Neuroscience Graduate Program

2019
NEWSLETTER

NGP NEWSLETTER 2019

SCHOOL OF MEDICINE & DENTISTRY
UNIVERSITY of ROCHESTER

Neuroscience Graduate Program

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Cover Page Photograph: 2019 Incoming Class

Pictured left to right:

Caitlin Sharp, Melissa Rifkin, Sarah Yablonski, Linh Le, Johanna Fritzinger, Alejandra Rodriguez, Michael DuHain, MaKenna Cealie, and Emily Przysinda

Notes from Ania Majewska — NGP Director

Dear friends,

Greetings from the Neuroscience Graduate Program. To start off, I am excited to introduce you to our first year class composed of eleven students, whose diverse backgrounds and interests you can explore in the profiles appearing in this newsletter. Since I last wrote, we have had three students graduate – Rianne Stowell, who is now a postdoctoral fellow in the lab of one of our newest faculty, Dr. Kuan Hong Wang and Dr. Aimee Morris and Dr. Dawling Dionisio Santos, both of whom have returned to medical school. Saying good bye to our students is always bitter sweet, as we will certainly miss their daily contributions to the program. But all three have produced an amazing body of work and we are extremely proud of their achievements.

We are grateful for the support of the Del Monte Institute of Neuroscience and John Foxe which has allowed us to grow recruitment and provide our students with additional educational opportunities. This year we are expanding our core curriculum to provide much needed quantitative training for all of our first year students which will enhance their skills in both graduate work and in their future scientific career. This new initiative was born out of our efforts to review our curriculum and I want to thank our curriculum review committee (John Olschowka, Chris Holt, Douglas Portman, Tania Pasternak, Ruchira Singh, Liz Romanski, Krishnan Padmanabhan, Hugh Xia) for their efforts which will be continuing this year. If you have input on how we can improve our curriculum, please don't hesitate to get in touch with me or anyone on the committee. I also want to welcome our new NGP faculty: Michele Rucci (Brain and Cognitive Science), Marissa Sobolewski (Environmental Medicine), Kuan Hong Wang (Neuroscience) and Andrew Wojtovich (Anesthesiology). We are very excited to have them on board and to watch our NGP students as they navigate the new research possibilities in these labs.

I also want to remind you about our student seminar series which is held on Mondays at 4pm in K307. It is a great opportunity to learn about the exciting work being done in our community while supporting the development of our students. A huge thank you to Holly Beaulac, Allison Murphy, Margot Mayer-Proschel and Ross Maddox for keeping this series running smoothly and to all the students and faculty who attend and contribute to the vibrant discussions. Along with a slate of exciting student-invited external speakers, this year we are also partnering with the new student group, Alliance for Diversity in Science and Engineering, and will be co-hosting Dr. Natalia Vargara (UC Denver) for a scientific and career talk to the broader science UR community. Thank you to Kate Andersh for coordinating that effort.

Lastly, you will find an alumni directory at the end of this newsletter. Please help us keep this directory current by updating any old information and letting us know of any accomplishments, honors or awards that you or your fellow alumni may have received. We are proud of our alumni and want to celebrate your successes. If you are ever in Rochester or want to stop by for a visit, please let us know. We would love to have you meet our current students and share your wisdom with them.

In closing, I want to thank all of you for another fantastic year. I encourage you all to communicate with me or any member of the NGP steering or executive committees if you have any suggestions on ways to improve our program. Your input is important!

Regards,
Ania Majewska, PhD

SU(i)B
Student Updates — (in) Brief

Be sure to check out the SU(i)B callouts interspersed throughout this newsletter for blurbs and photos highlighting a plethera of noteworthy NGP student activities. Look for the SU(i)B boxes!

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Notes from Doug Portman — NGP Admissions Committee Chair

The NGP admissions committee is delighted to report that the 2019 admissions season was an unqualified success. In total, we considered 110 applications, roughly on par with numbers from the last few years. During two very full interview weekends, as well as several Skype sessions, we interviewed 41 candidates. The scale of our interview weekends demands an all-hands-on-deck approach, and, as usual, our faculty and students rose to the occasion! The time and effort of all NGP faculty, as well as their thoughtful evaluations of the applicants, is essential to recruiting a strong class. Current NGP students also play a vital role, getting to know the applicants, helping to make their visits informative and engaging, and conveying the sense of community that our program fosters. Ultimately, we were able to recruit eight very talented new first-year students to the program. You can learn more about them, as well as a ninth student who has joined NGP as an MD/PhD student, elsewhere in this newsletter.

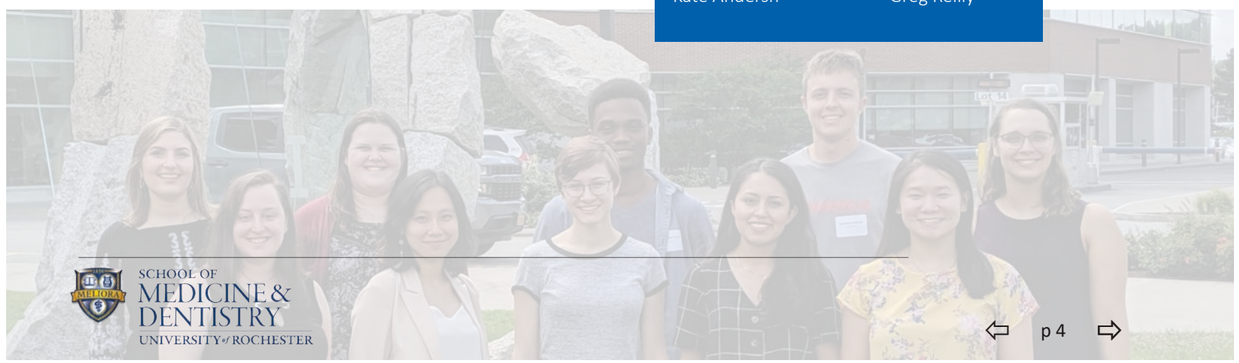
Special thanks go to Tori D'Agostino, who again went above and beyond in coordinating the smooth operation of the entire admissions process. Thanks also to the faculty members of the NGP admissions committee, Farran Briggs, Gail Johnson, Ania Majewska, John Olschowka, Liz Romanski, and Pat White, each of whom carefully screened dozens of applications and interviewed many candidates. Finally, the admissions committee's student members, Kate Andersh, Greg Reilly, Neil Shah, and Emily Warner, worked tirelessly to organize interview weekend events, introduce applicants to the NGP community, and attract the best ones to UR. With the 2020 admissions season only a few months away, the cycle will soon begin anew! The admissions committee is eager to hear your feedback and ideas for making this process as successful and efficient as possible, so please reach out to any of us with your thoughts.

Doug Portman

Chair, NGP Admissions Committee

NGP Admissions Committee

Doug Portman, Chair	Ania Majewska
John Olschowka	Liz Romanski
Farran Briggs	Pat White
Gail Johnson	Tori D'Agostino
Neal Shah	Emily Warner
Kate Andersh	Greg Reilly



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Notes from John Foxe — Director, Del Monte Institute for Neuroscience Chair, Neuroscience Department

It has been another note-worthy year for the Del Monte Institute for Neuroscience and the Department of Neuroscience. Highlights include burgeoning faculty growth, increasing NGP student enrollment, and planning for the upcoming October 2019 two-day symposium, Manipulating Brain States: Invasive mapping and neuromodulation in human neurological disease. It should be an exciting event with 20 of the world's most prominent and renowned neuroscientists working on these techniques on the slate of speakers.

When I arrived at the U of R in 2015, NGP enrollment was at 27 students. I am happy to report that in 2019, enrollment now tops 48 students. The NGP is now one of the biggest graduate programs at the University! I am so pleased to be associated with such a fantastic program.

The depth and breadth of work happening in our Institute is truly astonishing, and continues our mission of dynamic growth. We are delighted to announce that Dr. Kuan Hong Wang, joined our faculty in early 2019. Dr. Wang came from the National Institute of Mental Health at NIH where he served as Chief of the Neural Circuits and Adaptive Behavior Division. He is up and running full-steam ahead in his newly-renovated lab in the Kornberg Medical Research Building. We are also delighted to have recruited Dr. Paul Geha from Yale University as an Assistant Professor jointly appointed with Psychiatry and Neuroscience. Dr. Manual Gomez – Ramirez is another new face on campus. Dr. Gomez-Ramirez joins us from Brown University as an Assistant Professor in the Departments of Brain and Cognitive Science and Neuroscience. Continuing our commitment to fostering junior faculty, Neuroscience welcomed Yurong Gao as Technical Director, in the Multiphoton Research Core Facility and Leona Oakes as Research Assistant Professor in the Cognitive Neurophysiology Lab. Additionally, recruitments for new Neuroscience faculty in Alzheimer's Disease Research, and in Augmented and Virtual Reality are underway. We also are working closely with the departments of Pediatrics, Brain & Cognitive Sciences, and Psychiatry on co-recruitments.

Over the past year we have congratulated three newly-minted PhD's from our graduate program. This year we have welcomed eight PhD, one MD/PhD, and two MD/MS students. We were thrilled to hear that 3 of our students received NIH Fellowship awards all within a month of each other this summer.

