



## Notes from the NGP Director



Dear colleagues,

I hope you are all recovering from a busy 2014-2015 academic year. It was an exciting year for the Neuroscience

Graduate Program, with many new activities, events and honors for our students and faculty. I hope you will enjoy reading about them as you explore this newsletter.

This year we said goodbye to Revathi Balasubramanian, Adrienne Chesser and Susanne Pallo, and are looking forward to the thesis defenses of Wei Sun and Adam Pallus. We wish them well and look forward to hearing about their successes in the future. We have some updates for you from our alumni, so check out the interesting things they are doing with their neuroscience PhDs. We have 5 students who will be starting in the Fall of 2015. Read on to learn a little more about them. Humberto Mestre and Garrick Salois will join us July 1st for a summer rotation. Please introduce yourself if you see them around this summer.

We are so proud of our student's achievements and appreciative of how much they give back to the program. You will hear about their latest exploits – such as community outreach efforts, student-initiated scientific programming, organization of the student bootcamp and recruitment efforts – even entrepreneurial activities. Many of our students are also participating in the URBEST program and expanding their horizons for future non-academic careers. Additionally, our steering, admissions and first year advisory committees worked tirelessly to ensure the program's success and I want to thank all the faculty that contribute their time and effort to these committees, as well those who teach in our graduate courses and mentor students in any capacity.

There have been further changes to the rules for defenses. You can read about these below and please also check out our webpage: <http://www.urmc.rochester.edu/education/graduate/phd/neurosciences/> where you can find lots of information about the program, including the make-up

of our committees. We redesigned the website this year and welcome any suggestions for further improvements. We also have a Facebook page which has listings of upcoming and recent events. Click on the icon on our webpage to get there.

As always, I'd love to receive feedback and suggestions for the program from faculty, students and community members at any time. Feel free to e-mail, call or come by my office. Your input is important!

Regards,  
Ania Majewska

### Did you know.....

#### The New SharePoint PhD Candidate Processing System is live!

The new online PhD candidate processing system is available on SharePoint and accessible from anywhere in the world. It does not require VPN. The process is time-sensitive and requires multiple consecutive approvals beginning with a coordinator and finishing with the University Graduate Dean.

*(continued on page 9)*

# Newsletter - Summer 2015

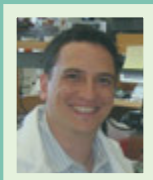
## Neuroscience Graduate Program



# Neuroscience Graduate Program Newsletter - Summer 2015



## Student Admission for Fall 2015



Thanks to the efforts of many in our community, we're pleased to report that the Neuroscience Graduate Program had another successful recruitment season this year. From the over 90 applications we received, the admissions committee interviewed 20 candidates during two full interview days and a couple of individual applicant visits. Many of our candidates are finishing their final year of college, while some had spent several years as lab techs or in postbac programs.

After much deliberation, we extended 12 offers to a very competitive group of applicants, four of whom accepted. In addition, one MD/PhD student will be joining our Program. More information about these students is below. A key goal for next year will be for us to recruit a higher fraction of those who are offered spots in the program.

In addition to the hard work put in by members of the admissions committee (Ben Hayden, Chris Holt, Amy Kiernan, Ania Majewska, John Olschowka, and Chris Pröschel), special thanks goes out to Ania Dworzanski, current student admissions committee (Julie Feola, Ryan Dawes, Becca Rausch, and Jessie Hogestyn), and NGP students, who tirelessly escorted, entertained, and evaluated candidates. These efforts are critical in attracting the best students to our program.

Doug Portman  
Chair, NGP Admissions Committee



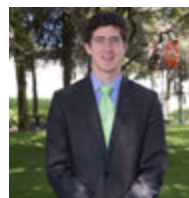
**Holly Beaulac** enters the NGP having most recently provided technical research assistance within the Center for Excellence in the Neurosciences laboratories at the University of New England (UNE) in Biddeford, ME. She originally completed her Bachelor's degree at UNE followed by a Master's degree, both in neuroscience, from Brandeis University in Waltham, MA. Holly has contributed to several experimental projects, ranging in topics from cognitive psychology to neuroimmunology, and is interested in the collaborative environment URM has to offer. She is eager to focus on exploring the molecular mechanisms of inflammation associated with neurodegenerative diseases and neurological disorders.

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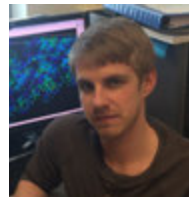
**Monique Mendes** graduated with a Bachelor's degree in Biology from the University of Florida. In Gainesville, she worked closely with Dr. Sylvain Doré on investigating therapies for hypoxic ischemia encephalopathy. She is interested in studying neurological and neurodegenerative diseases, specifically the cellular mechanisms associated, in hopes of finding novel and effective therapies.

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**Humberto Mestre** received his medical degree from Anahuac University in Mexico City, Mexico. During his clinical training he realized the impact that age-related brain disorders had on Mexico's health system which convinced him to pursue a doctoral degree in neuroscience to better understand disease processes and drug discovery. He has mostly worked with animal models of neurotrauma and has research experience from University of Oxford and University of South Florida.

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**Garrick Salois** graduated from Saginaw Valley State University in Saginaw, Michigan where he majored in Psychology. At SVSU, he worked with Dr. Jeffrey Smith studying translational therapies for traumatic brain injury. He focused on how enriched animal housing environments affect neuroplasticity and recovery from injury. While working with Dr. Smith, Garrick was particularly fascinated by the changes he observed in neuroglia in response to changes in environment. At Rochester, Garrick is interested studying the complex roles of neuroglia in the normal and pathological brain.

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**Dawling A. Dionisio-Santos** obtained his Bachelor of Science degree in cellular and molecular biology from the University of Puerto Rico, Rio Piedras Campus. While there he worked in a cognition laboratory where he became interested in neuroscience and in particular the molecular mechanisms behind memory formation. Furthermore, he became interested in the pathophysiological mechanisms behind the development of different neurological diseases such as Alzheimer's disease. He decided to pursue a dual MD/PhD degree in order to receive training that would allow him to better translate and incorporate neuroscience research into patient care.



