Greetings! As the new academic year gets under way and before the all too brief Rochester autumn gives way to winter’s first snowflakes, it’s time to recognize the accomplishments of the past year and to introduce our newest class of students. I would also like to take this opportunity to highlight some recent changes to our graduate programs. Chief among these is the recent consolidation of the IGPN and NBA graduate programs into a unified Neuroscience Graduate Program (NGP), which will serve as the umbrella under which the Ph.D. degrees in Neuroscience and in Neurobiology and Anatomy will be administered. Motivation for the consolidation came from faculty and student feedback, comments from former applicants, reviewer critiques of our recently renewed NIH training grant (Interdepartmental Neuroscience Training, John Olschowka, PI), and the recognition that all of our neuroscience graduate students, regardless of which degree they decide to pursue, deserve the best possible education and training experience.

The creation of a single NGP will not only simplify administering the program, it should also help improve the way we market neuroscience graduate education at Rochester to the outside world. In addition, it has sparked renewed interest in assessing the way we educate the next generation of top-notch neuroscientists. With this in mind, an NGP steering committee (Bill Bowers, Ed Freedman, Bob Freeman, Krystel Huxlin, Gail Johnson Voll, Ania Majewska, John Olschowka, and Doug Portman) has been meeting regularly to identify and extract the best aspects of the former NBA and IGPN programs to use as cornerstones for the new NGP. To maintain continuity during the transition, the NGP Executive Committee (Gary Paige, Handy Gelbard, Greg DeAngelis, and Bill Tank), with the support of the Senior Associate Dean for Graduate Education, recommended that the former IGPN and NBA Program Directors (yours truly and John Olschowka) serve initial two-year terms as NGP Director and Associate Director, respectively. Importantly, Ms. Ania Dworzanski will continue to serve as the NGP Coordinator. Stay tuned in the coming weeks as we solicit feedback on draft versions of a new NGP student handbook and website.

As we look forward to another year of student achievements, including those from the outstanding group of first-year students introduced below, I want to thank all of you who have generously donated your time and talents towards ensuring our graduate program continues to thrive. As always, I welcome your comments and suggestions on how to improve the quality of graduate education in neuroscience at Rochester.

Bob Freeman (NGP Director)
Please join us in welcoming this year’s entering class of Neuroscience graduate students. These students represent the cream of the crop from a record 91 applicants (66 domestic and 25 international), the most among all UR graduate programs in the biomedical sciences for 2010. Two students in this year’s class are M.D./Ph.D. students and one joins us courtesy of the increasingly popular M.D./M.S. program in Neurobiology and Anatomy.

Take a look at who they are: (from the left)

Brandon Bader completed his undergraduate degree at Colorado State University before joining the MSTP program at Rochester. Brandon’s long term goal in seeking joint M.D./Ph.D. degrees is to optimize his ability to reach patients on a personal level while also working to invoke global changes in medicine. After having the chance to experience a research project from start to finish, including contributing to the write-up and publication of the work, Brandon became inspired to seek a career in medicine that would also involve research.

Adrienne Chesser attended Carleton College in Minnesota and decided to apply to M.D./Ph.D. programs to follow her two passions: science and service to others. Adrienne wants to improve lives of others by advancing the ability to treat and cure diseases. She hopes to push the boundaries of medicine forward through translational research while delivering the best available care with passion and commitment.

Christina Cloninger comes to us from Grinnell College in central Iowa. Christy’s interests lie primarily at the intersection of cognitive and behavioral neuroscience. In particular, she is interested in the functioning of neural systems involved in anxiety and in executive functioning.

Kelli Fagan finds it’s not so easy to answer the seemingly simple question, where are you from? She grew up in Germany, attended college at RIT, and spent summers in South Korea. Not surprisingly, she considers herself somewhat of an expert in cultural paradoxes. When it comes to neuroscience, her interests lie in the development of addictions and accompanying neurological changes. She is also interested in how sensory input is translated through convergence with limbic pathways in response to saliency stimuli in order to form good decision-making processes.

Julianne Feola graduated from SUNY Geneseo with an unusual double major in chemistry and psychology. Julie is very interested in how abnormalities in the nervous system that develop after brain trauma or in other neurological disorders affect behavior and overall brain function. She hopes to relate her research to humans with brain injuries or other types of neurological disease.