We are absolutely delighted to have you here with us and look forward to your vigorous participation in our exciting new programs in the years ahead.

John Foxe, PhD
Professor & Chair, Department of Neuroscience
Director, Del Monte Institute for Neuroscience

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Class of 2019 NGP Student Admissions

Introducing the class of 2019 — another exceptional year for our Neuroscience Graduate Program! Our admissions includes 8 PhD students, 2 MD/MS and 1 MD/PhD. Please join us in a big welcome to this promising group of future neuroscientists!

Matthew Adusei — I graduated from Lafayette College with a B.S. in Biology. At Lafayette, I worked primarily in the Dearworth lab where we used UPLC-MS to check for 11-cis retinal in the caudal photoreceptor of the crayfish, Procambarus clarkii, to support the possession of a functional protein with properties similar to melanopsin. I also worked with Dr. Kurt to analyze macrophages and neutrophils infiltrating murine mammary carcinoma sites within hours of tumor delivery. I am looking forward to exploring my interests in the range of vision research done by NGP faculty at URMC.

MaKenna Cealie — MaKenna Cealie recently graduated from Colgate University with a B.A. in Neuroscience and a minor in Anthropology. She conducted her undergraduate research with Dr. Wan-chun Liu, studying the effects of environmental changes on the brains of zebra finches. Her senior thesis examined the relationship between neurogenesis and movement using immunohistochemistry. At URMC, she looks forward to further exploring her interests.

Michael DuHain — Michael graduated from Montana State University in 2017 with a B.S. in Cell Biology & Neuroscience. After graduating, he conducted research in the lab of Dr. James Mazer, studying the neuronal response and tuning in early visual cortical areas of non-human primates. This project used extracellular recordings and computational methods to rework the model of V1 to account for simple curvature, and non-gabor stimuli, both inside and out of the non-classical surround portion of the receptive field. In his graduate work, he hopes to further explore his interests in computational methods, circuit dynamics, and injury states of the CNS and PNS.

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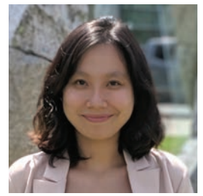
SU(i)B

PhD Defense

Rianne Stowell defended her dissertation on 6/28/2019 and has since become a postdoc in Dr. Kuan Hong Wang's lab.

Class of 2019 (continued)

Johanna Fritzinger Johanna Fritzinger recently graduated from Case Western Reserve University with a Bachelor of Science in Electrical Engineering and a minor in Music. During her time as an undergraduate she conducted research primarily under Dr. Hillel Chiel in an electrophysiology lab working to adapt novel carbon fiber electrode arrays created at the University of Michigan for stimulation and recording of neural circuits implicated in feeding behavior in Aplsia californica. She is excited to explore auditory and visual sensory systems at Rochester.



Linh Le — Linh Le graduated from Truman State University with a M.S. in Biology in 2019. During undergrad, she interned under Dr. Vidal Melo at MGH, working on projects addressing ventilator-induced lung injuries. At school, she conducted research under Dr. Brett Berke, studying learning and memory using Drosophila (fruit fly) model. Her graduate research focused on the role of postsynaptic phosphorylation/dephosphorylation balance on presynaptic development at the Drosophila neuromuscular junction. She is currently interested in studying the underlying mechanisms of neurodegenerative diseases.

Emily Przysinda — Emily Przysinda graduated from Skidmore College in 2015 with B.A.s in Neuroscience and Music. She completed two summer internships at University of Rochester working in Dr. Elizabeth Marvin's Music Cognition Lab and Dr. Brad Mahon's Concepts, Actions, and Objects Lab. Before entering Rochester's MD/PhD program, Emily worked as a lab coordinator in the Music Imaging and Neural Dynamics Lab with Psyche Loui, PhD at Wesleyan University where she used EEG and MRI to study improvisatory musical training. At Rochester, Emily plans to study the hierarchical processing of language in clinical populations and is looking forward to integrating her clinical skills with research.

Melissa Rifkin — Melissa Rifkin graduated from Hood College in 2019 with a B.A. in Biology and a B.A. in Psychology. She has worked in labs at Hood as well as at the University of Delaware and the University of Vermont, studying a variety of model systems including tiger salamanders and rats. Her senior biology honors thesis investigated the impact of a common laboratory anesthetic (triethylamine) on gene expression and learning/memory abilities in Drosophila melanogaster. She is interested in researching neurodevelopment and the etiology of psychiatric diseases in her graduate studies.

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SU(i)B

PhD Defenses

Dawling Dionisio-Santos (6/26/2019) and Aimee Morris (7/1/2019) successfully defended their dissertations and have since returned to Medical School to finish their MD degrees.

Class of 2019 (continued)

Alejandra Rodriguez— Alejandra Rodriguez received her BS in Neuroscience with a cellular and molecular concentration from Johns Hopkins University in 2015. She is currently enrolled in the University of Rochester School of Medicine and Dentistry MD program and MS in Neurobiology and Anatomy. She is working with Dr. David Paul, MD, MS to analyze the effects of growth hormone and insulin-like growth factor-1 on the anterior visual system using optical coherence tomography (OCT) and diffusion tensor imaging (DTI).

Caitlin Sharp — Caitlin Sharp graduated from Gettysburg College in 2017 with a B.A. in psychology and a minor in neuroscience. During her time at Gettysburg College, Caitlin investigated play behavior in rats in the lab of Dr. Steve Siviy. Her thesis examined the effects of strain and isolation duration on social anxiety in rats and the involvement of the dorsal prefrontal cortex. After graduating, Caitlin helped to conduct EEG and neuroimaging studies investigating the neurobiological basis of schizophrenia and cannabis associated neurocognitive impairments for the Schizophrenia Neuropharmacology Research Group at Yale. She later coordinated several fMRI studies for the Yale Imaging Psychopharmacology Lab to examine medication assisted treatments for substance use disorders. Caitlin hopes to further explore the neurobiological basis of mental illnesses as a graduate student at the University of Rochester.

John Wilson — John Wilson graduated from the University of Rochester in 2015 with dual Bachelor's degrees in Molecular Genetics and Psychology. During his undergraduate years, he worked in the Developmental Neuropsychology Lab, studying sensory processing in children with autism spectrum disorder under Loisa Bennetto, Ph.D. In 2016, John enrolled as an M.D. candidate at the University of Rochester; he is presently between his third and fourth years of medical school. In July 2019, John began an NIH TL1 NRSA Predoctoral Fellowship in Otolaryngology/Neuroscience through the CTSI Academic Research Track Year-Out Program for medical students; he is concurrently pursuing a Master's degree in Medical Neurobiology & Anatomy. His research with Kenneth Henry, Ph.D. explores new modalities for characterizing sensorineural hearing loss using an avian paradigm. John plans to pursue a residency in Otolaryngology and a career in academic medicine.

Sarah Yablonski — Sarah Yablonski recently graduated from St. Lawrence University with a Bachelor of Science in Neuroscience with an emphasis on Cellular Neuroscience. At St. Lawrence University, she worked in the lab of Dr. Ana Estevez investigating cerium oxide nanoparticles and their potential to serve as a therapeutic for neurodegenerative diseases. She has also worked in labs at Augusta University and at the Wadsworth Center in Albany, NY. At Rochester, she hopes to continue to explore her interests in cellular neuroscience, including neurodegenerative diseases.

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2019 Neuroscience Retreat

This year's Neuroscience Retreat was held at the Memorial Art Gallery on April 12, 2019. With more than 150 attendees, the day was a success. This year's keynote lecturer, David Amaral, PhD, spoke about "The Ups and Downs of Autism Spectrum Disorder:Tracking the trajectories of autism in the Autism Phenome Project". Dr. Amaral is the Beneto Foundation Chair,MIND Institute; University of California Distinguished Professor, Department of Psychiatry and Behavioral Sciences and Center for Neuroscience, School of Medicine; Core Investigator, California National Primate Research Center.

(L) Aleta Stevens received the Robert Doty prize for this year's outstanding dissertation in neuroscience.

(R) David Amaral, PhD Keynote Speaker

(L) Gary Paige received the 3rd Annual Peter Shrager Award

4th year students Neal Shah, Kathleen Miller-Rhodes, Ally McHale, Emily Warner and Yunpeng (YP) Pang

5th year students Holly Beaulac, Dawling Dionisio-Santos, Humberto Mestre, Garrick Salois, and Monique Mendes

Mark your calendar!

2020 Neuroscience Retreat

April 24th

Memorial Art Gallery with keynote speaker Dr. Cristina Alberini

Looking forward to seeing you there!