# Neuroscience Graduate Program Newsletter - Summer 2015



## Milestones - Fall 2014 & Spring 2015

### PhD Thesis Defenses

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**Revathi Balasubramanian** (PhD), *"LIM-Homeodomain transcription factor LHX9 is involved in the differentiation of amacrine cell subtypes"*

**Adrienne Chesser** (PhD), *"Selectively Enhancing Clearance of Pathological Tau Through the Use of Phytochemical Compounds"*

**Susanne Pallo** (PhD), *"The Role of Tau and Amyloid-Beta in Alzheimer's Disease-Related Excitotoxicity"*

**Wei Sun** (PhD), *"Studies of astrocytes using gene expression analysis"*

**Adam Pallus** (PhD), *"Head Movement Control in Visual Pursuit"*

### NGP Preliminary Examinations (Part 1)

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**Stephanie Syc** (Libby Lab)

**Nguyen Mai** (Halterman Lab)

**Colin Lockwood** (Duffy Lab)

## Events - Mark Your Calendars

### Other Events

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- NGP Boot Camp, August 20-21, 2015
- SMD Graduate Student Orientation, August 24, 2015
- Undergraduate Research Day, October 16, 2015
- SFN Annual Meeting, October 17-21, 2015, Chicago
- NGP Holiday Party, December 2015

## Neuroscience Organizations

### PREDOCTORAL ORGANIZATION FOR NEUROSCIENCES - PONS

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The Pre-doctoral Organization for the Neurosciences, PONS, has entered its 2nd year here at the University of Rochester. With its core mission of bridging the gap between medical professionals and basic science researchers, PONS has developed a semi-monthly program to foster trainee educational development, and has participated in community outreach efforts to better serve the local community.

The primary educational effort established by PONS is the Luncheon Roundtable Series. These one-hour programs feature a roundtable-style discussion between students and a small panel of local experts on key topics of interest for URMC trainees. The central goal of these events is to provide a forum for cross-disciplinary communication between trainees, physicians, and researchers, and allow for trainees to establish collegial relationships with URMC faculty. To date, PONS has sponsored five of these Roundtables, discussing topics such as glial biology and traumatic brain injury. Suggestions from the Neuroscience community are welcomed and encouraged, contact Molly Jaynes with specific topic requests.

Beyond its educational efforts, PONS members have also played a central role in the local Brain Awareness Week Campaign. This international program, initially developed by the Dana Foundation, took place in mid-March, had volunteers travel to local schools to teach school children in grades K-4 about their brain through interactive experiments and activities. By volunteering their time, PONS members were able to enrich the education of over 300 young learners.

In the coming months, look for more Luncheon Roundtable Series events on topics including neurodevelopment, sleep, and demyelinating diseases. Also be on the lookout for additional community outreach opportunities, in particular PONS co-sponsored public health education discussions.

# Neuroscience Graduate Program Newsletter - Summer 2015



## Neuroscience Organizations

### ROCHESTER SfN CHAPTER GROWS

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The Rochester Chapter of the Society for Neuroscience (SfN), reactivated through the efforts of Krystal Huxlin in 2013, is continuing its efforts to serve research and education in Neuroscience in the Rochester area. Doug Portman serves as the Chapter's president for the 2015-7 term, Laurel Carney is the Chapter's Secretary/Treasurer, and Liz Romanski and Ben Hayden serve as Faculty Councilors. Jen Stripay is the Student Councilor, and the Chapter has recently added a Postdoctoral Councilor position, currently held by Sarah Heilbronner. Krystal Huxlin continues to serve the chapter as Past President.

The Chapter's efforts this year continue to focus on research and education, supported primarily by a Chapter Grant from SfN. These resources allowed the Chapter to sponsor three Poster Prizes at the recent Neuroscience Retreat; in addition, the Chapter provides financial and logistical support to Brain Awareness Month outreach efforts and to the Pre-doctoral Organization for Neurosciences (PONS).

The chapter is developing three new initiatives this year. First, a monthly postdoc/faculty seminar series was begun early in 2015, spearheaded by postdoc councilor Sarah Heilbronner. This series has already hosted lively talks from several UR post-docs, and provides an ideal opportunity for members of our community to interact, learn about others' work, and generate opportunities for collaboration. In particular, more senior postdocs are encouraged to use this forum to help polish their job talks, and junior faculty can take advantage of this opportunity to introduce their work to the Rochester community. Please contact Sarah (Sarah\_Heilbronner@URMC.Rochester.edu) if you are interested in speaking or would like to nominate a speaker.

Second, the Chapter will host a "Post-SfN Poster Session" during the last week of October, providing a venue for members of our community who present work at the 2015 SfN meeting in Chicago to share their research locally. Look for more details on this event this Fall.

Finally, a new educational and social initiative, Neuro Movie Night, kicked off in June. About 20 of our members watched "Being John Malkovich," a truly bizarre cult classic from 1999 that explores themes of self-identity and free will. This monthly event will feature recent and classic films with Neuroscience-related themes. We hope to precede many of these with introductions from experts in relevant areas, and will host post-film gatherings at nearby venues to encourage continued discussion. Watch your email for an announcement of our next film, to be screened in mid-July. Email Doug (douglas.portman@rochester.edu) if you have suggestions for films and/or speakers that you'd like to see.

For more information about the Chapter's mission and activities, please visit the Chapter website. The Chapter leadership is always interested in your input, so please feel free to contact anyone on the Council with your ideas and feedback.

## Student Initiatives



### VasoMark advances to the next phase!

A group of students from Neuroscience Graduate Program and Neurosurgery Residency Program have teamed up to compete in the National Institutes of Health "Neuro Startup Challenge". This new effort offers pre- and post-doctoral students from biomedical, legal, and business backgrounds the opportunity to compete for licenses to patented technologies from the NIH portfolio. The teams model a business around the intellectual property, and seek startup funding from partnering angel investor and venture capitalist firms in order to bring the proposed technology to the biomedical marketplace. The NGP and Neurosurgery team, named VasoMark, selected two patents for the development of a minimally invasive diagnostic for the detection of primary and recurrent malignant brain tumors. VasoMark successfully completed Phase I of the competition, where they developed a two-minute elevator pitch and executive summary describing their intended entrepreneurial use of the selected technology. They are currently developing a business plan and live investor pitch describing their business model, intended market, and future areas of expansion for their selected patents.