Rebecca Lowery grew up in Rochester and for as long as she can remember has been dreaming of becoming a scientist. Her childhood questions about thoughts and where they come from matured into interests in plasticity, developmental neurobiology, neurodegenerative disease, and cognitive neuroscience as an undergraduate at UR and more recently, as a technician in the Majewska lab.
**Students Entering Class 2010**

*John O’Donnel* plans to do research that will contribute to our understanding of how cellular systems work, with the aim of helping to develop therapies that will improve functional recovery in the nervous system and brain. As a neuroscience major at Johns Hopkins University, he immersed himself in the study of how glial cells impact the development and maintenance of the nervous system. He wants to expand on his past work by studying how glia and neurons function to govern balance of ions in the brain, and how the balance is disrupted in both brain injury and disease.

*Salvador Pena* is taking a year off from medical school at Rochester to earn a M.S. degree in Neurobiology and Anatomy. He believes that it is important for physicians to understand the methodologies of research and to stay current with the literature in order to provide the best care possible to their patients. In addition, Salvador hopes to gain skills that will be helpful in obtaining grants and publishing research.

*Fatima Riviera-Escalera*, a graduate of the University of Puerto Rico, is no stranger to Rochester, having already spent a year with us in the Post-Baccalaureate Research and Education Program (PREP). She has been working with Drs. O’Banion and Olschowka carrying out research related to the development and function of glial cells in the nervous system, including their interaction with neurons and their role in neurodegenerative disease, brain injury and neuroinflammation.

*Yi (Joyce) Ren* has been working and volunteering in research labs virtually non-stop since high school. Although she’s spent the last four years on Long Island as a student at Stony Brook University, she is plenty familiar with western NY, having lived in Buffalo since middle school. Joyce has a long-standing interest in the function, regulation and evolution of electrophysiological systems—interests she developed from her undergraduate research, which focused on ion channels in the heart.

*Grayson Sipe* joins us from Lafayette College in Easton, PA. Grayson wants to research visual representation and object association, in order to answer questions such as, how does the brain brake down the visual scene into color, form, and motion? In his research, he hopes to use fMRI to observe brain activity during visual information processing in humans.
Milestones - Year 2009 - 2010

Qualifying Exam

Molly Gill (Cook), "ER stress target CHOP-10 modulates neuronal cell viability after hypoxia"
Anasuya Das, "Perceptual learning of visual motion in cortical blindness – properties and mechanisms"
Maria Diehl, "Effects of emotional expression and identity on discrimination of faces and vocalization in the frontal lobe"
Sarah Allen (McConnell), "The role of neuroinflammation in methamphetamine-induced neurotoxicity"
Sally Duarte, "Neuronal and network mechanisms of ictogenesis"
Youngsun Cho, "Linking pathways and function in anxious adolescents: using tract tracing studies in nonhuman primates to guide functional imaging studies"
Katherine Selzler, "Deep brain stimulation of the subthalamic nucleus: a model for understanding striato-frontal circuits"
Veena Ganeshan, "Oxidative stress and the role of p75NTR in the effects of fenretinide on neuroblastoma cells"
Michael Jacob, "Behavioral influences on visual cortical processing: neural mechanisms revealed by human aging and monkey neurons"
Nathan Smith, "Astrocytes role in lipid mediated synaptic activity"

PhD Thesis Defense

Yuriy Shapovalov (PhD), "The role of neuroinflammation in the pathogenesis of amyotrophic lateral sclerosis"
Lynette Desouza (PhD), "EGLN3 regulates the rate of cell death in developing sympathetic neurons following nerve growth factor withdrawal"
I-Chen Yu (PhD), "Multiple roles of the androgen receptor in insulin resistance and metabolic syndrome: tissue-specific perspectives"
Michael Pesavento (PhD), "Neurons to networks and back again: interactions in neocortical circuit processing of transient input"
Deborah Ryan (PhD), "Targeting amyloid-beta in a passive immunotherapeutic approach to disrupt Alzheimer's disease pathogenesis"
Marina Dobreva (PhD), "The influence of aging, memory, and stimulus characteristics on human auditory and visual spatial localization"
William Mowrey (PhD), "Distributed control of sex differences in C. elegans locomotor behavior"
Sarah Bliss Matousek (PhD), "Chronic neuroinflammation: contribution of IL-1β to prostaglandin production and Alzheimer's disease pathology"
Michael Moravan (PhD), "Irradiation of mouse brain leads to neuroinflammation and delayed infiltration of immune cells: role of interleukin-1 and CCR2 signaling"
Student Presentations


