

NEURO NEWS

News from the Director: Kristen A. Keefe

Welcome to another new academic year for the Neuroscience Program. First, I'd like to take this opportunity to thank, on behalf of the program, **Dr. Mary Lucero** for her years of dedicated service as Director of the Interdepartmental Program in Neuroscience. Mary has clearly been the driving force that has made our Program one of the best Neuroscience graduate programs in the country. Rest assured that her imprint on the program will not fade anytime in the near future. She will continue to serve as the PI on our Institutional Training Grant, and in that role, will also continue to serve on the Directorate of the Program. Please thank Mary personally when you see her for her selfless commitment to the Graduate Program!

I also would like to sincerely thank two other faculty who rotated off their positions as Chairs of committees this summer. **Dr. Sabine Fuhrmann** stepped down as Chair of the Admissions Committee, being replaced by **Dr. Ning Tian**. **Dr. Franz Goller** also stepped down as Chair of the Curriculum Committee, being replaced by **Dr. Shaifr Taha**. Both Sabine and Franz have given countless hours serving as the Chairs of these critical committees for the Neuroscience Program -- without the admission of top-quality students and the delivery of a state-of-the-art curriculum, our program would not be operating from the position of strength that it is. Thank you Drs. Fuhrmann and Goller for all of the service you've given the program!

Second, I'd like to welcome our new graduate students to Salt Lake City and the Program. This year, we have eight new students joining the program. They are: **Maryam Bijanzedeh** (Univ. of Sheffield), **Daniel Epstein** (USC), **Feliks Furamov** (U of U), **Meredith Gibbons** (Sarah Lawrence College), **Lance Petersen** (Utah State), **Gregory Remigio** (Marist

College), **Yueqi Wang** (Peking University), and **Hui Xu** (Capital Normal University). Please welcome the students when you see them! Also, please remember to attend the "New Student Reception" to be held Wednesday, Sept. 14th from 5-8 PM at the JCC. This event is a great opportunity to not only meet and greet our new students, but also to reunite with colleagues and students from across the campus.

Finally, I am happy to succeed Mary as Director of the Program. Mary has left large shoes to fill, but I am excited to work toward continuing the excellence of our Program and, hopefully, to strengthen it even further. As you all know, we had our Program Review by the Graduate School in the fall of 2009. It was, for the Program, a positive experience, as it was a time to reflect on how we're doing training future researchers. Overall, the review was quite laudatory, and the comments of both the internal and external review committees are now posted on the Neuroscience Website, should you wish to read them.

That said, there's always room for improvement, and so also on the website is a copy of the Memorandum of Understanding regarding follow-up and recommendations from the Graduate Council. In response to that feedback, we are implementing some changes to the program. 1) We have instituted a new teaching requirement for all students to fulfill before their 4th year in the program. If you have a student please work with them to identify a teaching experience appropriate for their career goals. And, if you have opportunities for students to teach in a class for which you're responsible, please let Tracy know so she can make the students aware of that possibility. 2) The Neuroscience Program will now replace faculty on program committees every three years and the

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Director every five years. In the past year, the Director was replaced, as were chairs of the Admissions and Curriculum Committees, as noted above. At the end of this next year, we will replace **Dr. Richard Dorsky** as Chair of the Advising Committee, and the following year, we will replace **Dr. Ed Levine** as Chair of the Recruitment Committee. The new Chairs will be chosen from among the individuals serving on the respective committees, and new members for the committees will be selected from the program faculty at large. Faculty can volunteer to serve on committees by notifying the committee chair or Tracy Marble of their interest. Also, we will use the results of the recently completed survey to identify individuals to serve on the various committees. 3) We will also move to formalize the replacement of faculty in teaching positions when current faculty desire to step down from those positions. To this end, the Curriculum Committee this year will begin to lay out a timed plan for appointment or re-appointment of course masters for each of the four core Neuroscience courses. In addition, course masters will be provided with lists of faculty who have indicated, on the yearly survey, an interest in teaching in their class. In these times of increasingly tight funding and increased demands on faculty time, we know that is is challenging for faculty to find the time to contribute to the service and teaching missions of the program, and so we thank you in advance for your contributions to these missions both in the past and in the future as well!

My vision for the Graduate Program in Neuroscience is to continue its strengths by matriculating high-quality students into the program, offering a cutting-edge curriculum taught by dedicated faculty, maintaining Administrative and Training Grant support of graduate student stipends to allow maximal opportunities for student training, and securing department and faculty commitments to teaching and service in the program. I would further like to strengthen the program by increasing student career planning and development, heightening our recruiting efforts with a particular eye toward increasing the enrollment of women and individuals from populations traditionally under-represented in science, and providing more regular venues in which faculty can learn and make recommendations about the Program. In relation to this latter point, please watch for announcements for a faculty gathering and re-birth of the "State of the Program" gathering coming your way this December!