# Neuroscience Graduate Program Newsletter - Summer 2015



## Student Initiatives

### Brain Awareness Week 2015

Between March 16th and 27th, the NGP once again participated in Brain Awareness Week (BAW) outreach in local elementary schools. BAW is a completely student run event and 6 NGP students (Julie Feola, Christy Cloninger, Jenn Stripay, Becky Lowery, Ryan Dawes, Susanne Pallo) played a critical role in the planning and organization of the activities, school visits and training sessions for volunteers. While last year's theme focused on the senses, this year the organizing committee created new fun, hands-on activities that dealt with signal transduction, memory and perception. The BAW team this year consisted of 35 volunteers, including BCS and neuroscience undergraduate and graduate students, who visited 9 classrooms at 3 different schools (Colebrook School in Irondequoit, Indian Landing in Penfield and West Ridge in Greece). The volunteers reached 350 children in grades K-4 who had a great time learning about the wonders of the brain!



### 2015 Neuroscience Retreat



**2015 Neuroscience Retreat** took place on Friday, April 17, 2015 at the Memorial Art Gallery. This year's keynote speaker, Dr. Valina Dawson from Johns Hopkins University, presented her work on mechanisms of cell death in Parkinson's disease. The retreat committee added a new feature to this year's program - 5 minute poster teaser presentations from selected abstracts. An influx of poster registrations brought our presenter number to 45, representing 26 labs across the University. Dr. Christopher Folts (Noble Lab), received the award for best Post-Doc poster, while Christina Cloninger (Paige Lab) and Matthew Cavanaugh (Huxlin Lab) took home prizes for the first and second place graduate student posters, respectively.

# Neuroscience Graduate Program Newsletter - Summer 2015



## Student Fellowships

**Adrienne Chesser**, NIEHS F30 Individual Predoctoral Fellowship, "Mitochondrial Dynamics Underlie Gene-Environment Interactions in Parkinson's" (July 2011-June 2015)

**Kelli Fagan**, F31, NIH Individual Predoctoral Fellowship, "Genetic control of a sexually dimorphic neural circuit" (September 2013-August 2016)

**Julianne Feola**, F31 NIH (NRSA) Individual Predoctoral Fellowship, "The Role of Astrocytic Transglutaminase 2 in Mediating Ischemic Stroke Damage" (September 2012-September 2015)

**Nguyen Mai**, F30 NIH, Individual Predoctoral Fellowship, "Role of lung-brain coupling on neutrophil priming and reperfusion injury following global cerebral ischemia" (April 2015-March 2018)

**Grayson Sipe**, F31 NIH (NRSA) Individual Predoctoral Fellowship, "Role of P2Y12 and Purinergic Signaling in Microglia-Mediated Synaptic Plasticity" (March 2014-August 2016)

**Jennifer Stripay**, F31 NIH (NRSA) Individual Predoctoral Fellowship, "Identifying c-Cbl as a critical point of intervention in glioblastoma multiforme" (September 2013-August 2016)

**Laura Yunes-Medina**, F31, NIH Individual Predoctoral Fellowship to promote diversity in health-related research, "Defining CHOP-10 Dependent Adaptive ER Stress Pathways in Neurons" (August 2013-July 2017)

**Ryan Dawes**, predoctoral award from the Schmidt Program on Integrative Brain Research (July-December 2015)

**Training grant in Hearing, Balance, and Spatial Orientation**, 5T32DC009974, current NGP appointee: **Christina Cloninger, Aleta Steevens** (July 2014-June 2015)

**Neuroscience Training Grant**, T 32NS07489, current appointees: Elizabeth Belcher, Laura Duclos, Joshua Hinkle, Jessica Hogestyn, Patrick Miller-Rhodes, Rianna Stowell (September 2014-August 2015)

**CVS Training Grant**, T32EY007125, current NGP appointee: Rebecca Rausch (January 2015-December 2015)

## Student Publications

**Cloninger C, Flemming JT, Allen P, O'Neill W, Paige G** (2015). Smooth pursuit eye and gaze movements to moving auditory targets: Evidence for velocity-specific processing in the auditory system. *J. Acoust. Soc. Am.* 137, 2201.

**O'Donnell J, Ding F, Nedergaard M** (2015) Distinct Functional States of Astrocytes During Sleep and Wakefulness: Is Norepinephrine the Master Regulator? *Curr Sleep Medicine Rep* 1, 1-8.

**Burke KA, Dawes RP, Cheema MK, Van Hove A, Benoit DS, Perry SW, Brown E** (2015). Second-harmonic generation scattering directionality predicts tumor cell motility in collagen gels. *J Biomed Opt.* 20, 51024.

**Puccini JM, Marker DF, Fitzgerald T, Barbieri J, Kim CS, Miller-Rhodes P, Lu SM, Dewhurst S, Gelbard HA** (2015). Leucine-rich repeat kinase 2 modulates neuroinflammation and neurotoxicity in models of human immunodeficiency virus 1-associated neurocognitive disorders. *J Neurosci.* 35, 5271-83.

**Winkler EA, Nishida Y, Sagare AP, Rege SV, Bell RD, Perlmutter D, Sengillo JD, Hillman S, Kong P, Nelson AR, Sullivan JS, Zhao Z, Meiselman HJ, Wenby RB, Soto J, Abel ED, Makshanoff J, Zuniga E, De Vivo DC, Zlokovic BV** (2015). GLUT1 reductions exacerbate Alzheimer's disease vasculo-neuronal dysfunction and degeneration. *Nat Neurosci.* 18, 521-30.