Many thanks to the Retreat Committee

Krishnan Padmanabhan, PhD, Monique Mendes, Ally McHale, Yunpeng (YP) Pang, Kate Andersh, Brendan Whitelaw, and Tori D'Agostino

Laboratory Rotation Opportunities

First year Neuroscience Graduate Program students are required to rotate in three laboratories before selecting a research advisor. Below are some of the laboratories currently looking for students; this list is not exhaustive. A more complete list can be found at https://www.urmc.rochester.edu/education/graduate/phd/neurosciences/students/rotations.aspx

Dr. Amy Kiernan Lab — The Kiernan Lab uses mouse genetics to understand the fundamental molecular pathways involved in sensory development and disease. As in humans, many of the specialized cell types in the ear and the eye of the mouse, such as hair cells, photoreceptors and ganglion cells, cannot regenerate when damaged due to genetics, environmental factors, or normal aging. Loss of these important cells leads to irreversible deafness, vestibular dysfunction and vision loss. Therefore, identifying the key molecules involved in the specification of these cell types and their precursors will be important when developing therapies using stem cells, progenitor cells, or gene therapy as well as in understanding the congenital defects associated with mutations in these genes. The long-term goal of the laboratory is to use advanced genetic approaches, including conditional gene targeting, inducible expression systems, and RNA-seq to elucidate how critical cell types develop in the ear and the eye.

Dr. Ania Majewska Lab — The Majewska lab is interested in the interactions between microglia and neurons in the context of network remodeling in both normal development, aging and in disease settings such as autism and Alzheimer's disease. Possible rotation projects include immunohistochemical analyses of microglial expression in diverse areas of the brain and in vivo imaging of microglial and astrocytic dynamics using two-photon microscopy.

More lab opportunities on next page

SU(i)B

Spotlight on Dennis Jung

Second-year student, Dennis Jung, co-authored a paper he was working on before he started graduate school.

Zhang, Q., Jung, D., Larson, T., Kim, Y., & Narayanan, N. (2019 April). Scopolamine and medial frontal stimulus-processing during interval timing. bioRxiv, 598862.

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Laboratory Rotation Opportunities (continued)

Dr. Jesse Schallek Lab — The neural cells that line the back of our eyes are sensitive to light and initiate our ability to see. These cells are among the most metabolically active tissues in the human body and are nourished by a dense network of capillaries that circulate blood to deliver nutrients and remove waste products from these hard-working cells. However, dysfunction of this neural-vascular system associates with a variety of retinal diseases and collectively gives rise to the leading cause of blindness in the developed world.

Our lab investigates blood flow in the living eye by using a specialized camera called an Adaptive Optics Scanning Light Ophthalmoscope (AOSLO) to correct for small imperfections of the optics of the eye. Once corrected, we can image the microscopic integrity of the smallest vessels that are ten-times thinner than a human hair. Additionally, capturing videos of this tissue enables study of the movement of single blood cells flowing within this network. We are developing and applying this cutting-edge technology to study blood flow in the retina in conditions of health and disease.

We are pursuing several projects in this area that include in vivo basic research in models of retinal disease and imaging human patients in the Flaum Eye Institute.

1. Examining the role of blood flow regulation and capillary level neurovascular coupling in the central nervous system
2. Characterizing blood flow at the smallest vascular level to determine what constitutes normal vascular perfusion
3. Imaging aberrant blood flow in patients with a number of vascular diseases of the retina
4. Developing new instrumentation to detect new sensitive biomarkers of retinal disease

More lab opportunities on next page

SU(i)B

Women In Neuroscience

Photo taken at seminar for the International Day of Women and Girls in Science. Pictured (left to right): Jessie Hogestyn, Emily Warner, Anjali Sinha, Monique Mendes, Ally McHale, Allison Murphy, Alesha Usuki, and Kate Andersh.

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Laboratory Rotation Opportunities (continued)

Dr. Gail V. W. Johnson Lab — The Johnson lab is involved in studying molecular mechanisms that underlay neurodegeneration. In particular studies in her lab are focused in two areas: (1) on understanding the regulation and function of the protein in tau in the context of Alzheimer's disease, and (2) on how a protein called transglutaminase 2 (TG2) differentially impacts the survival and function of neurons and astrocytes following CNS injury.

In the context of the first area, a major focus of her studies involves determining how a neuron recognizes tau that is abnormally modified or no longer functional, and targets it to the autophagy pathway for degradation. In particular her group is interested in determining if a complex containing BAG3 and other interacting proteins plays a role in not only directing tau to autophagy, but also in mediating the autophagy process. In the context of the second area of study, there is a focus on determining the differential roles of TG2 in regulating gene expression profiles in neurons and astrocytes. In astrocytes, TG2 plays a detrimental role following injury resulting in decreased survival of the astrocytes and an impaired ability to protect neurons. Conversely, TG2 supports neuronal survival and improves outcomes after insults. Possible mechanisms underlying these fundamental differences in TG2 function in neurons and astrocytes are being explored.

Rotation students would have the opportunity to choose to work on a project in either area. Although we do carry out studies using mouse models, rotation projects are usually primarily cell-based. Rotation projects would involve a variety of molecular and cellular techniques, with the specific project being determined by the student's interests.

More lab opportunities on next page

Laboratory Rotation Opportunities (continued)

Dr. Andrew Wojtovich Lab — Mitochondria play a central role in stroke outcomes. We study ischemia reperfusion injury in neurons using optogenetic tools to control the mitochondrial membrane potential or reactive oxygen species production. Depending on where, when, and how mitochondrial function changes, damage or protective signaling can occur. We use CRISPR/Cas9, C. elegans genetics, and measures of mitochondrial bioenergetics to learn about the mechanisms of this damage or protection in our models.

Dr. Pat White Lab —ERBB2/3 Activation after Cochlear Damage.

The White lab is conducting investigations into the timing, delivery, and sequelae of ERBB2/3 activation after cochlear damage. Preliminary data indicates that the genetic activation of ERBB2/3 in supporting cells may improve hearing outcomes after noise damage.

Dr. Tania Pasternak Lab — The ability to briefly store visual information is fundamental to successful execution of visually guided behaviors. Research in my lab is aimed at the study of the circuitry underlying the active maintenance of the representation of sensory information, i.e. sensory working memory. The overriding goal is to provide a link between cortical areas traditionally associated with processing of visual motion (area MT) and the region identified with cognitive control of visually guided behaviors, prefrontal cortex and relate neural activity recorded in these two regions to perceptual decisions.

Students rotating in the lab will have an opportunity to become familiar with procedures involved in neurophysiological recordings from behaving monkeys, including behavioral training techniques, single-cell recordings, analysis of neuronal activity, approaches to the study of behavioral effects of microstimulation and inactivation of identified cortical regions. They will work closely with other lab members and participate in the lab's weekly Journal Club.

More lab opportunities on next page

Laboratory Rotation Opportunities (continued)

Dr. Margot Mayer-Proschel Lab — TThe Mayer-Proschel lab is offering rotations related to two major projects:

Project 1

The overall goal of this project is to determine the impact of infection with a human-specific virus, human herpes simplex virus 6 (HHV6), on the repair function of human oligodendrocyte progenitor cells (hOPCs) and on the proper development of neurons in the context of demyelination and myelin repair and Alzheimer disease. Our recently generated mouse model that mimics human latent HHV6 infections offers the unique opportunity to (i) study the impact of this virus on brain repair functions in vivo in models of demyelination and (ii) allows crossing the mouse to existing Alzheimer model mice to determine whether latent HHV6 impacts the onset and/or severity of AD. The project involves cell culture techniques, Immunofluorescent cell labeling, iPSC technology, in vitro migration assays, generation and characterization of tissue section using confocal microscopy and behavior testing of mice.

Project 2

This project is focused on the genetic disease Ataxia Telangiectasia (AT). Hallmarks of the fatal disease are lung infections, immune defects and neurodegeneration. The onset and progression of the disease are unpredictable and there is no cure. A major challenge in studying this disease is that the neurological decline in patients seems to be driven by secondary insults. However, the specific nature of these insults are not known. In this project we are working in collaboration with Dr. O'Reilly to test the hypothesis that A-T related cognitive and neurologic changes are driven by repeated respiratory viral infections and lung disease. Reminisce of the idea that there is a connection between the gut microbiome and the brain, we are proposing that there is also a connection between lung and brain, which is particular important in the context of AT. We have generated a mouse model of AT and are now investigating whether repeated viral infections and lung disease worsen the neurological decline in our AT animals. This collaborative project involves immunohistologcial analysis and behavioral analysis.

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Student & Alumni Publications

Sweeney AM, Plá V, Du T, Liu G, Sun Q, Peng S, Plog BA, Kress BT, Wang X, Mestre H, Nedergaard M (2019 Jul 29). In Vivo Imaging of Cerebrospinal Fluid Transport through the Intact Mouse Skull using Fluorescence Macroscopy.; Journal of visualized experiments: JoVE.

Kersey AJ, Wakim KM, Li R, Cantlon JF (2019 Jul 26). Developing, mature, and unique functions of the child's brain in reading and mathematics. Developmental cognitive neuroscience; Vol 39.

Zvietcovich F, Ge GR, Mestre H, Giannetto M, Nedergaard M, Rolland JP, Parker KJ (2019 Jul 01). Longitudinal shear waves for elastic characterization of tissues in optical coherence elastography. Biomedical optics express; Vol 10(7).

Smith NA, Bekar LK, Nedergaard M (2019 Jun 28). Astrocytic Endocannabinoids Mediate Hippocampal Transient Heterosynaptic Depression. Neurochemical research.

Tithof J, Kelley DH, Mestre H, Nedergaard M, Thomas JH (2019 Jun 20). Hydraulic resistance of periarterial spaces in the brain. Fluids and barriers of the CNS; Vol 16(1).