Hussar CR, Pasternak T, “Differential representation of task-related signals by cell type in prefrontal cortex.” Society for Neuroscience Abstracts, Chicago, IL, (November 2009)

Hussar CR, Pasternak T, “Memory-related activity in the PFC depends on cell type only in the absence of sensory stimulation.” Frontiers in Systems Neuroscience.” Computational and Systems Neuroscience Meeting, Salt Lake City, UT, (February 2010)


Student Publications


Student Awards

Ethan Winkler, Walle J.H. Nauta Prize recipient for excellence in the Neurosciences. (September 2009)

Stephen Raiker, NIH F31 Ruth L. Kirschstein NRSA Individual Pre-Doctoral Fellowship, 1 F31 NS061589-01A1, (February 2009)

Kathleen McAvoy, NIH F31 Ruth L. Kirschstein NRSA Individual Pre-Doctoral Fellowship, F 31 NS064629, (December 2010)

Michael Wu, American Society of Neurochemistry Young Investigator Enhancement Award (March 2010)

Youngsun Cho, NIH F30 Ruth L. Kirschstein NRSA Individual Pre-Doctoral Fellowship, 1 F30 MH 091926-01 (May 2010)


Revathi Balasubramanian, SPINES fellowship to attend “Summer program in Neuroscience, Ethics and Survival” at the Marine Biological Laboratories (MBL), Woods Hole, MA

John O’Donnell, The University of Rochester Merritt & Marjorie Cleveland Fellowship (September 2010)

Grayson Sipe, The University of Rochester Alumni Fellowship Award (September 2010)

Interdepartmental Neuroscience Training Grant, T 32NS07489, current appointees: Kelli Fagan, Julianne Feola, Jonh O’Donnell, Fatima Rivera-Escalera, Grayson Sipe, Adam Pallus

News and Other Events

Neuroscience Students Play Softball

The 2010 Myoclonic Jerks competed in the URMC/River Campus Slow Pitch Softball League this season, continuing a yearly summer tradition. Captained by Katie Selzler, a graduate student in the Neurobiology and Anatomy program, the team is made up of members of the University of Rochester Neuroscience community, including other graduate students, post-docs, technicians, IT specialists and friends. With a winning season and a strong effort in the post-season playoffs, the Jerks look forward next spring when a new year and new talent could make them recreational softball champions. Find the Myoclocnic Jerks group on Facebook for additional photos and information.
News & Other Events

2009 IGPN alumna, Nancy Ann Oberheim Bush, gave birth to a baby Oliver in March 2010. She will be graduating from Medical School with Class 2011.

Current IGPN student, Irina Statnikova, gave birth to a baby girl in May 2010.

Congratulations to Sarah Allen, NBA student, who got married in June 2010 and became Sarah McConnell.

Molly Gill (IGPN student) and Kevin Cook (IMV) took the plunge on June 12, 2010 in Spokane, WA.

IGPN Happy Hour at Elmwood Inn.

Bowling Night at Clover Lanes.

2010 Neuroscience Retreat held at Memorial Art Gallery on April 29 had a great turnout. 185 faculty, students, and staff attended from the Neuroscience Community.
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 with updates.

Tim Mhyre, PhD, 2000, NBA, Assistant Professor, Dept. Of Neuroscience, Georgetown University, New Research Building EP-04, Box 571464, Washington, DC, trm36@georgetown.edu

Nikolaus McFarland, MD/PhD, 2001, NBA, Assistant in Neurology in the MGH Department of Neurology and Instructor in Neurology at Harvard Medical School, Boston, MA, nmcfarland@partners.org

Jay Nierenberg, PhD, 2001, NBA, Assistant Professor, Dept. of Psychiatry, NYU Longone Medical Center, 550 First Ave., New York, NY, Jay.Nierenberg@nyumc.org

Mary Maida, PhD, 2001, NSC, Medingen Group, LLC, Clerisy Corp., 3543 Winton Place, Rochester, NY 14623, Phone: 585.598.4911, mmaida@medingen.com; mary.maida@clerisycorp.com

