

NEURO NEWS

Thoughts from the Director: Kristen A. Keefe

Thoughts on Mentoring and Being Mentored

As we start another academic year, I'd like to welcome our new graduate students. We have 14 new students who have joined our ranks this year, so please welcome them to the program and reach out to them to help them get settled. With the start of the new year and the arrival of new students, it is a good time to reflect both on our roles as mentors and mentees.

For mentors, graduate education is the enterprise in which our teaching and research missions most closely align; and yet, this enterprise can also be the point at which conflicts between what is best for the student and what is best for the "business" of our science arise. Perhaps the potential for this conflict has never been greater than it is now—best practices in training graduate students require increasing the breadth of our training experiences to prepare our students for the realities of jobs that are mainly not in academia whereas current funding realities require high degrees of focus on research productivity of the laboratories. As mentors, focusing only on the research productivity of our students appears to be the solution to this potential conflict, and no one can deny that a strong record of research productivity, as evidenced by publications and presentations at meetings, is essential for the future competitiveness of our students, regardless of ultimate career path. However, sole focus on research productivity limits the broader development of our students that contributes to their future success (and thus the overall success of our graduate program and our role as educators, not just scientists). By focusing only on our students' research, we deny them the opportunity to develop their teaching skills/portfolio, as well as their leadership capabilities and experience, which they can accrue through service on various program/

university / professional committees. These latter activities undoubtedly take students away from the lab at times. However, none of us in our careers are afforded the luxury of only focusing on one task. Thus, it is only through accepting such broader engagement of our students that we as mentors create the environment in which we can mentor our students on how to maintain research productivity in the face of competing demands. That is perhaps one of the most critical skills that our students need to acquire to be successful as the leaders of science in the future. I would argue, then, that mentors thus have a broader role to play in the overall development of our graduate students as "complete" professionals.

Students also have the obvious other fundamental role in the mentor-mentee relationship. Students need to have career goals and to think early, often, and critically about whether a particular mentor can help them achieve that goal and what that help might look like at different stages of the student's graduate and professional career. In the absence of clear career goals on the part of the student, informed choices and rational decisions regarding allocation of time and energy are difficult, if not impossible. The student may spend all of his/her time in the lab only to find that development of necessary teaching skills/portfolio to be competitive in the teaching position that the student ultimately desires are lacking. Alternatively, a student may engage in multiple opportunities/training programs, for example for teaching and translational medicine, thereby spreading himself/herself too thin in an attempt to "keep the options open". In so doing, research productivity may suffer and the student fail to adequately prepare himself/herself to be competitive for any position. It is therefore incumbent on each student to engage in thoughtful career planning and to be open with their mentor about their career goals and to plan,

From the Director: Kristen Keefe

(continued from page 1)

along with the mentor, the activities in which the student will engage in order to be as competitive as possible for achieving those goals. Passively waiting for one's mentor to tell one what to do and when one is finished with graduate school is not a recipe for success. Additionally, choosing a dissertation mentor with whom you feel uncomfortable discussing your career goals makes successful attainment of those goals considerably more difficult. Being explicit with one's mentor about your career goals and plans to achieve those goals, including during the research rotations/period of deciding on a dissertation lab, helps to ensure that the mentor-mentee relationship sits on a common, solid foundation that supports the attainment of the goals of both the mentee and the mentor—the win-win situation we all hope for.

The mentor-mentee relationship requires thoughtful attention on the part of both parties. The relationship will be most successful when both parties, early on, make explicit their expectations about the relationship and the responsibilities of the two parties in the relationship. It is only with such open exchange of expectations that the faculty member can know if this is a student that he/she can effectively mentor and how best to mentor the student and the student can know if this is a mentor prepared to help the student meet his/her career goals.