Sharma KK, Kelly EA, Pfeifer CW, Fudge JL (2019 Jun 20). Translating Fear Circuitry: Amygdala Projections to Subgenual and Perigenual Anterior Cingulate in the Macaque. Cerebral cortex (New York, N.Y. : 1991).

Nygaard Mortensen K, Sanggaard S, Mestre H, Lee H, Kostrikov S, Xavier ALR, Gjedde A, Benveniste H, Nedergaard M (2019 Jun 17). Impaired Glymphatic Transport in Spontaneously Hypertensive Rats. The Journal of neuroscience: the official journal of the Society for Neuroscience.

Steevens AR, Glatzer JC, Kellogg C, CLow WC, Santi PA, Kiernan AE (2019 May 31). SOX2 is required for inner ear growth and cochlear nonsensory formation prior to sensory development. Development (Cambridge, England).

Monai H, Wang X, Yahagi K, Lou N, Mestre H, Xu Q, Abe Y, Yasui M, Iwai Y, Nedergaard M, Hirase H (2019 May 16). Adrenergic receptor antagonism induces neuroprotection and facilitates recovery from acute ischemic stroke. Proceedings of the National Academy of Sciences of the United States of America.

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Leonard A, Millar MW, Slavin SA, Bijli KM, Dionisio Santos DA, Dean DA, Fazal F, Rahman A (2019 May 1). Critical role of autophagy regulator Beclin1 in endothelial cell inflammation and barrier disruption. Cellular signalling.

Zhou S, Giannetto M, DeCourcey J, Kang H, Kang N, Li Y, Zheng S, Zhao H, Simmons WR, Wei HS, Bodine DM, Low PS, Nedergaard M, Wan J (2019 May). Oxygen tension-mediated erythrocyte membrane interactions regulate cerebral capillary hyperemia. Science advances; Vol 5(5).

Frisch BJ, Hoffman CM, Latchney SE, LaMere MW, Myers J, Ashton J, Li AJ, Saunders J, Palis J, Perkins AS, McCabe A, Smith JN, McGrath KE, Rivera-Escalera F, McDavid A, Liesveld JL, Korshunov VA, Elliott MR, MacNamara KC, Becker MW, Calvi LM (2019 Apr 18). Aged marrow macrophages expand platelet-biased hematopoietic stem cells via Interleukin1B. JCI insight; Vol 5.

Dionisio-Santos DA, Olschowka JA, O'Banion MK (2019 Apr 05). Exploiting microglial and peripheral immune cell crosstalk to treat Alzheimer's disease. Journal of neuroinflammation; Vol 16(1).

Mai N, Miller-Rhodes K, Knowlden S, Halterman MW (2019 Mar 13). The post-cardiac arrest syndrome: A case for lung-brain coupling and opportunities for neuroprotection. Journal of cerebral blood flow and metabolism: official journal of the International Society of Cerebral Blood Flow and Metabolism.

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Student & Alumni Publications (continued)

Cogné B, Ehresmann S, Beauregard-Lacroix E, Rousseau J, Besnard T, Garcia T, Petrovski S, Avni S, McWalter K, Blackburn PR, Sanders SJ, Uguen K, Harris J, Cohen JS, Blyth M, Lehman A, Berg J, Li MH, Kini U, Joss S, von der Lippe C, Gordon CT, Humberson JB, **Robak L**, *Scott DA, Sutton VR, Skraban CM, Johnston JJ, Poduri A, Nordenskjöld M, Shashi V, Gerkes EH, Bongers EMHF, Gilissen C, Zarate YA, Kvarnung M, Lally KP, Kulch PA, Daniels B, Hernandez-Garcia A, Stong N, McGaughran J, Retterer K, Tveten K, Sullivan J, Geisheker MR, Stray-Pedersen A, Tarpinian JM, Klee EW, Sapp JC, Zyskind J, Holla ØL, Bedoukian E, Filippini F, Guimier A, Picard A, Busk ØL, Punetha J, Pfundt R, Lindstrand A, Nordgren A, Kalb F, Desai M, Ebanks AH, Jhangiani SN, Dewan T, Coban Akdemir ZH, Telegrafi A, Zackai EH, Begtrup A, Song X, Toutain A, Wentzensen IM, Odent S, Bonneau D, Latypova X, Deb W, Redon S, Bilan F, Legendre M, Troyer C, Whitlock K, Caluseriu O, Murphree MI, Pichurin PN, Agre K, Gavrilova R, Rinne T, Park M, Shain C, Heinzen EL, Xiao R, Amiel J, Lyonnet SIsidor B, Biesecker LG, Lowenstein D, Posey JE, Denommé-Pichon AS, Férec C, Yang XJ, Rosenfeld JA, Gilbert-Dussardier B, Audebert-Bellanger S, Redon R, Stessman HAF, Nellaker C, Yang Y, Lupski JR, Goldstein DB, Eichler EE, Bolduc F, Bézieau S, Küry S, Campeau PM (2019 Feb 28). Missense Variants in the Histone Acetyltransferase Complex Component Gene TRRAP Cause Autism and Syndromic Intellectual Disability. American journal of human genetics.*

***Syc-Mazurek SB, Rausch RL, Fernandes KA**, Wilson MP, Libby RT (2019 Jan 25). Author Correction: Mkk4 and Mkk7 are important for retinal development and axonal injury-induced retinal ganglion cell death. Cell death & disease; Vol 10(2). 2019 Jan 25.*

***Chockanathan UD**, Souza AM, Abidin AZ, Schifitto G, Wismüller A (2019 Jan 15). Automated diagnosis of HIV-associated neurocognitive disorders using large-scale Granger causality analysis of resting-state functional MRI. Computers in biology and medicine; Vol 106.*

Saminathan P, Kevadiya BD, **Marker DF**, *Gendelman HE, Gorantla S, Gelbard HA (2019 Jan 7). Broad Spectrum Mixed Lineage Kinase Type 3 Inhibition and HIV-1 Persistence in Macrophages. Journal of neuroimmune pharmacology: the official journal of the Society on NeuroImmune Pharmacology.*

***Mestre H**, Hablitz LM, Xavier AL, Feng W, Zou W, Pu T, Monai H, Murlidharan G, Castellanos Rivera RM, Simon MJ, Pike MM, Plá V, Du T, Kress BT,* **Wang X**, *Plog BA, Thrane AS, Lundgaard I, Abe Y, Yasui M, Thomas JH, Xiao M, Hirase H, Asokan A, Iliff JJ, Nedergaard M (2018 Dec 18). Aquaporin-4-dependent glymphatic solute transport in the rodent brain. eLife; Vol 7.*

***Bellizzi MJ**, Hammond JW, Li H, Gantz Marker MA,* **Marker DF**, *Freeman RS, Gelbard HA (2018 Dec 3). The Mixed-Lineage Kinase Inhibitor URMC-099 Protects Hippocampal Synapses in Experimental Autoimmune Encephalomyelitis. eNeuro; Vol 5(6).*

***Mestre H**, Tithof J, Du T, Song W, Peng W, Sweeney AM, Olveda G, Thomas JH, Nedergaard M, Kelley DH (2018 Nov 19). Flow of cerebrospinal fluid is driven by arterial pulsations and is reduced in hypertension. Nature communications; Vol 9(1).*

***Wakim KM**, Helmreich DL (2018 Nov 17). Profiles of women in science: Carmen Sandi, President of the Federation of European Neuroscience Societies. The European Journal of Neuroscience.*

Rasmussen MK, **Mestre H**, *Nedergaard M (2018 Nov). The glymphatic pathway in neurological disorders. The Lancet. Neurology; Vol 17(11).*

***Syc-Mazurek SB, Rausch RL, Fernandes KA**, Wilson MP, Libby RT (2018 Oct 26). Mkk4 and Mkk7 are important for retinal development and axonal injury-induced retinal ganglion cell death. Cell death & disease; Vol 9(11).*

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Student & Alumni Publications (continued)

Singh MV, Kotla S, Le NT, Ko KA, Heo KS, Wang Y, Fujii Y, Vu HT, McBeath E, Thomas TN, Gi YJ, Tao Y, Medina JL, Taunton J, Carson N, Dogra V, Doyley MM, Tyrell A, Lu W, Qiu X, Stirpe NE, **Gates K**, *Hurley C, Fujiwara K, Maggirwar S, Schifitto G, Abe JI (2018 Oct 26). Senescent Phenotype Induced by p90RSK-NRF2 Signaling Sensitizes Monocytes and Macrophages to Oxidative Stress in HIV+ Individuals: Implications for Atherogenesis. Circulation.*

Plog BA, **Mestre H**, *Olveda GE, Sweeney AM, Kenney HM, Cove A, Dholakia KY, Tithof J, Nevins TD, Lundgaard I, Du T, Kelley DH, Nedergaard M (2018 Oct 18). Transcranial optical imaging reveals a pathway for optimizing the delivery of immunotherapeutics to the brain. JCI insight; Vol 3(20).*

Hammond JW, Qiu WQ, **Marker DF**, *Chamberlain JM, Greaves-Tunnell W,* **Bellizzi MJ**, *Lu SM, Gelbard HA (2018 Oct 16). HIV Tat causes synapse loss in a mouse model of HIV-associated neurocognitive disorder that is independent of the classical complement cascade component C1q. Glia.*

***Punekar IRA**, Koltz PF, Smith DI, Tran NH, Chibber AK, Sbitany H, Girotto JA, Morrison C (2018 Aug 31). The Evolution of Iliac Bone Graft Donor Site Analgesia in Cleft Patients: Transversus Abdominis Plane Block Is Safe and Efficacious. Annals of plastic surgery.*

PONS
Pre-doctoral Organization for the Neurosciences

For seven years, the **Pre-doctoral Organization for the Neurosciences (PONS)** has served as a bridge for the neuroscience and neurology focused student groups at the University of Rochester. Over the last year, President Holly Beaulac, Minister of Innovation Garrick Salois, Minister of Finance Dawling Dionisio-Santos, Executive Officers Emily Warner and Neal Shah, and Junior Officer Karl Foley, have organized several events for the Neuro community.