**Yue JK, Pronger AM, Ferguson AR, Temkin NR, Sharma S, Rosand J, Sorani MD, McAllister TW, Barber J, Winkler EA, Burchard EG, Hu D, Lingsma HF, Cooper SR, Puccio AM, Okonkwo DO, Diaz-Arrastia R, Manley GT, The COBRIT Investigators, The TRACK-TBI Investigators** (2015). Association of a common genetic variant within ANKK1 with six-month cognitive performance after traumatic brain injury. *Neurogenetics.*

**Kavcic V, Triplett RL, Das A, Martin T, Huxlin KR** (2015). Role of inter-hemispheric transfer in generating visual evoked potentials in V1-damaged brain hemispheres. *Neuropsychologia.* 68C, 82-93.

**Fujita T, Chen MJ, Li B, Smith NA, Peng W, Sun W, Toner MJ, Kress BT, Wang L, Benraiss A, Takano T, Wang S, Nedergaard M** (2014). Neuronal transgene expression in dominant-negative SNARE mice. *J Neurosci.* 34, 16594-604.

**Kress BT, Illiff JJ, Xia M, Wang M, Wei HS, Zeppenfeld D, Xie L, Kang H, Xu Q, Liew JA, Plog BA, Ding F, Deane R, Nedergaard M** (2014).



# Neuroscience Graduate Program Newsletter - Summer 2015



## Student Publications

Mac Nair CE, **Fernandes KA**, Schlamp CL, Libby RT, Nickells RW (2014). Tumor necrosis factor alpha has an early protective effect on retinal ganglion cells after optic nerve crush. *J Neuroinflammation*. 11, 194.

Silva JN, Polesskaya O, **Wei HS**, Rasheed IY, Chamberlain JM, Nishimura C, Feng C, Dewhurst S (2014). Chronic central nervous system expression of HIV-1 Tat leads to accelerated rarefaction of neocortical capillaries and loss of red blood cell velocity heterogeneity. *Microcirculation*. 21, 664-76.

Noble M, Mayer-Proschel M, Li Z, Dong T, Cui W, Proschel C, Ambekovich I, Dietrich J, Han R, Yang T, Folts C, **Stripay J**, Chen HY, Stevens B. (2014) Redox biology in normal cells and cancer: Restoring function of the redox/fyn/c-cbl pathway in cancer cells offers new approaches to cancer treatment. *Free Radical Biology and Medicine*. S0891-5849(14)01362-8.

Cotrina ML, Chen M, Han X, Iliff J, Ren Z, **Sun W**, Hagemann T, Goldman J, Messing A, Nedergaard M (2014). Effects of traumatic brain injury on reactive astrogliosis and seizures in mouse models of Alzheimer disease. *Brain Res*. 1582, 211-9.

**Rivera-Escalera F**, Matousek SB, Ghosh S, Olschowka JA, O'Banion MK (2014). Interleukin-1 beta mediated amyloid plaque clearance is independent of CCR2 signaling in the APP/PS1 mouse model of Alzheimer's disease. *Neurobiol Dis*. 69, 124-33.

**Fernandes KA**, Harder JM, John SW, Shrager P, Libby RT (2014). DLK-dependent signaling is important for somal but not axonal degeneration of retinal ganglion cells following axonal injury. *Neurobiol Dis*. 69, 108-16.

**Balasubramanian R**, Gan L (2014). Development of Retinal Amacrine Calles and Thier Dendritic Stratification. *Curr Ophthalmol Rep*. 2, 100-106.

**Das A**, Tadin D, Huxlin KR (2014). Beyond blindsight: properties of visual relearning in cortically blind fields. *J Neurosci*. 34, 11652-64.

**Diehl MM**, Romanski LM (2014). Responses of prefrontal multisensory neurons to mismatching faces and vocalizations. *J Neurosci*. 34, 11233-43.

**Winkler EA**, Sagare AP, Zlokovic BV (2014). The pericyte: a forgotten cell type with important implications for Alzheimer's disease? *Brain Pathol*. 24, 371-86.

Tong J, Ren Y, **Wang X**, Dimopoulos VG, Kesler HN, Liu W, He X, Nedergaard M, Huang JH (2014). Assesment of Nogo-66 receptor 1 function in vivo after spinal cord injury. *Neurosurgery*. 75, 51-60.

## Student Awards & Honors



**Fatima Rivera-Escalera**, a fifth-year student in the O Lab, was awarded a Keystone Symposia Scholarship to attend the Keystone Symposium on Neuroinflammation in Diseases of the Central Nervous System in Taos, NM from January 25-30th, 2015.



**Rianne Stowell**, a first-year student, received an honorable mention for her NSF predoc application entitled, "Characterizing the ramifications of maternal stress on microglial behavior during cortical development and plasticity."



**Christina Cloninger**, a fifth year student in Dr. Paige's Lab, won 1st place at the 2015 NSC retreat poster competition and **Matt Cavanaugh**, a third year student in Dr. Huxlin's lab, won 2nd place.



**Grayson Sipe**, a fifth-year student in Dr. Ania Majewska's lab, was named a winner of the 2014 Edward Peck Curtis Award for Excellence in Teaching by a Graduate Student. Gray also won a Medical Faculty Council Student/Trainee Travel Award for attendance at the Gordon Research Conference, Glial Biology: Functional Interactions Among Glia & Neurons in Ventura, CA from March 1-6th, 2015.