Randall Hayes, PhD, 2001, NSC, Assistant Professor, University Studies at North Carolina A&T University, rhayes@ncat.edu

Tina Huang, PhD, 2001, NSC, Director of Research, Transparent Corporation, 2549 Summit Street, Columbus, OH, 43202; Scientist III, Nutritional Immunology Laboratory, Jean Mayer USDA HNRCA at Tufts University, 711 Washington Street, Boston, MA 02111-1524, Phone: (617) 556-3350, tina.huang@tufts.edu

Adnan Siddiqui, MD/PhD, 2003, NBA, Assistant Professor of Neurosurgery, University at Buffalo Neurosurgery, 3 Gates Circle, Buffalo, NY 14209, Phone: (716) 887-5200, asiddiqui@ubns.com, Assistant Professor of Radiology, State University of New York, Fredonia

Andrew Custer, PhD, 2003, NSC, Associate, Foley & Lardner LLP, 3579 Valley Centre Drive, Suite 300, San Diego, CA 92130-3302, acuster@foley.com, http://www.foley.com; J.D., University of Florida, Levin College of Law (2009)

Michael Froehler, PhD, 2004, NSC, Physician, Interventional Neuroradiology, Ronald Reagan UCLA Medical Center, Los Angeles, CA, email address

Michael Hanna, PhD, 2004, NSC, Assistant Professor, Dept. of Biological & Environmental Sciences, Texas A&M University-Commerce, Commerce, TX, Michael_Hanna@tamu-commerce.edu

Seth Perry, PhD, 2004, NSC, Research Assistant Professor, Biomedical Engineering, URMC, Rochester, NY, seth_perry@urmc.rochester.edu

Luisa Scott, PhD, 2004, NSC, Research Fellow, Section of Neurobiology, University of Texas, Austin, TX, luisa_scott@mail.utexas.edu

Patricia Sheridan, PhD, 2004, NSC, Research Assistant Professor, Dept. of Nutrition, University of North Carolina, Chapel Hill, NC, patricia_sheridan@med.unc.edu

Renee Miller, PhD, 2004, NSC, Post-doctoral Research Associate, Center for Neural Development & Disease, URMC, Rochester, NY, renee_miller@urmc.rochester.edu

Rebecca Sappington, PhD, 2005, NSC, Assistant Professor of Ophthalmology & Visual Sciences, Vanderbilt University Medical Center, Nashville, TN, rebecca.m.sappington@Vanderbilt.Edu

ChiaWen (Kitty) Wu, PhD, 2005, NSC, Post-doctoral Fellow, UPENN School of Medicine, Philadelphia, PA, chiawen@mail.med.upenn.edu

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

Chiayu Chiu, PhD, 2005, NSC

Min Zhu, PhD, 2006, Dept. of Neurology, Albert Einstein College of Medical of Yeshiva University

Kuei-Cheng Lim, MD, PhD, 2006, NSC, 2nd year resident, New York University, Neurology, New York, NY, Kuei-Cheng.Lim@nyumc.org

Jill Weimer, PhD, 2006, NSC, Assistant Scientist, Sanford Research; Assistant Professor, Department of Pediatric, University of South Dakota, Sioux Falls, SD, jill.weimer@sanfordhealth.org
Alumni Updates

Zhiyong Yang, PhD, 2006, NSC

Jason Hamilton, PhD, 2007, NSC

Charles Wuertzer, PhD, 2007, NSC, Post-doctoral Fellow, Mayo Clinic, Jacksonville, FL, email address

Roberto Fernandez-Romero, PhD, 2007, NBA, Resident, URMC, Neurology, Rochester, NY, Roberto._Fernandez@urmc.rochester.edu

Solomon Shaftel, PhD, 2007, NBA, Resident, Ophthalmology Dept., University of California in San Diego, CA, docshaft@gmail.com

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

Daniel Zaksas, PhD, 2007, NSC, Post-doctoral Fellow, Dept. of Neurobiology, Harvard Medical school, Boston, MA

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

Karthik Venkatesh, PhD, 2008, NSC, Post-doctoral Fellow, University of Michigan, Dept. of Neurology, Ann Arbor, Michigan, karvenka@umich.edu

Erin Johnson, PhD, 2008, NSC, Post-doctoral Fellow, University of Michigan Medical School, Molecular and Behavioral Neuroscience Institute, Ann Arbor, MI, ejohnson@umich.edu