PONS hosts a bi-monthly Luncheon Roundtable Series to expose pre-doctoral students to current topics and research opportunities in interdisciplinary neuroscience. This year's panel discussion topics and presenters included:

Development and Regeneration: Margot Mayer-Pröschel, PhD + Amy Kiernan, PhD + Patricia White, PhD

Stress and Anxiety Disorders: Lisa Starr, PhD + Thomas O'Connor, PhD

Publish or Perish: Ricky Libby, PhD + Elaine Smolock, PhD

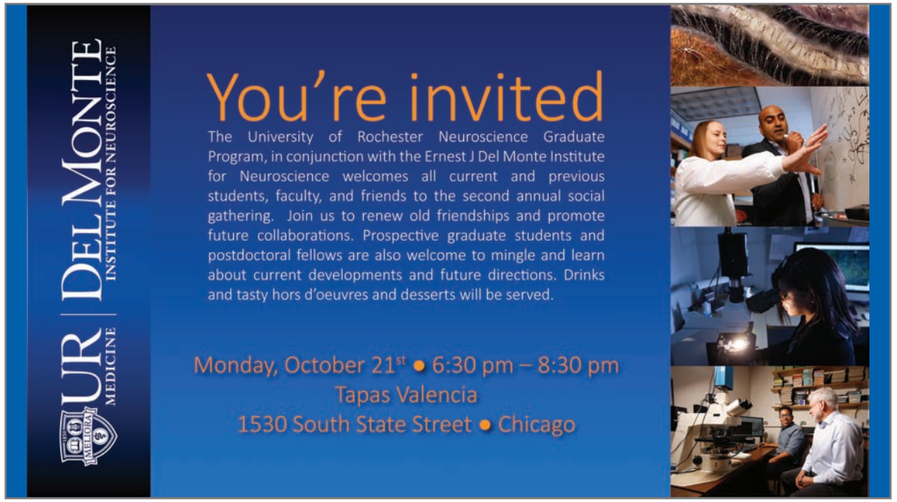
Neuromuscular Disorders: Charles Thornton, MD + David Herrmann, MD, MBBCh

Music and the Brain: Matthew BaileyShea, PhD + David Temperley, PhD + Ed Lalor, PhD +Ross Maddox, PhD

Biomedical Imaging: Ed Brown, PhD + Michael Giacomelli, PhD + Bradley Turner, MD, MPH, MHA

All students interested in partaking in PONS or those with suggestions for new activities should visit our websites http://blogs.rochester.edu/pons, http://www.rochestersfn.org/pons, or contact us at urmcpons@gmail.com.

2019 PONS members include Neal Shah, Emily Warner, Karl Foley, Kathryn Toffolo, and Luke Shaw



SU(i)B
Posters and Pints

Emily Warner, Neal Shah and Cody McKee poured beer for the Thinkers and Drinkers first annual Posters and Pints event with almost 200 people (other NGP involved in this event: Jessie Hogestyn & Fei Shang)

SU(i)B
7/25 Neuroscience Ice Cream Social

Picture includes NGP students Neal Shah, Emily Warner, & Jessie Hogestyn and also Nancy Castro from the Padmanabhan lab.

SU(i)B
Welcome Hanifa!

Fara Zakusilo's daughter, Hanifa, was born on March 18, 2019.

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Brain Awareness Campaign

The Rochester Brain Awareness Campaign consists of a group of graduate students whose goal is to simultaneously share the amazing features and functions of the brain, while increasing young people's interest in science.

One of our biggest events is the organization of Brain Awareness Week. This year, with the help of 30 volunteers, we utilized fun activities to teach over 500 kids in grades 3-6 how the brain integrates sensory information. Sensory integration is vital for obtaining an accurate depiction of the world around us. One of these activities demonstrated to the kids the utility of using both vision and olfaction in order to accurately guess the flavor of skittles. Most students were shocked when they were unable to guess the flavor without their sense of smell!

Furthermore, the Brain Awareness Campaign annually hosts the Rochester Brain Bee, which consisted of 7 high school students this year who went brain to brain in front of a panel of neuroscience judges and brain enthusiasts. The winner was awarded a trip to the National Brain Bee that was held in Baltimore, Maryland. The funding for that trip would not have been possible without the support from our main contributor, the Rochester chapter of the Society for Neuroscience along with various fundraising events hosted by Barnes & Noble and Chipotle.

The committee was also excited to put together another event with the local Girl Scout council this year. We had over 40 girls work through the scientific method to address specific questions. After conducting their respective experiments, the girls created a scientific poster that they then presented to the rest of the scouts and volunteers. This emphasized not only the importance of teamwork and quality science but also the importance of being able to communicate that science to others.

In addition to these events, the committee also participated in Saint John Fisher College's Science Exploration Day. We used this opportunity to debut our new interactive synaptic transmission game. This game, in which the kids had to become a signal in the brain, demonstrated how neurons use electrical and chemical signals to communicate to each other to pass along information.

As a committee we are always thrilled to see these kids have a blast with the activities while learning how to be a scientist by continuously questioning and experimenting.

If you are interested in becoming involved with the Brain Awareness Campaign, you can contact us at URBrainAwareness@gmail.com and like us on Facebook at facebook.com/URBrainAwareness.

Convocation Awards 2019

Johanna Fritzinger received the Irving L. Spar Fellowship Award

Sarah Yablonski received The Merritt & Marjorie Cleveland Fellowship & the Robert L. and Mary L. Sproull University Fellowship

John Olschowka, PhD received a Commendation for First Year Teaching

In addition, Suzanne Haber, PhD received the Dean's Professorship & Marc Halterman, MD, PhD received the Dean's Associate Professorship

Student Fellowships

Kathleen Gates, *American Heart Association Predoctoral Fellowship, Lung-brain coupling regulates neurovascular unit responses to stroke, (07/01/2018 – 06/30/2020)*

Monique Mendes, *F99/K00, NINDS, NIH Blueprint Diversity Specialized Predoctoral to Postdoctoral Advancement in Neuroscience (D-SPAN), The role of purinergic signaling in mediating the dynamics of microglia repopulation following depletion in the adult cortex in vivo, (07/31/2018-06/30/2024)*

Laura Owlett, *F30, NIH, Modulating microglial phagocytosis and inflamation in Alzheimer's disease: investigating a role for Axl, (08/01/2019-07/31/2020)*

Brendan Whitelaw, *F30, NIH, The role of PI3Kg signaling in microglial dynamics and experience dependent synaptic plasticity, (08/01/2019-07/31/2023)*

SU(i)B

Welcome Reece!

Alesha Usuki's's son, Reece, was born on June 16, 2019.

SU(i)B

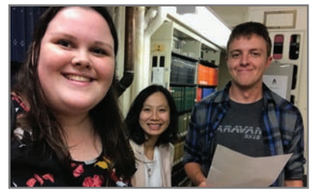
Return of the Tacos

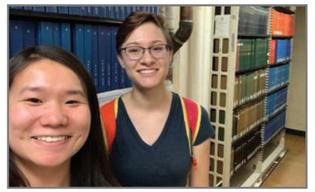
Current students' kickball team won the Medical Center League. (NGP students (& family) seen in the picture: Ed (Emily's fiancé), Emily Warner, Allison Murphy, Josh Hinkle, Kate Andersh, and Neal Shah)

Student Updates

Boot Camp Selfies

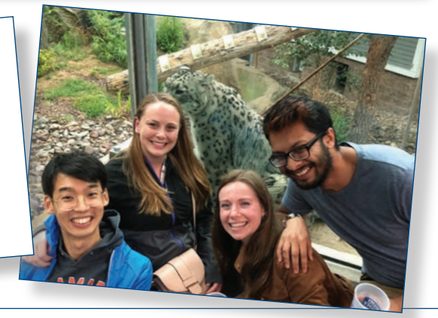
1st year NGP students were sent on a selfie scavenger hunt around the University during their orientation Boot Camp.