****2013 Incoming Students****

Joshua Barrios, Louisiana State University, Baton Rouge

Jefferson Brown, University of Utah (MD/PhD)

Kayla Chandler, Arizona State University

Kevin Huang, Rutgers University

Anthony Iuso, CUNY, Hunter College

Kyle Jenks, University of New Hampshire

Sasha Luks-Morgan, Hampshire College

Pablo Maldonado, Universidad Metropolitana

Andrew Moran, University of California, Riverside

Patrick Parker, Boise State University

Genevieve Smith, University of Utah

Pratyush Suryavanshi, Creighton University

Andrew Taibi, SUNY, Stony Brook

Brent Young, University of Utah

****NEW FACULTY****

Since the last issue of NeuroNews we have added the following new faculty:

Frederick G. Strathmann, Ph.D., Assistant Professor of Pathology. Research: Understanding how glia at all stages of differentiation influence their environment during development, disease and repair of the central nervous system. Clinical focus is in trace and toxic element analysis, chronic pain and drugs of abuse.

****SEMINAR SERIES 2013-2014****

September 17: Larry Zweifel, Ph.D., U Washington

October 15: Marla Feller, Ph.D., UC, Berkeley

November 19: Robin Hiesinger, Ph.D., U TX Southwestern Medical Center

January 21: Lisa Boulanger, Ph.D., Princeton U

February 18: Ilya Bezprozvanny, Ph.D., D. Sci., U TX Southwestern Medical Center

March 18: Susan Ferguson, Ph.D., U Washington

April 15: Beth Stevens, Ph.D., Harvard, Boston Children's Hospital

see more details at:

<http://neuroscience.med.utah.edu/Meetings.html>

****Other Important Dates****

Sept. 12: Neuroscience Program: Meet the New Students Reception

Jewish Community Center; 5-8PM

Nov. 1: Annual Neuroscience Program Symposium @ Snowbird

"Neurogenesis and Neurodegeneration"

<http://neuroscience.med.utah.edu/Snowbird>.

This year's invited speakers:

Maria Lehtinen, Ph.D., Boston Children's Hospital, Harvard Medical School

Thomas Reh, Ph.D., U. of Washington

Linda Sorkin, Ph.D.: University of California, San Diego

Richard Dorsky, Ph.D., University of Utah

Stefan-M. Pulst, M.D., University of Utah

Nov. 9-13: The Society for Neuroscience Annual Meeting held this year in San Diego, CA.

Feb. 14, 2014: Neuroscience Program Recruitment Weekend.

****FACULTY AWARDS****

Daniel Scoles and **Stefan Pulst** have been awarded an R21 from NIH/NINDS entitled "Antisense oligonucleotides for the treatment of spinocerebellar ataxia type 2".

ACADEMIC DEFENSES

Since the last issue of NeuroNews, the Neuroscience Program congratulates the following students on successfully defending their dissertations: **Yelena Filchakova (McIntosh lab)**, **Danielle Friend (Keefe lab)**, **Eli Jacob (Light lab)**, **Jared Nielsen (Lainhart lab)**, **Elissa Pastuzyn (Keefe lab)**, **Nikko Ronquillo (Baehr lab)**, **Andrea Schwager (Taha lab)**, and **Elliot Smith (Greger lab)**.

Also, since the last issue of NeuroNews, the Neuroscience Program congratulates the following students on successfully passing their qualifying exams: **Jeff Yarch (Angelucci lab)**, **Daniel Epstein (Yurgelun-Todd lab)**, **Meredith Gibbons (Wilcox lab)**, **Greg Remigio (West lab)**, **Hui Xu (Fu lab)** and **Feliks Furmanov (J. White lab)**.

and dissertation proposals; **Judd Cahoon (Ambati lab)** and **Andrew Haack (Taha lab)**.

****ALUMNI NEWS****

Robert Renden (2003) has a new position:
Assistant Professor
Department of Physiology and Cell Biology
University of Nevada School of Medicine
Reno, NV 89557

In addition, he is participating in a NIGMS project grant (Center of Biomedical Research Excellence (COBRE) in Cell Biology of Signaling across Membranes), providing early investigator and infrastructure funding at UNR. He is currently recruiting for talented postdoctoral fellows with electrophysiology and/or molecular biology expertise. He can be contacted at rendenr@unr.edu.

