Announcements

The Kirby Center welcomes newest faculty member Robin Kleiman, PhD, of the Translational Neuroscience Center (TNC). Dr. Kleiman was promoted to Assistant Professor of Neurology, Harvard Medical School. Congratulations, Robin!

Michela Fagiolini, PhD, was promoted to Associate Professor of Neurology, Harvard Medical School. Congratulations, Michela!

Congratulations to Beth Stevens, PhD, recently promoted to Associate Professor of Neurology, Harvard Medical School.

Zhigang He, PhD, received a secondary appointment as Professor of Ophthalmology, Harvard Medical School. Congratulations, Zhigang!

Jeff Holt, PhD, received a secondary appointment as Professor of Neurology, Harvard Medical School. Congratulations, Jeff!

Congratulations to Mustafa Sahin, MD, PhD, who has been named Director of the Translational Research Program (TRP), Boston Children's Hospital.

In the fall of 2016, the following Kirby Center employees received Boston Children's Hospital Milestone Service Awards for their dedication to BCH. Congratulations!

- In October, Yung-Chih Cheng, PhD, and Seong-Moon Cheong, PhD, celebrated 5 years of service.
- In November, Seungkyu Lee, PhD; Bifeng Pan, PhD; Evgeny Shlevkov, PhD; and Ajay Yekkiral, PhD, celebrated 5 years of service; and Long Cheng, PhD, celebrated 10 years of service.
- In December, Andreas Liu, PhD, and Ahmet Cansizoglu, PhD, celebrated 5 years of service.

Research News

Medical Xpress article Impaired recycling of mitochondria in autism? reports the work of Mustafa Sahin, MD, PhD, who has shown that autism-causing genetic disorder Tuberous Sclerosis Complex may occur as a result of cells not properly recycling mitochondria. These findings could suggest new treatment possibilities for TSC and other genetic disorders. Read more on this study in The Daily Mail and Vector.
The work of Larry Benowitz, PhD, and Paul Rosenberg, MD, PhD, is featured in Vector article Zinc chelation: A better way to regenerate the optic nerve?

Xi He, PhD, contributes his Wnt expertise to Min Dong's cellular investigation of clostridium difficile in Vector's Entry door for deadly C. difficile toxin suggests new mode of protection.

In Vector article Muscular dystrophy study suggests new therapeutic approaches to autism, Robin Kleiman, PhD, explains how treatment for Duchenne muscular dystrophy may influence autism therapies.

Admin News

In October, Kirby Center Research Administrator Padam Gharti was named Boston Children's Hospital Employee of the Month. Frank Thayer, Director of Research Administration, nominated Padam, who had worked hard to help Frank’s group meet a last-minute deadline. Letters of support from the Neurobiology Department testified to Padam’s strong work ethic, dedication to excellence, and enthusiastic spirit—qualities that Padam brings to Boston Children’s Hospital every day. Congratulations on this well-deserved honor, Padam!

Holiday Traditions

Per annual tradition, the Kirby Center administrative team hosted the 2016 Kirby Center Holiday Party, complete with homemade concoctions and confections, including holiday sweets, kugel, and Nepalese momos. The Neurobiology labs competed in a contest to see who could create the best holiday art, using lab items. The Schwarz lab won first place for their rotating Christmas tree, which utilized a magnetic stirrer for effect. The Sahin lab took home the prize for the trivia contest. Overall, the party atmosphere was jolly.

The Kirby Center also observes the holiday tradition of contributing toward brightening the holidays of an Adopted Family at Boston Children's Hospital. This year, the Neurobiology Department raised over $800 in gift cards to Target, Shaws, and Olive Garden, plus parking vouchers for our adopted family of six, the youngest of whom is being treated at BCH.

Recent Awards

Michela Fagiolini, PhD, and Hisashi Umemori, MD, PhD, received a Pilot Award from the BCH Research Faculty Council for their collaborative grant titled Testing the role of callosal axon/synapse refinement in the onset of CDKL5 disorder.