Zoo Brew

4th year NGP students, Yunpeng (YP) Pang, Emily Warner, Ally McHale and Neal Shah posed with a snow leopard at the Seneca Park Zoo



Graduate Student Society

Holly Beaulac, Anjali Sinha, Fara Zakusilo, and Fei Shang represent Neuroscience in GSS. Some of the many events they host include Graduate Student Ice Cream Social, 3MT: Three Minute Thesis, Glass Blowing Lesson at Corning Museum of Glass, Red Wings Baseball Game, Charity Gala, etc. In addition, GSS advocates for and are on committees of Graduate Students Raising Families (GSRF), Alliance for Diversity in Science and Engineering (ADSE) liaison, Committee for Graduate Studies (CGS), Graduate Student and Postdoctoral Trainee Council with Vice Provost Melissa Sturge-Apple, Medical Center Parking Advisory Committee, and Student Leader Advisory Committee to the President (WIP).

SMD Alumni Ambassador Program

The NGP and Neuroscience Department are well represented in the SMD Alumni Ambassador program. Current members from Neuroscience include

Kate Andersh (Y3)
Fei Shang (Y2)
Jingyi Yang (Y2)
Holly Beaulac (Y5)
Fara Tolibzoda Zakusilo (MD/Y2)
Jingyuan Zhang (PostDoc)

Student Updates (continued)

SU(i)B
Neuro kids at the GSS Brew

From left to right: Neal Shah, Cody McKee, Garrick Salois, Jessie Hogestyn, Ally McHale, Greg Reilly, Kate Andersh, Allison Murphy, Holly Beaulac

SU(i)B
Celebration

Dawling Dionisio-Santos celebrating his successful dissertation defense

SU(i)B
Night of 1000 Josh's

NGP students gathered to celebrate Josh Hinkle's 30th birthday.

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Student Updates (continued)

SU(i)B
Birthday Celebration

NGP students gathered to celebrate Garrick Salois's birthday.

SU(i)B
Winter 2018 Holiday Party

NGP students gathered for a White Elephant holiday party.

SU(i)B
Painting with a twist

Monique Mendes's birthday celebration.

SU(i)B
Best White Elephant Gift

Won by Karl Foley.

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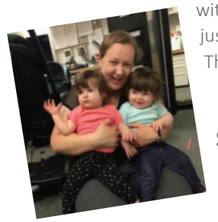
Alumni Updates

Meg Veruki (PhD 1994) is currently a Professor in the Department of Biomedicine at the University of Bergen, Bergen Norway. She is a co-PI with her husband, Professor Espen Hartveit. In addition to collaborating in science, we he couple have raised two children, who both decided to attend the University of Rochester as undergraduates (as did Meg, class of 1984). Mattias (Hartveit) is a Senior majoring in Chemical Engineering and will graduate this year. Hanne (Hartveit) is a Sophomore and studying Mechanical Engineering.

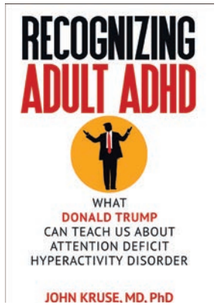
Michele Saul (PhD) is busy teaching at St. John Fischer, mentoring an MA candidate from RIT, and raising her twins, Elise and Madeleine, with her husband, Eric. Michele visited Dr. Julie Fudge with her girls this summer, just before their first birthday. They are all thriving!



Sarah Bliss Matousek (PhD) moved to Spokane, Washington. She is now a Principal Consultant for Day Health Strategies. In addition, she is teaching at Boston University and has an affiliate faculty position at Ariadne Labs at the Harvard T.H. Chan School of Public Health

Brandon Harvey (PhD) is a tenure track investigator at NIH in the NIDA intramural program. He recently discovered a phenomenon in cell biology termed “exodosis” where the resident proteins of the endoplasmic reticulum(ER) are secreted from the cell when the ER calcium levels decreased. The paper was published last year in Cell Reports. He has two daughters that just started middle school and high school and his wife, Dr. Deon Harvey (also of the UoR Neuroscience program) also works at NIDA IRP as a scientific administrator. Life is good.

John Kruse (MD, PhD) wrote a book, Recognizing Adult ADHD: What Donald Trump Can Teach Us About Attention Deficit Hyperactivity Disorder, that was published a month ago by Authority Press. The book uses Mr. Trump to explain symptoms of ADHD to the general public, and also uses ADHD to explain much of the president's otherwise-mystifying behavior. He also address the ethics of diagnosing the president (the official definition of ADHD relies solely on observable behaviors), summarize that ADHD is a brain-based disorder, address stigma related to the diagnosis of ADHD, and described several feedback loops that are making our whole society more ADHD-like.



In other areas of life, John completed his 100th marathon in August 2018.

Karthik Venkatesh (PhD) is married to alumnus, Erin Johnson and lives in Newton MA, with their two kids, Sachin,(8, 2nd grade) and Sanjay (4, Pre-K). He is currently an Associate Director of Medical Writing at Biogen in Cambridge while Erin is a research scientist at Children's Hospital in Boston. They just went on a Disney Cruise.

Rebecca Sappington (PhD) was recruited from Vanderbilt University School of Medicine to the Department of Neurobiology and Anatomy at Wake Forest School of Medicine this month (Sept 2019). My rank at both institutions is/was Associate Professor with Tenure.

Sarah McConnell (PhD) received the Gold Medal Award for Excellence in Teaching

Neuroscience Graduate Program Alumni

First Name	Last Name	Defense Date	Current Position, Location
Aimee	Morris	07/01/2019	Medical Student, Medicine, University of Rochester
Rianne	Stowell	06/28/2019	Postdoctoral Fellow, Wang Lab, Neuroscience, University of Rochester
Dawling	Dionisio-Santos	06/26/2019	Medical Student, Medicine, University of Rochester
Aleta	Steevens	04/16/2018	Postdoctoral Fellow, Low Lab, Department of Neurosurgery and the Stem Cell Institute, University of Minnesota-Twin Cities
Rebecca	Rausch	11/03/2017	Senior Scientist, EyeCRO, Ann Arbor, Michigan
Natola	Heather	10/03/2017	Postdoc, Biomedical Genetics, University of Rochester
John	O'Donnell	07/17/2017	Postdoc at Washington University Saint Louis in their neurology department looking at imaging of Parkinson.
Matt	Cavanaugh	07/17/2017	Post-doc with Dr. Steve Feldon, Ophthalmology M&D, University of Rochester
Laura	Yunes-Medina	06/16/2017	Postdoctoral Research Fellow, Indiana University School of Medicine
Xiaowei	Wang	04/17/2017	Postdoctoral Associate, Nedergaard Lab, University of Rochester
Evan	McConnell	04/12/2017	Medical Student, Medicine, University of Rochester
Nguyen	Mai	04/10/2017	Medical Student, Medicine, University of Rochester
Stephanie	Syc-Mazurek	03/27/2017	Medical Student, Medicine, University of Rochester
Berkeley	Farenthold	03/20/2017	Postdoctoral Fellow, Ophthalmology, University of Rochester
Kelli	Fagan	01/23/2017	Data Scientist, BCBS
Julianne	Feola	01/17/2017	Regulatory Specialist, Masonic Cancer Center, Univresity of Michigan
Shiona	Biswas	09/28/2016	Postdoctoral Accociate, Ophthalmology M&D, University of Rochester
Jennifer	Stripay	07/25/2016	Postdoctoral Fellow, Department of Tumor Cell Biology, St. Jude's Children Hospital
Ryan	Dawes	07/18/2016	Scientist 1, Vertex Pharmaceuticals

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Neuroscience Graduate Program Alumni (continued)

Rebecca	Lowery	07/07/2016	Postdoctoral Fellow, Majewska Lab, Neuroscience, University of Rochester
Brianna	Sleezer	05/20/2016	Postdoctoral Fellow, Brain & Cognitive Science, University of Rochester
Christina	Cloninger	04/07/2016	Scientist, Exponent
Grayson	Sipe	02/19/2016	Postdoctoral Fellow, Brain & Cognitive Science, MIT
Fatima	Rivera-Escalera	11/02/2015	Postdoctoral Fellow, Neuroscience, University of Rochester
Adam	Pallus	07/01/2015	Postdoctoral Fellow, Genome Sciences, University of Washington
Wei	Sun	06/29/2015	Postdoctoral Fellow, NIMH
Adrianne	Chesser	06/10/2015	Resident, Allina Health, Internal Medicine
Susanne	Pritchard Pallo	05/19/2015	Public Relations Assistant, University of Rochester
Revathi	Balasubramanian	11/07/2014	Postdoctoral Research Scientist, Ophthalmology, Eye Institute, Columbia University
Helen	Wei	06/24/2014	Department of Surgery, General Surgery Residency Program, Rutgers New Jersey Medical School
Imran	Punekar	06/19/2014	Postdoctoral Associate, Plastic Surgery, University of Rochester
Irina	Statnikova	04/14/2014	Medical Student, Medicine, University of Rochester
Michele	Saul	04/07/2014	Adjunct Assistant Professor, University of Rochester; Visiting Assistant Professor, St. John Fisher
Simantini	Ghosh	12/12/2013	Postdoctoral Fellow, Neurology, Washington University School of Medicine in St. Louis
Kimberly	Fernandes	11/04/2013	Medical Writer, VirtualScopics, Inc , Rochester, NY
Danielle	DeCampo	11/01/2013	Pediatrics, Johns Hopkins Neurosurgery
Anasuya	Das	07/19/2013	Data Scientist, Memorial Sloan Kettering Cancer Center
Nathan	Smith	06/24/2013	Neuroscientist, Center for Neuroscience Research, Children's National Medical Center
Daniel	Marker	04/17/2013	Resident, Pathology, University of Pittsburgh
Veena	Ganeshan	04/11/2013	Senior lab Engineer, BME, Rochester, NY