Ben Albensi:
Wanda Snow, PhD, Brenda Stoesz, Debbie M Kelly, PhD,
Benedict C Albensi, PhD. "Roles for NF- κ B and Gene Targets of NF- κ B in Synaptic Plasticity, Memory, and Navigation" was accepted in the journal *Molecular Neurobiology*.

D. Koji Takahashi will be starting in the fall as a medical science liaison (MSL) with Lundbeck, Inc.

Elliot Smith has started a postdoc at Columbia University Neurosurgery in Sameer Sheth's lab.

Arik Hone obtained a Marie Curie International Postdoctoral Fellowship grant from the European Commission. He is working in the Almudena Albillos lab, Universidad Autónoma de Madrid, Departamento de Farmacología y Terapéutica, Madrid, Spain.

Tim Simeone:
Simeone, T.A., Simeone, K.A., Samson, K.K., Kim, D.Y., and Rho, J.M. (2013) Loss of the Kv1.1 potassium channel promotes pathologic sharp waves and high frequency oscillations in in vitro hippocampal slices. *Neurobiol Dis*, 54:68-81. PMID: 23466697.

****STUDENT AWARDS****

Kevin Breen (Vetter lab) has been selected as a University of Utah Graduate Research Fellow. This award covers \$15,000 of his stipend, tuition benefit and 80% of his health insurance.

Greg Remigio (West lab) received an American Foundation for Pharmaceutical Education Pre-Doctoral Fellowship.

Leonardo Parra (Jorgensen lab) has been selected to participate in the Med2Grad program.

Patrick Gordon (Levine lab) got the cover of the July 24 issue of *Journal of Neuroscience*.



The Neuroscience Training Grant recipients for 2013-2014 are: **Sarah Anderson, Tyler Hanak, Anthony Umpierre** (2nd years) and **Kayla Chandler, Andrew Moran, Patrick Parker** (1st years).

NEWS WORTHY

Feb 13, 2013 2:37 PM SALT LAKE CITY – A researcher at the John A. Moran Eye Center has been selected as one of 10 winners by the National Eye Institute (NEI), part of the National Institutes of Health.

Yingbin Fu, a Moran researcher and assistant professor of Ophthalmology and Visual Science at the University of Utah, is one of 10 winners of the Audacious Goals Challenge, a nationwide competition for compelling ideas to advance vision and science.

More coverage:

http://www.davisclipper.com/view/full_story/21663666/article-Utah-eye-researcher-targets-mutated-DNA?instance=lead_story_left_column

<http://www.deseretnews.com/article/print/865572966/Moran-Eye-Center-doctor-receives-award.html>

http://dev.utahbusiness.com/articles/view/moran_eye_center_researcher_recognized_for_audaci

<http://www.nei.nih.gov/challenge/>

http://healthcare.utah.edu/publicaffairs/news/current/02-13-2013_yingbinFu_recognized_audaciousIdea.html

<http://webvision.med.utah.edu/2013/02/nih-competition-awards-prizes-for-audacious-ideas-in-vision-research/>

RECENTLY PUBLISHED

Federer, F., Williams, D., Ichida, J.M., Merlin, S., and **Angelucci, A.** (2013) Two Projection Streams from Macaque V1 to the Pale Cytochrome Oxidase Stripes of V2. *The Journal of Neuroscience*, 10 July, 33(28):11530-11539; doi:10.1523/JNEUROSCI.5053-12.2013

Fricks-Gleason, A.N., and **Keefe, K.A.** (2013) Evaluating the role of neuronal nitric oxide synthase-containing striatal interneurons in methamphetamine-induced dopamine neurotoxicity. *Neurotoxicity Research*, 24(2):288-97. PMID: 23575992

Friend, D.M., Fricks-Gleason, A.N., and **Keefe, K.A.** (2013) Is there a role for nitric oxide in methamphetamine-induced dopamine terminal degeneration? *Neurotoxicity Research*, Aug 6. [Epub ahead of print], PMID: 23918001

Friend, D.M., and **Keefe, K.A.** (2013) A role for D1 DA receptors in striatal methamphetamine-induced neurotoxicity. *Neuroscience Letters*, Aug 28. doi:pil: S0304-3940(13)00772-6. 10.1016/j.neulet.2013.08.039. PMID: 23994061

Friend, D.M., and **Keefe, K.A.** (2013) Glial reactivity in resistance to methamphetamine-induced neurotoxicity. *The Journal of Neurochemistry*, 125(4):566-574.