Yasser Elshatory, PhD, 2008, NSC, Resident in Ophthalmology, University of Oklahoma

Pushkar Joshi, PhD, 2008, NSC, Post-doctoral Fellow, Stanford University, Dept. of Biology, Stanford, CA, pushkari@stanford.edu

Ling Pan, PhD, 2008, NSC, Post-doctoral Fellow, MIT, Dept. of Brain and Cognitive Sciences, Cambridge, MA, lingpan@mit.edu

Xiaoyan Lin, PhD, 2008, NSC, Post-doctoral Fellow, University of California in San Francisco, Dept. of Neurology, San Francisco, CA, xiaoyan.lin@ucsf.edu

Matthew Belizzi, PhD, 2008, NSC, Resident, Dept. of Neurology, URMC, Rochester, NY, matthew_belizzi@urmc.rochester.edu

Yanan Guo, PhD, 2009, NSC, Post-doctoral Fellow, Harvard Medical School, Brigham and Women's Hospital, Boston, MA, yguo5@rics.bwh.harvard.edu

Onanong Chivatakarn, PhD, 2009, NSC, Post-doctoral Fellow, The Salk Institute, La Jolla, CA, ochivatakarn@salk.edu

Laurie Robak, PhD, 2009, NSC, Resident, Medical Genetics/Pediatrics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, Robak@bcm.tmc.edu

Nancy Oberheim Bush, PhD, 2009, NSC, Resident, URMC, Rochester, NY, nancyannoberheim@urmc.rochester.edu

Irah King, PhD, 2009, NSC, Post-Doctoral Fellow, Trudeau Institute, 154 Algonquin Avenue, Saranac Lake, NY, IKing@trudeainstitute.org

Grace Vangeison, PhD, 2009, NSC, Millipore, Billerica, MA, email
Alumni Updates

Virginiia Cuzon, PhD, 2009, NSC, NIH, Bethesda, MD, email address

Aaron Cecala, PhD, 2009, NBA, Assistant Professor of Physiology, Elizabethtown College, PA, cecalaa@etown.edu

Bernard Gee, PhD, 2009, NSC, Assistant Professor, Hobart and William Smith Colleges, Geneva, NY


Qi Cui, PhD, 2009, NBA, Medical Student, URMC, Rochester, NY qi_cui@urmc.rochester.edu

Carolyn Tyler, 2009, NSC, Post-doctoral Fellow, Princeton University, Dept. of Molecular Biology, Washington Rd., LTL 123, Princeton, NJ 08544, ctyler@Princeton.EDU

Ditte Lovatt, PhD, 2009, NSC, Post-doctoral Fellow, University of Pennsylvania School of Medicine, Dept. Pharmacology, 37 John Morgan Building, 3620 Hamilton Walk, Philadelphia, PA 19104-6055, lovatt@mail.med.upenn.edu

Yuriy Shapovalov, PhD, 2010, NSC, Post-doctoral Fellow, URMC, Rochester, NY, yuriy_shapovalov@urmc.rochester.edu

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

I-Chen Yu, PhD, 2010, NSC, Post-doctoral Fellow, Stanford University, Dept. of Neurosurgery, Stanford, CA 94305-5020, iyu@stanford.edu

William Mowrey, PhD, 2010, NSC, Post-doctoral Fellow, Biomedical Genetics, Box 645, URMC, Rochester, NY, william_mowrey@urmc.rochester.edu

Sarah Bliss Matousek, PhD, 2010, NBA, Post-doctoral Fellow, Center for Neurologic Diseases, Brigham and Women’s Hospital, 77 Avenue Louis Pasteur, New Research Building 636, Boston, MA 02115, smatousek@partners.org

Deborah Ryan, PhD, 2010, IGPN, Post-doctoral Fellow, Biomedical Genetics, Box 645, URMC, Rochester, NY, Deborahryan@urmc.rochester.edu

Marina Dobreva, PhD, 2010, NBA, Post-doctoral Fellow, NBA, URMC, Box 603, Rochester, NY, marina_dobreva@urmc.rochester.edu

Michael Pesavento, PhD, 2010, NBA, Post-doctoral Fellow, Dept. of Physics, 9500 Gilman Drive #0374, La Jolla, CA 92093, mpesavento@uscd.edu