Todd Anthony, PhD, received the Boston Children's Hospital Research Faculty Council Pilot Award for his project entitled Activity-Dependent Dissection of Lateral Septal Addiction Circuity.

Elizabeth Engle, MD, was awarded a 2016-17 BCH-Broad Institute Collaboration Grant for her project entitled Mechanisms of Cranial Motor Neuron and Axon Development in Health and Disease Revealed with Single Cell RNA-Seq.

Michela Fagiolini, PhD, received a one-year grant from Aptinyx for her project titled Probing
NMDA Receptor Modulators in a Mouse Model of Rett Syndrome.

Xi He, PhD, received a grant from the BCH Translational Research Program for his project titled A Therapeutic Strategy for Atopic Dermatitis by Targeting the WNT Pathway.

Dr. He also received funding from BCH for his project titled Studies of Wnt and R-spondin signaling.

Zhigang He, PhD, received a grant from Biogen for his project titled Cell type specific survival and regeneration of retinal ganglion cells following optic nerve injury.

Dr. He also received an administrative supplement from NIH for generating multiple circuit and neuron type specific aav vectors with cross-species applicability.

Jeff Holt, PhD, received an agreement from the University of Indiana for work on an R01 with Dr. Eri Hashino titled Modeling Genetic Inner Ear Disorders with Human Pluripotent Stem Cells.

Gabriel Kreiman, PhD, received a 2017 Memory and Cognitive Disorders Award from the McKnight Endowment Fund for Neuroscience for his project entitled Behavioral, Physiological and Computational Mechanisms Underlying Episodic Memory Formation in the Human Brain.

Jonathan Lipton, MD, PhD, received funding from the Tuberous Sclerosis Alliance for his project entitled The Circadian Clock as a Capacitor for TSC-related Phenotypes.

Ann Poduri, MD, PhD, is the recipient of a two-year CURE Epilepsy Award for her project entitled Genetics of Sudden Unexpected Death in Pediatrics and Hippocampal Pathology—A Novel Entity Linking SIDS and SUDE to Epilepsy.

Scott Pomeroy, MD, PhD, received a U54 from NICHD to fund a five-year renewal for the Boston Intellectual and Developmental Disabilities Research Center (IDDRC). This grant now includes a clinical/translational core, run by Mustafa Sahin, MD, PhD, and a project to be conducted by Dr. Sahin and Beth Stevens, PhD, titled Mechanisms of Synapse Remodeling in TSC.

Mustafa Sahin, MD, PhD, received funding for a one-year project from Motion Intelligence for his project titled Salivary miRNA biomarkers in neurodevelopmental disorders.

Judith Steen, PhD, received two awards from the Association for Frontotemporal Degeneration for her projects entitled 1) Using TDP43 as a Biomarker in FTD Patients and 2) Quantitative Profiling of Tau in CSF and Blood to Diagnose and Monitory Treatment Effectiveness in FTD Patients.

Soyon Hong, PhD, (Stevens) received a Charles King Trust Fellowship for her project titled Early Role of Complement and Microglia in Mediating Synapse Loss in Alzheimer’s Disease.

Yi Li, PhD, (Z. He) received a fellowship from the Craig Neilsen Foundation for his project titled Developing an OPN-based strategy of promoting CST regeneration and functional recovery after spinal cord injury.

Ivan Tochitsky, PhD, (Woolf) received a competitive NIH NRSA award for his project titled Single cell analysis of functional and transcriptional changes in somatosensory neurons after peripheral nerve injury.

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**Postdoc News**

**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) and Michael Do (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!*  

**Zhanlei Ye** (Hensch) Extrinsic and Intrinsic Factors Impacting Local Circuit Inhibition in the Neocortex

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**Recent Featured Publications**

- **Kreiman lab.** Predicting episodic memory formation for movie events. Scientific Reports. September, 2016.


- **Z. He, Benowitz, and Woolf labs.** Selected for Best of Neuron 2015-2016: A Systems-Level Analysis of the Peripheral Nerve Intrinsic Axonal Growth Program. (Neuron. March, 2016.)

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