](#), [Science Daily](#), [Medical Daily](#), and [Vector](#). (photo credit: [Vector](#))



**Alex Rotenberg**, MD, PhD, comments on electric brain stimulation potential in epilepsy treatment in *The New York Times* article [New Electrical Brain Stimulation Technique Shows](#)

## [Promise in Mice.](#)

In an interview with the editor-in-chief of [Medscape](#), **Beth Stevens**, PhD, shares details about her career beginnings and recent groundbreaking work.

*Harvard Magazine* article [Probing Psychoses](#) discusses the work of **Beth Stevens**, PhD, whose collaborative efforts with colleagues correlate excess synaptic pruning with the development of schizophrenia.

*Boston Business Journal* quotes **Clifford Woolf**, MB, BCh, PhD, in [How Boston hospitals are working to save NIH funding in the Trump era.](#)

**Zhigang He**, PhD, **Michael Norsworthy** (Z. He lab) and collaborators explore the complexity surrounding axon regeneration in retinal ganglion cells in a study featured in *Vector's* [Optic nerve regeneration: One approach doesn't fit all.](#)

*Vector* article [From mice to humans: Genetic syndromes may be key to finding autism treatment](#) describes the work of **Mustafa Sahin**, MD, PhD, with mouse models of genetic syndromes that cause autism spectrum disorder and resulting translation to human treatment. The story highlights a recently published *Molecular Autism* study, conducted by Dr. Sahin in collaboration with **Alex Rotenberg**, MD, PhD.

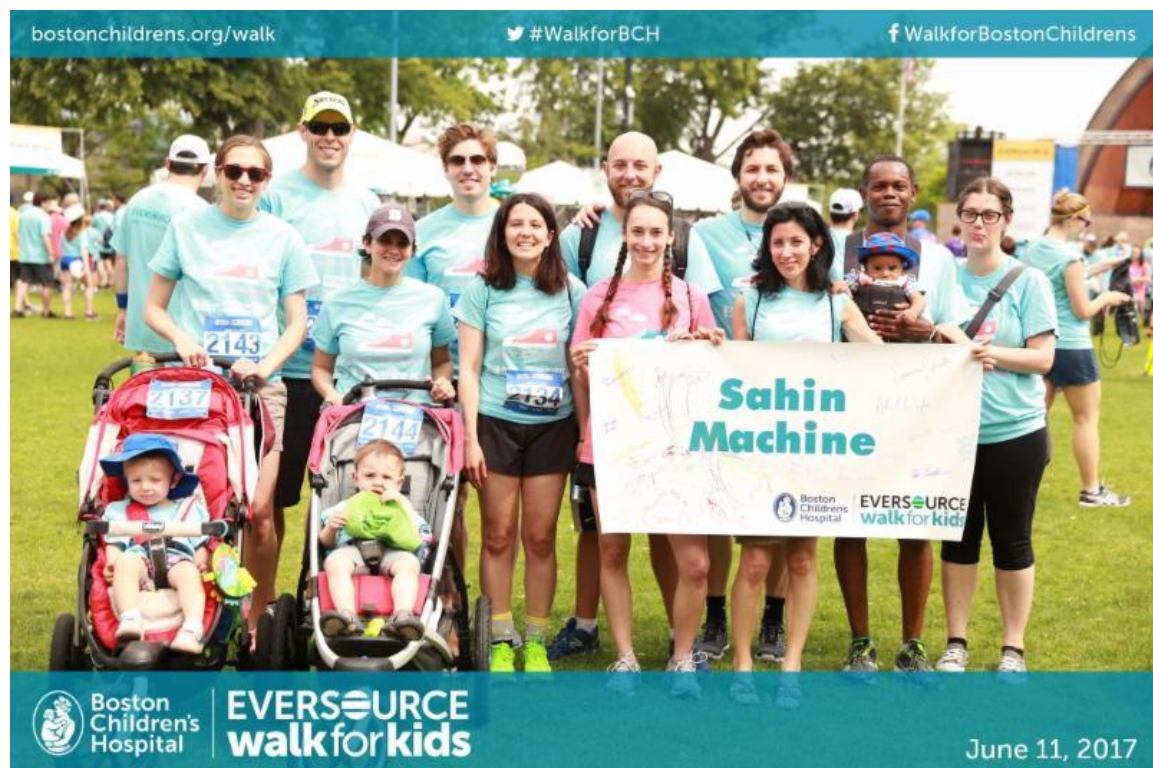
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## Kirby in the Community

Led by **Michela Fagiolini**, PhD, the Rett Syndrome Swim Program is a collaboration of Crimson Aquatics, Rett Syndrome Massachusetts Association, and Boston Children's Hospital that is serving girls with Rett Syndrome by providing swim time with young coaches. (pictured right: Luca Hensch instructs Sammy Gillard as Johnny McEachern stands by.)