****SEMINAR SERIES 2011-2012****

- September 20:** Lizabeth Romanski, Ph.D., U of Rochester
- October 18:** Vivian Budnik, Ph.D., UMASS
- November 15:** James Putney, Ph.D., NIEHS
- January 17:** Nelson Spruston, Ph.D., Northwestern U
- February 21:** Nancy Minshew, M.D., U of Pittsburgh
- March 20:** Baerbel Rohrer, Ph.D., Medical U of South Carolina
- April 17:** TBA

see more details at:
<http://neuroscience.med.utah.edu/Meetings.html>

****Other Important Dates****

- Sept. 14: New Graduate Student Reception.** Our annual reception devoted to welcoming the incoming Neuroscience graduate students will be held at the Jewish Community Center, 2 North Medical Drive, Wednesday from 5:00-8:00 pm.
- Sept. 27: Bioscience Symposium.** University Marriott Park Hotel, 1:00-7:00pm. Dinner at 7:00pm. Pre-registration required. Register at: www.bioscience.utah.edu. All Neuroscience students are encouraged to submit a poster and compete for the awards.
- Oct. 21-22: Annual Neuroscience Program Symposium @ Snowbird**
"Neurobiology of the Senses"
<http://neuroscience.med.utah.edu/Snowbird>
- This year's invited speakers:
Charles Zuker, Ph.D., Columbia U.
Pamela Raymond, Ph.D., U. of Michigan
Charles Schroeder, Ph.D., The Nathan Kline Institute for Psychiatric Research
Mary T. Lucero, Ph.D., U. Utah
Matt Wachowiak, Ph.D., U. Utah
Robert E. Marc, Ph.D., U. Utah

Plan to submit a poster for the SfN Intermountain Chapter Poster session that will be incorporated into the Snowbird Symposium. \$\$Cash Prizes! Look for abstract submission deadline at: <http://brain.utah.edu/portal/site/brain/>

- Nov. 12-16: The Society for Neuroscience Annual Meeting** held this year in Washington, DC.
- Feb. 18, 2012: Neuroscience Program Recruitment Weekend**

ACADEMIC DEFENSES

Since the last issue of NeuroNews, the Neuroscience Program congratulates the following students on successfully defending their dissertations: **Wei Chen (Vetter lab)**, **Michelle Stamm (Lucero lab)**, **Hideaki Tomita (Capecchi lab)** and **Mei-Yee Law (Chien lab)**.

Also, since the last issue of NeuroNews, the Neuroscience Program congratulates the following students on successfully passing their qualifying exams: **Jeremy Wilkerson (Rose lab)**, and **Lingyan Xing (Bonkowsky lab)**.

and dissertation proposals; **Danielle Friend (Keefe lab)**, **Elissa Pastuzyn (Keefe lab)**, **Patrick Gordon (Levine lab)**, **Adam McPherson (Dorsky lab)**, **Caitlin Mencio (Balagurunathan lab)**, **Yelena Filchakova (McIntosh lab)**, **Eli Iacob (Light lab)** and **Kevin Breen (Vetter lab)**.

****STUDENT AWARDS****

Scott Lauritzen (Marc lab) received the Association for Research in Vision and Ophthalmology (ARVO) 2011 Ramon y Dacheux II Memorial Travel Grant in Retinal Neurophysiology. He will receive \$750 for travel and complimentary registration fee.

Elissa Pastuzyn (Keefe lab) has been awarded an NRSA from NINDS. Her award is for 3 years for her dissertation work examining the long-term consequences of methamphetamine-induced neurotoxicity on basal ganglia function.

Jason Cooperrider (Lainhart lab) received 1 of 10 U.S. Diversity Travel Awards in the amount of \$1000 from the International Society for Autism Research (via the NIH) to attend the 2011 International Meeting for Autism Research in San Diego in May. He was also accepted to attend the University of Michigan's Training Course in fMRI for August 2011, all expenses paid by the NIH.

The Neuroscience Training Grant recipients for 2011-2012 are: **Andrew Haack**, **Zachary Frenchek**, **Rebecca Pfeiffer**, and **Jeffrey Yarch** (2nd year), **Daniel Epstein**, and **Lance Petersen** (1st year).

****ALUMNI NEWS****

Tim and **Kristina Simeone** would like to announce the birth of their second son, **Ryan Jonathan Simeone**, on June 12, 2011.

Publications:
Simeone, T.A., Wilcox, K.S., and White, H.S. cAMP-dependent protein kinase A activity modulates topiramate potentiation of GABAA receptors. *Epilepsy Research*, in press. doi:10.1016/j.eplepsyres.2011.05.009

Simeone, T.A., Wilcox, K.S., and White, H.S. (2011) Topiramate modulation of b1- and b3-homomeric GABAA receptors. *Pharmacological Research*, 64(1): 44-52.

Simeone, K.A., Kim, D.Y., Rho, J.M., Kerrigan, J.F., and Simeone, T.A. (2011) L-type calcium channel blockade reduces network activity in human epileptic hypothalamic hamartoma tissue. *Epilepsia*, 52(3):531-540.