Gordon, P., Yun, S., Clark, A.M., Murtaugh, L.C., Monuki, E.S., **Levine, E.M.** (2013) Lhx2 balances progenitor maintenance with neurogenic output and promotes competence state progression in the developing retina. *Journal of Neuroscience*, 33(30):12197-12207.

Heynen, S.R., Meneau, I., Caprara, C., Samardzija, M., Imsand, C., **Levine, E.M.**, Grimm, C. (2013) CDC42 is required for tissue lamination and cell survival in the mouse retina. *PLoS One*, 8(1):e53806

Hone, A.J., Ruiz, M., Scadden, M., Christensen, S., Gajewiak, J.B., Azam, L., and **McIntosh, J.M.** (2013) Positional scanning mutagenesis of α -conotoxin Pe1A identifies critical residues that confer potency and selectivity for $\alpha 6/ \alpha 3 \beta 2 \beta 3$ and $\alpha 3 \beta 2$ nicotinic acetylcholine receptors. *Journal of Biological Chemistry*, August 26th.

Howard, C.D., **Keefe, K.A.**, **Daberkow, D.P.**, Ramsson, E., and Garris, P.A. (2013) Methamphetamine-induced neurotoxicity disrupts naturally occurring phasic dopamine transient activity in the striatum of freely moving rats. *European Journal of Neuroscience*, 38(1):2078-2088.

Howard, C.D., **Pastuzyn, E.D.**, Barker-Haliski, M.L., Garris, P.A., and **Keefe, K.A.** (2013) Phasic-like stimulation of the medial forebrain bundle augments striatal gene expression despite methamphetamine-induced partial dopamine denervation. *J Neurochem*, 125:555-565.

Pollak, J., Wilken, M.S., Ueki, Y., Cox, K.E., Sullivan, J., Taylor, R.J., **Levine, E.M.**, Reh, T.A. (2013) Ascl1 reprograms mouse Müller glia into neurogenic retinal progenitors. *Development*, 140:2619-2631.

Riedy, M.D., **Kesner, R.P.**, **Hanson, G.R.**, and **Keefe, K.A.** Cellular analysis of temporal activity by fluorescent in situ hybridization (CatFISH) determination of immediate early gene expression during reinstatement of cocaine-seeking behavior in rats trained in a novel self-administration paradigm. *PLOS One*, in press.

Shushruth, S., Nurminen, L., Bijanzadeh, M., Ichida, J.M., Vanni, S., and **Angelucci, A.** (2013) Different orientation tuning of near-and far-surround suppression in macaque primary visual cortex mirrors their tuning in human perception. *The Journal of Neuroscience*, 2 January, 33(1):106-119.

Shushruth, S. (2013) Exploring the Neural Basis of Consciousness through Anesthesia. *The Journal of Neuroscience*, 30 January, 33(5):1757-1758.

Weeks III, H.R., Tadler, S.C., Smith, K.W., **Iacob, E.**, Saccoman, M., White, A.T., Landvatter, J.D., Chelune, G.J., Suchy, Y., Clark, E., Cahalan, M.K., Bushnell, L., Sakata, D., **Light, A.R.**, and Light, K.C. (2013) Antidepressant and Neurocognitive Effects of Isoflurane Anesthesia versus Electroconvulsive Therapy in Refractory Depression. *PLoS ONE*, 8(7) 201.

*Do you have something to submit in the next issue of NeuroNews?
Send your information to: Tracy Marble, Program in Neuroscience
401 MREB, FAX: 581-4233, or e-mail: tracy.marble@hsc.utah.edu*