On Sunday, June 11, Kirby Center faculty and staff comprised teams to participate in the Eversource Walk for Boston Children's Hospital, an annual walk held to raise funds to support BCH patient care and research programs. (pictured below: The Sahin lab team smiles for an Eversource shot.)

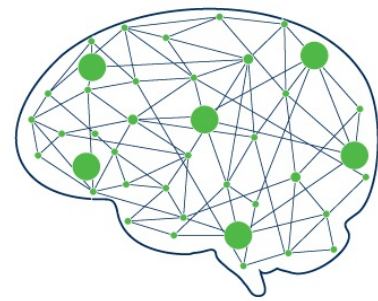


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## Recent Awards

**Todd Anthony**, PhD, received a Milton Fund Award for his project titled Genetic Dissection of Lateral Septal Addiction Circuitry.

Dr. Anthony was also granted a Charles H. Hood Foundation Child Health Research Award for his project titled Neural circuit-level mechanisms that control persistent consequences of early life stress.



**Michael Crickmore**, PhD, was named a 2017 Pew scholar as he was awarded a grant by the National Advisory Committee of the Pew Scholars Program in the Biomedical Sciences.

Dr. Crickmore also received an NIH Avenir Award (DP1) for his project titled Mating Behavior in *Drosophila* as a model for understanding and controlling aberrant dopaminergic responses.

**Takao Hensch**, PhD, received funding from the National Institute of Aging as part of a U24 grant awarded to Theresa Seeman at UCLA for their project titled Early Life Stress and Adolescent Sleep.

**Jeff Holt**, PhD, was awarded a Boston Children's Hospital Translational Research Program grant for his project titled Development of efficient gene-therapy approaches for delivery of large gene sequences to the inner ear.

**Ann Poduri**, MD, MPH, received funding from the Tommy Fuss Center for Neuropsychiatric Disease Research for her project titled Zebrafish Models of the Epilepsy-Schizophrenia Overlap: From Genes to Drug Screens.

**Tom Schwarz**, PhD, is the recipient of an HBI ALS Seed Grant for his project titled Enhancing Mitochondrial Transport as a Potential Therapeutic Target for ALS.

**Beth Stevens**, PhD, received an NIH P50 Conte Center Grant together with Drs. Michael Carroll (BCH) and Steve McCarroll (HMS) for their multi-PI project titled Neural-immune mechanisms and synaptic connectivity in psychiatric illness. (photo credit: [Conte](#))

**Hisashi Umemori**, MD, PhD, received an R01 from NIMH for his project titled How do neurons in the brain decide to refine their synaptic connections in vivo?

**Michael Costigan**, PhD, and Dr. Catherine Brownstein have entered into an extendable one-year pain drug discovery collaboration with Amgen.

**Alessandro Di Gioia**, PhD, (Engle lab) was awarded a Knights Templar Eye Foundation Pediatric Ophthalmology Career-Starter Research Grant for his project titled Dissecting the Genetic Basis of Duane Retraction Syndrome Using Zebrafish.

**Jill Falk**, PhD, (Schwarz lab) received a Parkinson's Disease Foundation fellowship for her project titled Mitochondrial protein homeostasis in peripheral axons.

**Suzanne Michalak**, MD, (Engle lab) received a 2017 ARVO (Association for Research in Vision and Ophthalmology) "Hot Topic" Abstract Award for her project titled Ocular Motor Nerve Development in the Presence and Absence of Extraocular Muscle.

**Matthew Rose**, MD, PhD, (Engle lab) is the recipient of a K08 grant for his project titled Mapping Brainstem Motor Neuron Subtypes and Genetic Pathways Involved in Their Differential Susceptibility to Disease.

**Mary Whitman**, MD, PhD, (Engle lab) was awarded a K08 grant for her project titled Oculomotor Axon Guidance in Normal and Abnormal Development.