**Jennifer Stripay**, a fourth-year student in Dr. Mark Noble's lab, won the Wilmot Cancer Institute Scientific Symposium Poster Grand Prize and was awarded the following honors:  
-Selected to St. Jude National Graduate Student Symposium Class of 2015  
-Appointed to American Associate for Cancer Research Programming Committee  
-Appointed to Society for Neuroscience Online Programs Steering Committee

# Neuroscience Graduate Program Newsletter - Summer 2015



## Faculty Awards & Honors



**MAY 2015: NIH R01 NS092455**  
**PI - Marc Halterman**  
*"Mechanisms of lung-dependent neutrophil priming in global cerebral ischemia reperfusion injury"*  
**\$1.7 million over five years**

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**APRIL 2015: NIH R01 NS089609**  
**PI - Brad Mahon**  
*"Cortical organization of action knowledge before and after brain surgery"*  
**\$1.8 million over five years**

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**JUNE 2015: CONTE 1P50 MH106435**  
**PI - Susanne Haber, Professor**  
*"Neurocircuitry of OCD: Effects of Modulation"*  
**\$10 million over 5 years**

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**MARCH 2015: R01 DC014261**  
**PI - Patricia White**  
*"Sufficiency of ErbB2 signaling in murine inner ear supporting cells"*  
**\$1.25 million over 5 years**

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**JULY 2015: 01 EY025497**  
**PI - David Williams**  
**NEI Audacious Goals Initiative**  
*"Accelerating vision restoration with in-vivo cellular imaging of retinal function"*  
**\$3.8 million over 5 years**

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**NAMED JAMES V. AQUAVELLA, MD**  
**PROFESSOR IN OPHTHALMOLOGY**  
**Krystel Huxlin, Professor**  
**JULY 2015: R01 EY015836**  
**PI - Krystel Huxlin**  
*"Nerve regeneration in corneal wound healing and optics"*  
**\$1.13 million over 4 years**



**NAMED FREDERICK A. HORNER, MD**  
**ENDOWED PROFESSOR IN PEDIATRIC NEUROLOGY**  
**Jonathan Mink, Professor**  
Department of Neurology

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**NEW CHAIR OF THE DEPARTMENT**  
**OF PHARMACOLOGY & PHYSIOLOGY**  
**Robert Dirksen, Professor**

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**THE 2014 FACULTY TEACHING, MENTORING,**  
**& DIVERSITY AWARD**  
**M. Kerry O'Banion, Professor**  
Department of Neurobiology & Anatomy

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**WILLIAM AND CHRISTIE HARTMANN PRIZE IN**  
**AUDITORY NEUROSCIENCE FROM THE ACOUSTICAL**  
**SOCIETY OF AMERICA**  
**Laurel Carney, Professor**  
Department of Biomedical Engineering  
Department of Neurobiology & Anatomy

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**TRANSLATIONAL RESEARCH IN NEUROVIROLOGY**  
**LECTURESHIP AT THE 13TH INTERNATIONAL SOCIETY**  
**FOR NEUROVIROLOGY MEETING, JUNE 5, SAN DIEGO**  
**Harris Gelbard, Professor**  
Center for Neural Development & Disease

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**NICHOLAS TOROK VESTIBULAR AWARD**  
**AMERICAN NEUROLOGY SOCIETY**  
**Benjamin Crane, Assoc. Professor**  
Department of Otolaryngology



# Neuroscience Graduate Program Newsletter - Summer 2015



## Did you know...

*(continued from page 1)*

### The New SharePoint PhD Candidate Processing System

#### How it works...

**Pre-registration:** Either the student or the program coordinator initiates the registration process by creating a student record and inputting student information. A coordinator uploads the Program of Study, PhD Completion Requirements, and the Advisory Record (Transcript). Either the student or the coordinator uploads the PhD thesis, student's CV, and Exit Interview form. The PhD thesis has to be uploaded into the system at least 4 weeks before the defense. The Program Coordinator's approval verifies the accuracy of all submitted information and uploaded files related to the student's work. After the Program Coordinator's approval, all the PhD thesis committee members receive an email requesting them to approve the PhD thesis. The PhD committee has 2 weeks to read and approve student's thesis. After the committee's approval, the student record has to be consecutively approved by the Program Director, Graduate School Office, Graduate School Dean, and the University Graduate Dean. The program coordinator will receive email alerts as each approval is made. The Dashboard on the SharePoint website indicates the registration status.

**Registration:** The students and coordinators will receive an email when the University Dean approves the student for the defense. The Chair of the defense and committee will receive exam information from the University Dean via email.

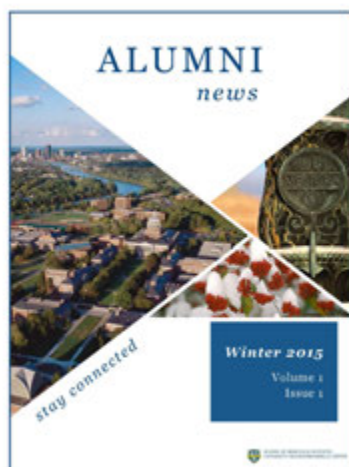
**Post-Registration:** Once the defense chair informs the University Dean of the outcome of the defense, the student will receive post-defense instructions for submission of the final, corrected thesis and forms. The student will retrieve the annotated version of the thesis from the online system and make revisions using this version of the document. The students must submit the final, corrected thesis to ProQuest 30 days after their defense.

**Non-university Committee members** will receive a temporary email address to access the system. The coordinator will receive an email with the username and password for the committee member and will forward the email to them.

**Approvals** regarding the use of Skype and the approvals of the non-University Committee members should be uploaded to the registration record. The candidate, the advisor, and the appointed chair must be physically present at the defense.

## Alumni Updates

The Graduate Education and Postdoctoral Affairs Office started a quarterly alumni newsletter *Alumi news*. The first edition was distributed to alumni in mid-February 2015 and second one in May 2015.



# Neuroscience Graduate Program Newsletter - Summer 2015



## Alumni Updates

**Diane Lawrence** (PhD '95) has been working at the NIH for 15 years, first as a Senior Research Fellow in a Neurology lab studying HIV infection and pathogenesis in the brain, and then as a Program Official in the National Institute on Drug Abuse (NIDA) and the National Institute of Allergy and Infectious Diseases (NIAID). She currently monitors grant progress and provides scientific advice to applicants seeking research funding in basic research related to HIV pathogenesis, and she works with the neuroscience institutes within NIH to support public-private partnerships developing strategies toward an HIV Cure. Diane and her husband Dave (Chemistry PhD '94) just celebrated their 25th anniversary. Their daughter Naomi is an aspiring lawyer, plays high school volleyball, and trains with Diane in Tae Kwon Do; son Steven plays baseball and was just voted most likely to become a scientist in his 5th grade class.

