

The Neurosciences at University Park: What's New?

This is the Fall 2013 issue of the University Park Neurosciences Newsletter. If you have news items that you would like to share with the Penn State neuroscience community please consider submitting them for future editions (to Ping Li, pul8@psu.edu or David Vandenberg, djv4@psu.edu).

New Students

Please join us in welcoming five new graduate students to the UP Graduate Program in Neuroscience.



Shlomit Gur: I graduated from Bar-Ilan University (Israel) in 2004 with a Bachelor of Science in Mathematics and minor in Computer Science, and recently graduated from Erasmus University Medical Center (the Netherlands) with a Master of Science in Neuroscience. I am

interested in applicable neuroscience combined with technology, in the field of neural prosthetics or brain-computer-interface, but also in artificial intelligence and robotics. Other research interests include learning and memory, and behavioral/emotional effects of visual input.



Christina Hamilton: I graduated from Ursinus College in 2011 with a BS in Neuroscience and Psychology. I recently received a MS in Experimental Psychology from Saint Joseph's University. My research interests are in cognitive neuroscience, particularly in visual perception and cognition. I would

like to study how humans and other animals represent information in the world, and how those representations are realized in a neural architecture.



Evan Oliver: I graduated this year from Mount St. Mary's University with a BS in Biology and minors in Computer Science and English. My research interests are broad, but I am especially interested in learning and memory, the processing of language in the brain, and neurodegenerative disorders.



Brendan Puls: I completed my B.S. at University of Maryland and my M.S. at Penn State. I previously worked in microbial geochemistry and environmental science, but I am now focused on the cognitive neuroscience of language learning with special regard to second language.

Through my research, I hope to combine computational neural models with fMRI studies to better understand the optimal conditions for adults to become proficient in a second language.



Jiu-Chao Yin: I graduated from the University of Science and Technology of China with a Bachelor of Science degree in Biosciences. My interests include the molecular mechanisms of brain development and neurodegenerative disorders, especially

using stem cell therapy to treat neurological disorders.

New Faculty



New Faculty

Biochemistry & Molecular Biology: Moriah L. Szpara, Assistant Prof., studies how neurons respond to infections by pathogens of varying virulence, using alpha-herpesviruses as a model.

Biobehavioral Health: Helen Kamens, Assistant Prof., studies which acetylcholine receptors may modulate alcohol and nicotine behaviors, using approaches ranging from behavioral experiments with genetically modified mice to human and molecular genetic analyses.

New Facility

Many Neuroscience faculty have moved this summer into new buildings and facilities, including the MSC, the new BBH Bldg., and the new Moore Bldg.



New Publications

Kevin Alloway: *The Rat whisker motor cortex is subdivided into sensory-input and motor-output areas*. *Frontiers Media S.A.* January 28, 2013, 7:4.

Victoria Braithwaite: *Environmental enrichment promotes neural plasticity and cognitive ability in fish*. *Proceedings. Biological Sciences/the Royal Society*, July 31, 2013, 280, 1767.

Gong Chen: *Astroglial cells regulate the developmental timeline of human neurons differentiated from induced pluripotent stem cells*. *Stem Cell Research*, September 01, 2013, 11, 2, 743-57.

Peter Molenaar, Sheri Berenbaum, Rick Gilmore, Stephen Wilson, & Adriene Beltz (*Changes in alcohol-related brain networks across the first year of college: A prospective pilot study using fMRI effective connectivity mapping*). *Addictive Behaviors*, April 01, 2013, 38, 4, 2052-2059.

Melissa Rolls: *Normal spastin gene dosage is specifically required for axon regeneration*. *Cell Reports*, November 29, 2012, 2, 5, 1340-50.

Robert Sainburg: *Contralesional motor deficits after unilateral stroke reflect hemisphere-specific control mechanisms*. *Brain: a Journal of Neurology*, April 2013, 136, 1288-303.

Suzy Scherf: *Emerging Structure-Function Relations in the Developing Face Processing System*. *Cerebral Cortex*, 54, May, 2013.

Steven Schiff published a textbook with MIT press: *Neural Control Engineering: The Emerging Intersection between Control Theory and Neuroscience*, Cambridge, MA, MIT Press, 2012.

Ping Li published a book with Karen Marrongelle on how to apply for research grants from the NSF: *Having success with NSF: A practical guide*. Hoboken, N.J: Wiley-Blackwell, 2013.

Committee Members

We welcome a new Curriculum Committee Member, Patrick Drew, who will join Paul Bartell, Byron Jones, and Ping Li in planning UP curriculum activities. We thank Rebecca Corwin for her service in the past. The other Neuroscience committees at UP include the Steering Committee (members: Victoria Braithwaite, Rick Gilmore, Laura Klein, Ping Li, Bob Sainburg, David Vandenberg) and the Admissions Committee (members: Kevin Alloway, Sonia Cavigelli, Gong Chen, Tim Jegla, and Ping Li). If you are interested in serving on one of these committees, please email David Vandenberg or Ping Li.

Recent Grants

Rick Gilmore received funding from the NSF and NIH for Databrary – an open-source, web-based video-data-sharing library.

Yingwei Mao received two separate grants, one from the American Heart Association, and another from the

Brain and Behavior Research Foundation.

Sheri Berenbaum received a research grant from the NIH/NIMH entitled *Prenatal androgen effects on sex-related neural processing of reward and threat*.

Other News

The Huck Institutes are pleased to announce the new *Graduate Enrichment Fund* to provide research support for students in all Huck programs including Neuroscience. See <http://goo.gl/N5zxcx> for details.

Gong Chen, professor of biology, has been appointed as the Verne M. Willaman Chair in Life Sciences in recognition of his national/international reputation for excellence in research and teaching. Congratulations!

The Neuroscience Retreat, a cross-campus event for the Penn State neuroscience community, will be held on 3/28-29, 2014 on the College of Medicine campus. There will be a Friday evening session featuring a faculty speaker, and a Saturday Data Blitz session where all are welcome to present their best work!

Neuroscience Seminars (Fall 2013)

The fall semester seminars begin on September 11th, with talks held in 108 Wartik at 4pm on Wednesdays.

9/11 Santhosh Girirajan (PSU, Host: Bernhard Luscher) *Untangling Phenotypic and Genetic Heterogeneity of Neurodevelopmental Disorders*

9/18 Scott Moffat (Georgia Tech, Host: Sheri Berenbaum) *TBA*

10/9 Xuemei Huang (PSU, Host: Byron Jones) *TBA*

10/16 James Eberwine (UPenn, Host: Yingwei Mao) *Emergent Properties of Single Cells: Dynamical Systems Analysis*

10/23 Alvaro Sagasti (UCLA, Host: Melissa Rolls) *Skin Cells Serve Glial Functions: Zebrafish Skin Regulates Sensory Axon Guidance, Ensheathment, and Repair*

10/30 Amar Sahay (Harvard, Host: Neuroscience Graduate Students) *TBA*

11/6 Stephen Wilson (PSU, Host: Sheri Berenbaum) *Imaging Brain Responses to Reward in Cigarette Addiction*

11/20 Jubin Abutalebi (U. vita-Salute San Raffaele, Host: Ping Li) *The Neural Impact of Bilingualism on the Brain*

12/4 Fan Wang (Duke U, Host: Patrick Drew) *The Brainstem Sensorimotor Circuits for Active Touch Sensation*

Updates on seminars and titles can be found at: <http://www.huck.psu.edu/calendar/talks-and-seminars/neuroscience>