Arie Sittichai Mobley:

Publication:
Mobley, A.S., Miller, A.M., Araneda, R.C., Maurer, L.R., Müller, F., and Greer, C.A. (2010) Hyperpolarization-activated cyclic nucleotide-gated channels in olfactory sensory neurons regulate axon extension and glomerular formation. *J Neurosci.*, Dec 8;30(49):16498-16508.

Katherine Zukor:

Publications:
Zukor, K., He, Z. (2011) Regenerative medicine: drawing breath after spinal injury, *Nature*, Jul 13;475(7355):177-178.

Shushruth is now a post-doc in the lab of Dr. Michael Shadlen at the University of Washington, Seattle.

NEWS WORTHY

Tao Zhang (Fu lab) has received the 2011 Knight's Templar postdoctoral fellowship (\$40K) for developing a new therapy for Leber congenital amaurosis, the most severe retinal dystrophy in early childhood.

Steve White and **Karen Wilcox** received a new RO1 entitled "A Novel Mouse Model of Temporal Lobe Epilepsy".

RECENTLY PUBLISHED

Barabas, P., Huang, W., Howell, G., **Tian N**, Rentería, R., John, S.M.W., and **Krizaj, D.** (2011) Missing optomotor head turning reflex in the DBA/2J mouse. *Investigative Ophthalmology and Visual Science*, Epub July14.

Fujimoto, E., Stevenson, T.J., **Chien, C.B.**, and **Bonkowsky, J.L.** (2011) Identification of a dopaminergic enhancer indicates complexity in vertebrate dopamine neuron phenotype specification. *Developmental Biology*, Jan 27. [Epub ahead of print] NIHMS275870.

Howard, C.D., **Keefe, K.A.**, Garris, P.A., and Daberkow, D.P. (2011) Methamphetamine-induced neurotoxicity decreases phasic, but not tonic, dopaminergic signaling in the rat striatum. *The Journal of Neurochemistry*, Aug;118(4):668-676. doi: 10.1111/j.1471-4159.2011.07342.x.

Jones, A., Kumar, S., Zhang, N., Tong, Z., Yang, J.-H., Watt, C., Anderson, J., Fnu, A., Fillerup, H., McCloskey, M., Luo, L., Yang, Z., **Ambati, B.**, **Marc, R.**, Oka, C., Zhang, K., and **Fu, Y.** (2011) Increased expression of multifunctional serine protease, HTRA1, in retinal pigment epithelium induces polypoidal choroidal vasculopathy in mice. *Proc Natl Acad Sci U S A*, in press.

Krizaj, D., Mercer, A., Thoreson, W.H., and Barabas, P. (2011) Intracellular pH modulates calcium homeostasis in vertebrate photoreceptors. *American Journal of Physiology*, 300(1) C187-197.

Lim, A.H., Suli, A., Yaniv, K., Weinstein, B., Li, D.Y., and **Chien, C.B.** (2011) Motoneurons are essential for vascular pathfinding. *Development*, 138:3847-3857.

Nix, P., Hisamoto, N., Matsumoto, K., and **Bastiani, M.** (2011) Axon regeneration requires coordinate activation of p38 and JNK MAPK pathways. *Proc Natl Acad Sci U S A*, Jun 28;108(26):10738-10743. Epub 2011 Jun 13.

Ryskamp, D.A., Witkovsky, P., Barabas, P., Huang, W., Koehler, C., Akimov, N.P., Lee, S.H., Chauhan, S., Xing, W., Rentería, R.C., Liedtke, W., and **Krizaj, D.** (2011) The polymodal ion channel transient receptor potential vanilloid 4 modulates calcium flux, spiking rate, and apoptosis of mouse retinal ganglion cells. *J Neurosci*, 31:7089-7101.

Smith, E.H. (2011) Temporal processing in the auditory core: transformation or segregation? *Journal of Neurophysiology*, in press. July 2011, doi: 10.1152/jn.00233.2011

Son, J-H, Latimer, C., and **Keefe, K.A.** (2011) Impaired formation of stimulus-response, but not action-outcome, associations in rats with methamphetamine-induced neurotoxicity. *Neuropsychopharmacology*, Jul 20. doi: 10.1038/npp.2011.131. [Epub ahead of print] 2011.

Zhang, H., **Constantine, R.**, Vorobiev, S., Chen, Y., Seetharaman, J., Huang, Y.J., Xiao, R., Montelione, G.T., Gerstner, C.D., Davis, M.W., Inana, G., Whitby, F.G., **Jorgensen, E.M.**, Hill, C.P., Tong, L., and **Baehr, W.** (2011) UNC119 is required for G protein trafficking in sensory neurons. *Nat Neurosci*, Jun 5;14(7):874-80. doi: 10.1038/nn.2835. PMID: 21642972 [PubMed - in process]

Zhang, T., Zhang, N., **Baehr, W.**, and **Fu, Y.** (2011) Cone opsin determines the time course of cone photoreceptor degeneration in Leber congenital amaurosis. *Proc Natl Acad Sci U S A*, 108 (21):8879-8884.

Do you have something to submit in the next issue of NeuroNews?
Send your information to: Tracy Marble, Program in Neuroscience
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