On the left in the picture is Diane's family including their Spanish exchange student, Paloma, hitting the trees for some climbing and zip line adventures.



In September 2014, NGP alumn, **Nathan Smith**, co-authored an article published in *Neuron* entitled, "Imaging Activity in Neurons and Glia with a *Polr2a*-Based and *Cre*-Dependent *GCaMP5G-IRES-tdTomato Reporter Mouse*." The authors also created a video abstract, in which they present a new *Cre*-dependent *GCaMP5G* reporter mouse (*PC::G5-tdT*) targeted the *Polr2a* locus. They demonstrate the utility of this mouse line for imaging calcium activity in neurons, astrocytes and microglia.

**Mike Pesavento** (graduated in 2009) is currently working at 3Scan (<http://www.3scan.com>, San Francisco CA) as their Image Processing Wizard. His job is to take terabytes of sub-micron resolution images of whole organs (eg brains!) and reconstruct them in 3D, developing analysis pipelines and metrics to guide medical decisions. When not pushing pixels, Mike has started doing neuroengineering consulting work in the Bay area. From his prior experience with NeuroSky (a biosensor EEG and ECG company), he has been experimenting with driving LED art installations with EEG input. A recent major project was driving the lights on Dr. Brainlove (<http://www.drbrainlove.org>) -- a 30 ft climbable brain art car at Burning Man 2014 -- with a Cognionics 16 sensor dry EEG headset to display neural activity patterns on the giant brain in real-time. He is currently working on adding more LEDs to the art car and adding more neuroscience-driven visualizations. This past February, Mike helped create content for multiple booths in the Cognitive Technology exhibit (<http://www.explorecoogtech.com>) at the world-famous San Francisco Exploratorium science museum. His booths demonstrated new technologies for neuroimaging and connectomics, as well as demonstrating the conscious control over mind and body as measured by EEG brain activity and heart rate variability from ECG. Mike is thoroughly enjoying the life and opportunities that San Francisco offers.



**Simantini Ghosh**, former NBA PhD student in the O Lab was awarded the Doty Award of Excellence in recognition of outstanding dissertation research in neuroscience. The award was presented at the 2015 Neuroscience Retreat.





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## Alumni Updates



**Zhuoxun Chen** graduated in 2012. After graduation, he worked as a postdoc in Jeff Rothstein's lab at Johns Hopkins Hospital in Baltimore. In August 2014, he began studies at the University of Maryland School of Dentistry, and in December 2014 he's become a father of two beautiful girls. In the picture above, on the right, Zhuoxun immortalized the moment when he told his 1-month old girls that Daddy would have at least one exam per week from that moment on.



**Bill Mowrey**, former PhD student in Dr. Portman's lab, has become the father of a baby girl, Julie, on the March 7, 2015.



**Irina Statnikova** graduated from NGP in 2014 and is now attending medical school at URM.

**Laurie Robak, MD/PhD**, received her B.S. in Biology and Psychology from Canisius College (Buffalo, NY) and completed an MD/PhD at the University of Rochester (Rochester, NY). She will complete her Medical Genetics/ Pediatric residency at Baylor College of Medicine on 6/30/15. She will be staying on at Baylor as a postdoctoral research associate/clinical instructor next year. Currently she works in the lab of Dr. Joshua Shulman researching the genetics of Parkinson's disease.

Laurie recently received the Pfizer/ACMG Foundation Translational Genomic Fellowship Award.



NGP Alumna, **Maria Diehl**, and faculty, Lizabeth Romanski, published a paper in the August 2014 edition of the Journal of Neuroscience on *Responses of Prefrontal Multisensory Neurons to Mismatching Faces and Vocalizations*.



Before Christmas 2014, **Dan Marker**, MD/PhD student, finished his third chessboard. As you can see, it's beautiful! Who knew Dan had a woodcrafting talent? He donated chessboards 2 and 3 to the alternatives for battered women arts and crafts fair.

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## Alumni Updates

We are asking your assistance with updating our alumni database. Information we need is marked in **RED**. Please contact Ania Dworzanski at [ania\\_dworzanski@urmc.rochester.edu](mailto:ania_dworzanski@urmc.rochester.edu) with updates. Information in **BLUE** has been recently updated.

**David Gooler**, PhD, 1982, NSC, Instructor, Dept. of Speech and Hearing Science, University of Illinois at Urbana-Campaign, 901 S. Sixth Street, Campaign, IL

**Diane Lawrence**, PhD, 1995, Pathogenesis and Basic Research Branch, BSP, DAIDS, NIAID

**Mark Basham**, PhD, 1997, NSC, Associate Professor, Chair of Psychology and Neuroscience Department, Director of Neuroscience Program at Regis University, Denver, CO

**Jay McLaughlin**, PhD, 1998, Associate Professor, Department of Pharmacodynamics, College of Pharmacy, University of Florida, Gainesville, FL

**Caroline Little (Cribari)**, MD, PhD, 1998, Neurobiology & Anatomy, Women's Hospital, Mountain View, CA

**Scott Ng-Evans**, PhD, 1999, NSC, Department of Psychiatry and Behavioral Sciences, University of Washington, Seattle, WA

**Russel Ferland Jr.**, PhD, 2000, NSC, Associate Professor and Associate Director, Center for Neuropharmacology and Neuroscience: Albany Medical College, Albany Medical College, 47 New Scotland Avenue, MC-136, Albany, NY

**Tim Mhyre**, PhD, 2000, NBA, Analyst in the Office of Sponsored Programs, Washington State University, Pullman, WA

**Nikolaus McFarland**, MD/PhD, 2001, NBA, Assistant Professor of Neurology, University of Florida, Gainesville, FL

**Jay Nierenberg**, MD/PhD, 2001, NBA, Assistant Professor, Dept. of Psychiatry, NYU Longone Medical Center, New York, NY

**Mary Maida**, PhD, 2001, NSC, Medingen Group, LLC, Clerisy Corp., Rochester, NY

**Randall Hayes**, PhD, 2001, NSC, Assistant Professor, Biology Education, North Carolina A&T, State University, Greensboro, NC