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## Postdoc News

**Alessandro Di Gioia**, PhD, (Engle lab) has been elected PDA co-president for 2017-2018.

This September, **Alban Latremoliere**, PhD, (Woolf lab) will begin his position as Assistant Professor in the Department of Neurosurgery at Johns Hopkins University School of Medicine.

**Annarita Patrizi**, PhD, (Fagiolini/Hensch lab) has accepted a position as Chica and Heinz Schaller Group Leader, Cell Biology and Tumor Biology Department, DKFZ, Heidelberg.

**Anne Takesian**, PhD, (Fagiolini/Hensch lab) has secured the position of Assistant Professor of Otology and Laryngology at Harvard Medical School and Assistant Scientist at Massachusetts Eye and Ear.

**Sebastien Talbot**, PhD, (Woolf lab) has begun his position as Assistant Professor in the Department of Pharmacology and Physiology in the Faculty of Medicine at Universite de Montreal.

**Xinjun Zhang**, PhD, (X.He lab) has been selected by the prestigious "Youth 1000 Talent Program" by the Government of People's Republic of China and has accepted a faculty position at Huazhong University of Science and Technology, China.



### Support for Fellows Entering the Job Market

The postdoctoral community has requested assistance with the search for academic positions, and faculty of the Kirby Center will begin offering guidance that is tailored to each fellow and stage of the process. If you are preparing to enter the job market, please email Lynn Bruning ([lynn.bruning@childrens.harvard.edu](mailto:lynn.bruning@childrens.harvard.edu)) and Michael Do ([michael.do@childrens.harvard.edu](mailto:michael.do@childrens.harvard.edu)) well in advance of your first deadline. We will convene a committee of Kirby faculty that has expertise in your area as well as a divergent viewpoint or two. This committee will

1. Review a draft of your application.
2. Provide coaching on preliminary screenings (e.g., video interviews) if applicable.
3. Offer feedback on your job talk.
4. Take you through a mock chalk talk.
5. Provide advice on negotiations.

This assistance is meant to be highly individualized. If you communicate your particular needs (e.g., "I am a biophysicist with neuroethological leanings for whom English is a second language."), that would help us arrange the appropriate committee.

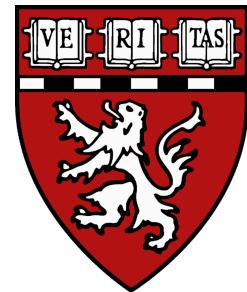
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## Graduate Student News

*Recent Dissertation Defenses: Congratulations, PhDs!*

**Liza Litvina** (Chen lab): Bringing to light functional convergence at the mouse retinogeniculate synapse.

**Yuwen Wu** (Stevens lab): Modeling activity-dependent synaptic competition via a novel coculture system.



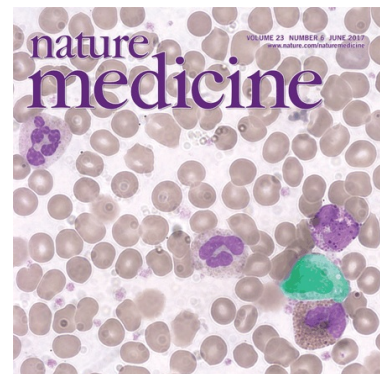
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## Recent Featured Publications

**Engle lab.** Ocular motor nerve development in the presence and absence of extraocular muscle. *Investigative Ophthalmology and Visual Research*. April, 2017.

**Lee lab.** Wiring variations that enable and constrain neural computation in a sensory microcircuit. *Elife*. May, 2017.

**Woolf lab.** Decreased alertness due to sleep loss increases pain sensitivity in mice. *Nature Medicine*. June, 2017. (photo credit: [Nature](#))



**Z. He lab.** Sox11 Expression Promotes Regeneration of Some Retinal Ganglion Cell Types but Kills Others. *Neuron*. June, 2017.

**Sahin and Rotenberg labs.** Replicable in vivo physiological and behavioral phenotypes of the Shank3B null mutant mouse model of autism. *Molecular Autism*. June, 2017.

**Woolf lab.** Time-Resolved Fast Mammalian Behavior Reveals the Complexity of Protective Pain Responses. *Cell Reports*. July, 2017.

For a listing of additional recent Kirby Center publications, please visit PubMed (last name [A-K](#), last name [L-Z](#)).

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