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Neuroscience Graduate Program Alumni (continued)

Danny	Rogers	03/29/2013	Resident Physician, Child Neurology, University of New Mexico
Philip	Rappold	12/20/2012	Resident, Urology, University of Rochester
Sarah	Allen (McConell)	12/18/2012	Assistant Professor, Neuroscience, University of Rochester
Maria	Diehl	11/07/2012	Postdoctoral Fellow, Psychiatry, University of Puerto Rico
Michael	Wu	09/08/2012	Resident Physician, Department of Anesthesiology, University of California San Francisco
Katherine	Selzler	06/25/2012	Associate Consultant for Scientific Communications, Eli Lilly and Company
Ethan	Winkler	06/18/2012	Resident, Neurological Surgery, University of California, San Franscisco
Youngsun	Cho	06/11/2012	Resident, Psychiatry, Yale School of Medicine
Sally	Duarte	04/13/2012	Postdoctoral Fellow, Max Planck Institute
Crystal	McClain	03/02/2012	Post Doctoral Research Associate at the University of Colorado Anschutz Campus
Zhuoxun	Chen	03/08/2012	Student, University of Maryland School of Dentistry
Cory	Hussar	02/20/2012	Senior Medical Writer; Curry Rockefeller Group, LLC
Kathleen	McAvoy	11/11/2011	Postdoctoral Fellow, Amar Fahay Lab, Harvard Stem Cell Institute
Michael	Jacob	06/16/2011	Resident in Psychiatry, UCSF
Susan	Lee	04/04/2011	Resident Physician, Child Neurology, Cincinnati Children's Hospital Medical Center
Steve	Raiker	12/08/2010	Research Fellow, Thomas Schwarz's Lab, Children's Hospital Boston, Boston Medical School
Arnulfo	Torres-Pena	08/17/2010	Medical Writer at Freelancer, /Medical Communications
Michael	Moravan	08/13/2010	Assistant Professor, Radiation Oncology Department, Duke University and VA Hospital
Sarah	Bliss-Matousek	06/09/2010	Principal Consultant, Day Health Strategies, Spokane, WA; Teaching, Boston University; Affiliate faculty, Ariadne Labs, Harvard T.H. Chan School of Public Health

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Neuroscience Graduate Program Alumni (continued)

William	Mowrey	06/01/2010	Post-doctoral Fellow, HHMI, Anthony Leonardo's lab at Janelia Farm
Marina	Dobreva (Stoilova)	04/16/2010	Bulgaria
Deborah	Ryan	04/09/2010	IGPN
Michael	Pesavento	04/06/2010	Senior Data Scientist and Algorithm Engineer, 3 Scan, San Francisco, CA
I-Chen	Yu	01/28/2010	Research Fellow at Indiana University School of Medicine
Lynette	Desouza	01/25/2010	Post-doctoral Fellow, Tata Institute of Fundamental Research; in 2013 was a stay at home mom
Yuriy	Shapovalov	12/22/2009	Preventive Cardiology Fellow at the Heart Research Follow-up Program, Division of Cardiology, Department of Medicine, mentor Dr. Wojciech Zareba, URMC
Bernard	Gee	08/13/2009	Faculty, Dept. of Psychology, Western Connecticut State University
Qi	Cui	08/11/2009	Opthalmology Resident (Class of 2015), at UCSF completed fellowship at Wills Eye Institute in Philadelphia
Sarita	Kishore	07/31/2009	2010-internship through University of Washington in Boise, Idaho, 2011-residency in Ophthalmology in Louisville, KY
Carolyn	Tyler	06/17/2009	Medical Science Liaison, Otsuka America Pharmaceutical, Inc.
Aaron	Cecala	06/15/2009	Associate Professor of Physiology, Elizabethtown College
Ditte	Lovatt	05/27/2009	Associate Principal Scientist, Merck
Kyung Hwa	Lee	03/16/2009	Post-doctoral Fellow, City College of New York, Itzhak Mano lab
Laurie	Robak	2009	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
Onanong (Annie)	Chivatakarn	2009	Post-doctoral Fellow, Salk Institute
Yanan	Guo	12/01/2008	Associate Director, R&D at Biocytogen, Beijing, China
Verginia	Cuzon (Carlson)	10/17/2008	NIH, Bethesda, MD

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Neuroscience Graduate Program Alumni (continued)

Grace	Vangeison (Johnston)	09/19/2008	Vice President of Marketing, Sartorius, Boston, MA
Irah	King	07/25/2008	Assistant Professor, McGill University, Department of Microbiology and Immunology
Annie	Chivatakarn	07/24/2008	Senior Research Associate, Gene Expression Lab, The Salk Institute for Biological Studies, San Diego, CA
Glenn	Schneider	06/19/2008	Otolaryngology Specialist, URMC
Nancy Ann	Oberheim Bush	06/18/2008	Neurology Resident, Class of 2015, UCSF
Allison	Stickles	04/21/2008	Resident Physician University of Cincinnati and Cincinnati Childrens, University of Cincinnati Academic Health Center
Meghan	Riley	04/17/2008	IRB Analyst III, The Children's Hospital of Philadelphia
Yasser	Elshatory	04/9/2008	Resident, Dean McGee Eye Institute, Department of Ophthalmology
Erin	Johnson (Venkatesh)	03/28/2008	Research Scientist, Children's Hospital, Boston, MA
Xiaoyan	Lin	08/14/2007	Associate Director WuXi AppTec , Shanghai City, China
Pushkar	Joshi	08/02/2007	Adjunct Professor, Stanford University, Dept. of Biology
Ling	Pan	08/01/2007	Research Scientist, Picower Institute for Learning & Memory
Karthik	Venkatesh	06/28/2007	Associate Director of Medical Writing, Biogen, Cambridge MA
Matthew	Bellizzi	06/04/2007	Sr. Instructor in Neurology, Division of Neuroimmunology, URMC
Beth-Ann	Shanker	05/09/2007	Colon & Rectal Surgery, St. Joseph Mercy Livingston, St. Joseph Mercy Ann Arbor, St. Mary Mercy Livonia
Solomon	Shaftel	04/23/2007	Ophthalmic plastic and reconstructive surgeon, Medical Practice, San Diego, CA
Xiaohai	Wang	01/03/2007	Senior Research Biologist, Dept of Neuropharmacology, Merck Research Laboratories, Philadelphia, PA
Jason	Hamilton	11/07/2006	Novartis NY
Daniel	Zaksas	10/03/2006	Scientific VP, Dudnyk, Horsham, PA

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Neuroscience Graduate Program Alumni (continued)

Ziye	Sui	09/26/2006	CEO at Comed B.V.; Almere Stad Area, Netherlands; Medical Devices; Current: Analyst at Care Capital
Charles	Wuertzer	07/25/2006	Faculty, MCC, Rochester, NY
Roberto	Fernandez-Romero	06/13/2006	Medical director Roberto Fernandez, MD, MPH, PhD, The Pat Summitt Clinic's experienced multi-disciplinary team helps patients with memory disorders, and their families and caregivers. The University of Tennessee Medical Center
Jill	Weimer	09/16/2005	Associate Director & Scientist, Children Health Research Center at Sanford Research Sioux Falls, South Dakota
Kuei-Cheng	Lim	07/08/2005	Neurologist, St. Luke's University Health Network, Philadelphia, PA
Chiayu	Chiu	06/27/2005	Associate Research Scientist I Neurobiology, Yale University, New Haven, CT
Min	Zhu	06/22/2005	New England Neurological Associates, PC, MA
Zhiyong	Yang	06/06/2005	Surgical Intern, UC San Diego Health System
(Kitty) Chia-Wen	Wu	04/13/2005	Pipeline & Portfolio Planning at Genentech, San Francisco, CA
Zhenhua	Wu	03/15/2005	Principal Scientist at Merck, Philadelphia, PA
Renee	Miller	12/21/2004	Lecturer, BCS, University of Rochester, NY
Rebecca	Sappington	06/04/2004	Associate Professor, Department of Neurobiology and Anatomy, Wake Forest School of Medicine, Winston-Salem, NC
Michael	Froehler	12/18/2003	Vanderbilt Neurosurgery, Tennesee
Michael	Hanna	12/09/2003	Assistant Professor, Dept. of Biological & Environmental Sciences, Texas A&M University-Commerce, Commerce, TX
Luisa	Scott	08/14/2003	Research Associate, Department of Neuroscience, Waggoner Center for Alcohol & Addiction Research, The University of Texas at Austin
Patricia	Sheridan	08/01/2003	Study Director, Metabolon, Inc.; Adjunct Assistant Professor, Nutrition- Ops, University of North Carolina at Chapel Hill
Seth	Perry	07/24/2003	

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Neuroscience Graduate Program Alumni (continued)