**Tina Huang**, PhD, 2001, NSC, Director of Research, Transparent Corporation, Columbus, OH, 43202; Scientist III, Nutritional Immunology Laboratory, Jean Mayer USDA HNRCA at Tufts University, Medford, MA

**Adnan Siddiqui**, MD/PhD, 2003, NBA, Associate Professor of Neurosurgery and Radiology, University at Buffalo, the State University of NY, Buffalo, NY

**Andrew Custer**, PhD, 2003, NSC, Patent Attorney, Blue Ocean Enterprises, Inc., San Diego, CA; J.D., University of Florida, Levin College of Law (2009)

**Michael Froehler**, MD/PhD, 2004, NSC, Clinical Assistant Professor, Dept. of Neurology, University of Iowa, Iowa City, IA

**Michael Hanna**, PhD, 2004, NSC, Assistant Professor, Dept. of Biological & Environmental Sciences, Texas A&M University-Commerce, Commerce, TX

**Seth Perry**, PhD, 2004, NSC, Research Assistant Professor, Biomedical Engineering, URMC, Rochester, NY

**Luisa Scott**, PhD, 2004, NSC, Research Associate, Section of Neurobiology, University of Texas, Austin, TX

**Patricia Sheridan**, PhD, 2004, NSC, Research Assistant Professor, Dept. of Nutrition, University of North Carolina, Chapel Hill, NC

**Renee Miller**, PhD, 2004, NSC, Lecturer, BCS, University of Rochester, Rochester, NY

**Rebecca Sappington**, PhD, 2004, NSC, Assistant Professor of Ophthalmology & Visual Sciences, Vanderbilt University Medical Center, Nashville, TN

**ChiaWen (Kitty) Wu**, PhD, 2005, NSC, Pipeline & Portfolio Planning at Genentech, San Francisco, CA

**Zhenhua Wu**, PhD, 2005, NSC, Senior Research Scientist, Merck, Boston, MA

**Chiayu Chiu**, PhD, 2005, NSC, Associate Research Scientist, Dept. of Neurobiology, Yale University, New Haven, CT

**Jill Weimer**, PhD, 2005, NSC, Associate Scientist, Sanford Research/USD and Assistant Professor, Department of Pediatric at University of South Dakota Sanford School of Medicine, Sioux Falls, South Dakota



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## Alumni Updates

**Kuei-Cheng Lim**, MD, PhD, 2006, NSC, Instructor in Epilepsy, Neurology, University of Pennsylvania Health System, Philadelphia, PA

**Min Zhu**, PhD, 2006, New England, Neurological Associates, Lawrence, MA

**Zhiyong Yang**, PhD, 2006, NSC

**Jason Hamilton**, PhD, 2007, NSC, Senior Scientist, Regenerative Medicine department at Athersys, Inc., Cleveland, OH

**Charles Wuertzer**, PhD, 2007, NSC, Faculty, Biology Dept., MCC, Rochester, NY

**Roberto Fernandez-Romero**, MD/PhD, 2007, NBA, Assistant Professor, Neurology Dept, University of Virginia, Charlottesville, VA

**Solomon Shaftel**, MD/PhD, 2007, NBA, in 2013 graduated from residency program in Ophthalmology Dept., UCSD, CA; He was accepted into a two year oculoplastics fellowship at the University of Washington, Seattle, WA (2013-2015)

**Xiaohai Wang**, PhD, 2007, NSC, Senior Research Biologist, Dept. of Neuropharmacology, Merck Research Laboratories, Boston, MA

**Daniel Zaksas**, PhD, 2007, NSC, Scientific VP, Dudnyk, Horsham, PA

**Ziye Sui**, PhD, 2007, NSC, Post-doctoral Fellow, Peking University, Peking, China

**Karthik Venkatesh**, PhD, 2008, NSC, Sr. Medical Writer, MMS Holdings Inc., Detroit, MI

**Erin Johnson Venkatesh**, PhD, 2008, NSC, Post-doctoral Fellow, University of Michigan Medical School, Molecular and Behavioral Neuroscience Institute, Ann Arbor, MI

**Yasser Elshatory**, MD/PhD, 2008, NSC, Resident, Dean McGee Eye Institute, Department of Ophthalmology, Oklahoma, OK

**Pushkar Joshi**, PhD, 2008, NSC, Post-doctoral Fellow, Stanford University, Dept. of Biology, Stanford, CA

**Ling Pan**, PhD, 2008, NSC, Research Scientist, Picower Institute for Learning & Memory, MIT, Cambridge, MA

**Xiaoyan Lin**, PhD, 2008, NSC, Research fellow at National Institutes of Health, Washington D.C. Metro Area

**Matthew Bellizzi**, MD/PhD, 2008, NSC, Sr. Instructor in Neurology, Division of Neuroimmunology, URMC, Rochester, NY

**Yanan Guo**, PhD, 2009, NSC, Post-doctoral Fellow, Harvard Medical School, Brigham and Women's Hospital, Boston, MA

**Onanong Chivatakarn**, PhD, 2009, NSC, Post-doctoral Fellow, Salk Institute, La Jolla, CA

**Laurie Robak**, MD/PhD, 2009, NSC, as of 7/1/15-6/30/16 Post-doctoral Research Associate/Clinical Instructor, Department of Neurology and Department of Molecular and Human Genetics, J. Schulman lab, Baylor College of Medicine, One Baylor Plaza, Houston, TX

**Nancy Oberheim Bush**, MD/PhD, 2009, NSC, Neurology Resident, Class of 2015, UCSF, San Francisco, CA

**Irah King**, PhD, 2009, NSC, Assistant Professor, McGill University, Department of Microbiology and Immunology, Montreal, Canada

**Grace Vangeison**, PhD, 2009, NSC, Market Manager, Millipore Corporation, Billerica, MA

**Verginia Cuzon**, PhD, 2009, NSC, NIH, Bethesda, MD

**Aaron Cecala**, PhD, 2009, NBA, Assistant Professor of Physiology, Elizabethtown College, PA

**Bernard Gee**, PhD, 2009, NSC, Faculty, Dept. of Psychology, Western Connecticut State University, Danbury, CT

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## Alumni Updates

**Sarita Kishore**, PhD, 2009, NBA, 2010-internship through University of Washington in Boise, Idaho, 2011-residency in Ophthalmology in Louisville, KY

**Qi Cui**, MD/PhD, 2009, NBA, Ophthalmology Resident (Class of 2015), UCSF, San Francisco, CA

**Carolyn Tyler**, 2009, NSC, Post-doctoral Fellow, Princeton University, Dept. of Molecular Biology, Washington Rd., LTL 123, Princeton, NJ

**Ditte Lovatt**, PhD, 2009, NSC, Post-doctoral Fellow, University of Pennsylvania School of Medicine, Fellow at Center for Technology Transfer, University of Pennsylvania, Philadelphia, PA

**KyungWha Lee**, PhD, 2009, NSC, Post-doctoral Fellow, City College of New York, Itzhak Mano lab, NY, NY

**Yuriy Shapovalov**, MD, PhD, 2010, NSC, Preventive Cardiology Fellow at the Heart Research Follow-up Program, Division of Cardiology, Department of Medicine, mentor Dr. Wojciech Zareba, URM, Rochester, NY

**Lynette Desouza**, PhD, 2010, NSC, Post-doctoral Fellow, Tata Institute of Fundamental Research, Mumbai, India

**I-Chen Yu**, PhD, 2010, NSC, Research Fellow at Indiana University School of Medicine

**William Mowrey**, PhD, 2010, NSC, Post-doctoral Fellow, HHMI, Anthony Leonardo's lab at Janelia Farm, Chevy Chase, MD

**Sarah Bliss Matousek**, PhD, 2010, NBA, Senior Analyst/Consultant at Day Health Strategies, Boston, MA

**Deborah Ryan**, PhD, 2010, IGPN, Post-doctoral Fellow, Portman Lab, Box 645, URM, Rochester, NY

**Michael Moravan**, MD/PhD, 2010, Resident physician in radiation oncology, URM, Rochester, NY

**Marina Dobrova**, PhD, 2010, NBA, Bulgaria

**Michael Pesavento**, PhD, 2010, NBA, 3 Scan, San Francisco, CA

**Arnulfo Torres**, PhD, 2011, NSC, Medical Writer at Freelancer - Medical Communications

**Stephen Raiker**, PhD, 2011, NSC, Research Fellow in Thomas Schwarz's Lab affiliated with Children's Hospital Boston/Harvard Medical School, Boston, MA

**Susan Lee**, MD/PhD, 2011, NSC, Resident Physician, Child Neurology at Cincinnati Children's Hospital Medical Center, Cincinnati, OH

**Michael Jacob**, MD/PhD, 2011, NBA, Resident in Psychiatry, UCSF, San Francisco, CA

**Kathleen McAvoy**, PhD, 2011, NSC, Post-doctoral Fellow, Harvard Stem Cell Institute, Amar Fahay Lab, Boston, MA

**Cory Hussar**, PhD, 2012, NSC, Senior Medical Writer at The Curry Rockefeller Group, LLC, Tarrytown, NY

**Zhuoxun Chen**, PhD, 2012, NSC, student, University of Maryland School of Dentistry, Baltimore, MD

**Crystal McClain**, PhD, 2012, NSC, Research Associate, Ben Simons and Robin Franklin lab, University of Cambridge, UK

**Sally Duarte**, PhD, 2012, NBA, Post-doctoral Fellow, Max Planck, Institute, Jupiter, FL

**Youngsun Cho**, MD/PhD, NBA, 2012, Psychiatry Resident, Yale School of Medicine, Anticevic Lab, New Haven, CT

**Katherine Selzler**, PhD, 2012, NBA, Associate Consultant, Scientific Communications, Indianapolis, IN

**Maria Diehl (Faryna)**, PhD, 2012, NSC, Postdoctoral Fellow, University of Puerto Rico, Quirk Lab, San Juan, PR



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## Alumni Updates

**Michael Wu**, MD/PhD, 2012, Resident physician in anesthesiology (2014-2017), UCSF

**Ethan Winkler**, MD/PhD, 2012, Resident physician in neurosurgery (2014-2020), UCSF

**Sarah McConnell**, PhD, 2012, Course Coordinator, Human Anatomy at Ithaca College, Adjunct Faculty, Monroe Community College, Rochester, NY

**Phillip Rappold**, MD/PhD, 2013, Resident physician in urology (2014-2019), URM, Rochester, NY

**Danny Rogers**, MD/PhD, 2013, Resident physician in pediatrics and child neurology (2014-2017), University of NM, Albuquerque, NM

**Veena Ganeshan**, PhD, NSC, 2013, Post-doctoral Fellow, Schor Lab, URM, Rochester, NY

**Daniel Marker**, MD/PhD, NSC, 2013, Resident in pathology, UPMC, Pittsburgh, PA

**Nathan Smith**, PhD, NSC, 2013, Research Scientist, Department of Pharmacology and Toxicology University of Utah, Salt Lake City, UT

**Anasuya Das**, PhD, NSC, 2013, Memorial Sloan Kettering Cancer Center, Data Scientist, New York, NY

**Danielle DeCampo**, MD/PhD, 2014, MSTP student, 4th year of medical school, URM, Rochester, NY

**Kimberly Fernandes**, PhD, NSC, 2014, Post-doctoral Fellow, Libby Lab, URM, Rochester, NY

**Simantini Ghosh**, PhD, 2014, Post-doctoral Fellow, David Brody Lab, Department of Neurology, Washington University School of Medicine in St. Louis, St. Louis, MO

**Michele Saul**, PhD, 2014, Post-doctoral Fellow, Fudge Lab, URM; Visiting Assistant Professor URM, St. John Fisher College, Rochester, NY

**Irina Statnikova**, PhD, 2014, medical school, URM, Rochester, NY

**Revathi Balasubramanian**, PhD, 2014, Post-doctoral Research Scientist, Xin Zhang Lab, Department of Ophthalmology, Eye Institute, Columbia University, New York, NY



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