Adnan	Siddiqui	04/23/2003	Assistant Professor of Neurosurgery, Assistant Professor of Radiology, University at Buffalo Neurosurgery, State University of New York, Buffalo, NY
Brandon	Harvey	11/15/2002	Investigator, Tenure Track, NIDA NIH
Andrew	Custer	09/25/2002	Lathrop Gage, Esq, Boston MA
David	Logan	08/05/2002	Principal Computational Scientist at Pfizer, MA
Marc	Dubin	06/18/2002	Assistant Professor in Clinical Psychiatry at Weill Cornell Medicine and an Assistant Attending Psychiatrist at New York Presbyterian Hospital
Mary	Maida	03/05/2002	The Medingen Group, LLC, Clerisy Corp., Rochester, NY
Deon	Harvey (Sanchez)	10/19/2001	Librarian; Director and Manager at Harvey Family, Baltimore County Public Library, MA
Mona	Thiruchelvam	10/18/2001	
Elizabeth	Kriscenski-Perry	08/03/2001	Assistant Professor, Biomedical Sciences, College of Health Sciences and Technology, Rochester Institute of Technology
Tina	Huang	08/01/2001	ALSO Tufts University, Scientist III, Nutritional Immunology Laboratory; Director of Research, Transparent Corporation, Columbus, OH
Jay	Nierenberg	2001	
Randall	Hayes	2001	Founder of Agnosia Media, LLC; Freelance Columnist, Orson Scott Card's Intergalactic Medicine Show; Specialist Roster, Fullbright Commission
Nikolaus	McFarland	2001	Assistant Professor; Acting Chief of Movement Disorders Division, Department of Neurology, University of Florida College of Medicine
Bonnie	Ward	10/12/2000	
Michael	Kaplan	08/14/2000	
Anna	Yermakova Allen	06/20/2000	Practicing Ophthalmology in Albany, New York
William	Page	03/27/2000	Research Assistant Professor, Department of Neurology, Memory Care, University of Rochester Medical Center

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Neuroscience Graduate Program Alumni (continued)

Russell	Ferland Jr.	03/22/2000	Associate Professor, Center for Neuropharmacology and Neuroscience: Albany Medical College, The Albany Medical College, Albany, NY
Tim	Mhyre	2000	Team Manager, Office of Sponsored Programs, Washington State University, Pullman, WA
Jess	DiGiorgianni	12/21/1999	Licensed Professional Counsellor, LCMHC, VT
Sheila	Kelley	11/05/1999	Sheila Phelps Kelley MD, PhD, Family Doctor, Webster, NY
Scott	Evans	10/21/1999	University of Washington, Psychiatry and Behavioral Sciences, Electronics and Material Engineering Shop
Stephanos	Kyrkanides	03/03/1999	Associate Dean for Research & Faculty Development, Professor & Chair, Department of Orthodontics and Pediatric Dentistry
Tracy	Callahan	02/05/1999	Community Lab Director, Biogen, Boston, MA
Michael	Gordon	07/28/1998	Lecturer I, Communication Sciences, College of Nursing and Health Sciences, The University of Vermont
Caroline	Little	07/13/1998	Women's Healing Centers, Inc., Assurex Health, A Place of Refuge Ministries
Deborah	New	05/22/1998	New Smiles Orthodontics, Rochester, NY
Jay	McLaughlin	04/09/1998	Associate Professor, Pharmacodynamics, University of Florida
James	Greene	02/20/1998	Associate Professor, Department of Neurology; Director, Neurohospitalist Program, Emory University School of Medicine
Alice	Roberts	12/17/1997	Dermatopathologist at Richfield Dermatopathology Laboratory, Cincinnati, OH
Derek	Choi-Lundberg	07/08/1997	Senior Lecturer, Division of Medicine and Paramedicine, School of Medicine, Faculty of Health, University of Tasmania, Australia
Mark	Basham	06/05/1997	Associate Professor and Director of the Neuroscience Program, Regis University, Department of Psychology, D-12 Regis University

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Xiaofeng	Qi	11/25/1996	Programmer, Optometry, Indiana University, Bloomington, IN
Gary	Samoriski	07/12/1996	Associate Vice President at Allergan R&D, NYC
Wu	Zhou	04/29/1996	
Kumi	Nagamoto-Combs	04/23/1996	Assistant Professor and Neuroscience Outreach Director, University of North Dakota School of Medicine & Health Services
Jay	Gibson	01/29/1996	Assistant Prof., Southwestern Medical Center, Dept. Of Neuroscience, Dallas, TX
San	Ouyang	11/29/1995	
Stephen	Breneman	08/03/1995	Associate Professor, Department of Anesthesiology & Perioperative Medicine, University of Rochester Medical Center
James	Way-Young Chen	06/02/1995	Associate Professor, Neurology, UCLA
Kevin	Kinney	04/24/1995	Professor, Biology, Depauw University, IN
Michael	Burek	03/08/1995	
Daniel	Selski	01/27/1995	Assist. Prof., Central Washington University, Dept. Of Biologocal Sciences, Science Building, Ellensburg, WA
Diane	Lawrence	09/30/1994	Program Official in the Division of AIDS, NIAID, National Institutes of Health, Washington, DC
Joseph	Colombo	07/20/1994	Medical Director and Executive Vice-President at Ansar, Inc., Philadelphia, PA
Tsung-i	Peng	06/28/1994	Department of Neurology Physician / Associate Professor Chang Gung University, Department of Neurology, Keelung Chang Gung Memorial Hospital, Taiwan
Willard	Wilson	06/27/1994	Acting Director- Therapy Research at Neurostream Technologies Corp, Minneapolis, MN
Margaret	Veruki	04/08/1994	Professor, Department of Biomedicine, University of Bergen, Norway
Sandra	Aamodt	01/21/1994	Science Writer, WINTERS, CA
Eileen	Lynd-Balta	05/05/1993	Faculty, St. John Fisher College, Rochester, NY
Thomas	Wengenack	07/25/1991	

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Neuroscience Graduate Program Alumni (continued)

Laura	Sim-Selley	07/09/1991	Professor, Department of Pharmacology and Toxicology, Virginia Commonwealth University
Susan	Sullivan	06/25/1991	Senior VP of Clinical Operations at Upstate NY Transplant Services, Buffalo, NY
Christine	Checkosky	06/07/1991	Empire Vision: Checkosky Christine M OD; Syracuse, NY
Stephen	Gucker	04/05/1991	Retired Patent Examiner at US federal government
Dana	Selley	03/25/1991	Professor, Pharmacology and Toxicology, Virginia Commonwealth University, Richmond, VA
Tracy	Romano	02/06/1991	Vice President of Biological Research / Chief Scientist, Mystic Aquarium
James	Maxwell	01/24/1991	
Claire	Gavin	01/21/1991	Water Testing Director at Clean Up Sound and Harbors, Connecticut
Farida	Sohrabji	10/05/1990	Assist. Prof., Texas A&M Health Science Center
Danru	Zhang	07/06/1990	
David	Berlove	02/05/1990	Senior Group Leader, Principal, Berlove Pharmacology Consulting, Boston, MA
Lucinda	Hemmick	10/14/1989	Teaching A.P. chemistry and science research at Longwood High School, Middle Island on Long Island, NY
Kurt	Ackerman	09/21/1989	Associate Professor of Psychiatry, University of Pittsburgh
Fitzsimmons	Marker	06/08/1989	
Rajesh	Miranda	02/27/1989	Department of Neuroscience and Experimental Therapeutics, Interdisciplinary Program in Neuroscience
Guoying	Bing	08/04/1988	Professor, Neuroscience, University of Kentucky College of Medicine
John	Kruse	1990	Physician specializing in Psychiatry, San Francisco, CA
Sonia	Carlson	10/21/1987	
Harold	Lesser	07/14/1987	Professor of Clinical Neurology in the Department of Neurology at the University of Rochester Medical Center

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Neuroscience Graduate Program Alumni (continued)

Frederick	Monsma	05/01/1987	Senior Vice President, Scientific Operations, The New York Stem Cell Foundation
Jeffrey	Levine	1987	
James	Herman	10/20/1986	University of Cincinnati, Director of the Neuroscience Graduate Program; Director of Basic Neuroscience, UC Neuroscience Institute; Director of the Stress Neurobiology Laboratory
Mark	Fitzsimmons	06/11/1985	Editor-in-chief, Annual Reviews, Palo Alto, CA
Webster	Pilcher	1983	The Ernest & Thelma Del Monte Distinguished Professor of Neuromedicine and Chairman of Neurosurgery, University of Rochester Medical Center, Rochester, NY
James	Reese	11/03/1980	International Coordinator, US Food and Drug Administration
Ronaldo	Riso	04/12/1979	
David	Amaral	1977	UC Davis Distinguished Professor, Beneto Foundation Chair and Research Director of The M.I.N.D. InstituteThe M.I.N.D. Institute, Department of Psychiatry and Behavioral Sciences, Center for Neuroscience, and the California National Primate Research Center; Director, NIH Autism Center of Excellence; Director, Autism BrainNet; Editor-in-Chief of Autism Research
Robert	Stoughton		Research Administrator, Montgomery County Human Services & Planning Development Department, University of Dayton
Michael	Levine		Chair, Graduate Interdepartmental Ph.D. Program in Neuroscience, Mental Retardation Research Center University of California at Los Angeles, Semel Institute for Neuroscience and Behavior Room
Fred	Kim		

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