Department of Anatomy & Neurobiology Spring 2021 Newsletter

Dear Fellow Members of the Department of Anatomy & Neurobiology,

Welcome to the Spring 2021 version of the departmental newsletter, compiled by our Masters student Jinyan Zhou. As noted innumerable times, the 2020-2021 academic year was full of unprecedented challenges due to the COVID-19 pandemic. Despite these challenges, I am happy and proud to report that the members of the department -staff, students and faculty- never wavered in their determination to carry out the 3 major missions of the department at the usual high standard of excellence. The tripartite mission of the department is to excel in Research, Teaching and Training. On the research front our faculty and students published high quality research articles, primarily in the field of neuroscience but also in the anatomical sciences and in the field of education. In addition, a significant number of faculty successfully obtained Federal and Foundation grants as



well as Industry contracts, keeping us at the forefront of research funding among the basic science departments at the School of Medicine. In January we welcomed new Assistant Professor Mike Wallace to the department and he is in the process of setting up his laboratory which will carry out state-ofthe-art research into action selection by the basal ganglia and associated brain regions. Teaching by department faculty and graduate student teaching assistants continued uninterrupted throughout the course of the year, albeit in many cases with creative solutions for remote, hybrid and in person classes. Medical, dental and graduate students were understanding and appreciative of these efforts to carry on under difficult circumstances, and we can say with confidence that our important educational mission was successfully implemented this year. Finally, our training mission also continued unabated. Masters students in Biomedical Forensic Sciences, Forensic Anthropology, Healthcare Emergency Management and Biomedical Imaging all successfully completed their course and training requirements this year. Similarly 15 Vesalius Masters and 22 PhD students were able to carry out their research projects, teaching requirements and coursework without significant interruption. We also enjoyed 4 PhD dissertation defenses this year with Chris Brooks, Katelyn Trecartin, Will Li and David Swain all defending successfully. We wish the graduates of all of our programs all the very best as they move on to the next chapters of their lives and we look forward to keeping in touch with them as they become department alumni! Looking forward to the Summer, there are a number of new developments in the works- the Gross Anatomy Lab is undergoing a major renovation (new HVAC, ceiling and lights, handsfree sinks) thanks to the generosity of donors Debbie and Albert Rosenthaler, whose gift also enabled the purchase of our new Anatomage Table and state-of-the-art ultrasound machines. Renovations also continue on the R-9 laboratory and office space for our new Assistant Professor recruit Tuan Tay. In addition, we hope to finalize recruitments of additional new teaching and research faculty in the coming few months- stay tuned for news on these in our next newsletter! Looking forward to the Fall, Boston University aims to return to normal or near-normal operations and we certainly look forward to that in the department too.

Take care and stay well,

Jennie Luebke

CONGRATULATIONS

Dr. Douglas Rosene, recipient of the 2021 Distinguished Neuroscientist Award –



Dr. Rosene, director of the Laboratory for Cognitive Neurobiology, principal investigator and collaborator on several NIH grants studying aging and age-related diseases in primates, is the recipient of the 2021 Jack Spivack Excellence in Neuroscience Award! Dr. Rosene has been a faculty at the department of Anatomy & Neurobiology since 1978, and is a renowned expert in temporal lobe limbic system.

The Jack Spivack Excellence in Neuroscience Award was established in 2013 to recognize and support clinical or basic research in Parkinson's (PD), Alzheimer's (AD), Chronic Traumatic Encephalopathy (CTE) and other neurological disorders, conducted here at BUSM. Congratulations, Dr. Rosene!

Dr. Ronald Killiany,

being promoted to the rank of Professor

Dr. Killiany's research focuses on the relationship between brain structure and behavior, a theme for his lab, Center for Biomedical Imaging, where he and his students utilize brain imaging to study normal aging and neurodegenerative diseases. Dr. Killiany led the research that was among the first to use MRI technologies in mapping the differences between the hippocampus in patients with Alzheimer's Disease and healthy controls. Dr. Killiany is also the co-developer for several atlases, including the Desikan-Killiany MRI Atlas and the Desikan-Killiany-Tourville Atlas.



Congratulations, Dr. Killiany!

Welcome to the A&N Family

This year we welcome a new member to our family, Dr. Michael Wallace, who is joining our department as an Assistant Professor. Dr. Wallace earned his Ph.D. in Neurobiology from University of North Carolina at Chapel Hill, subsequently training with Dr. Bernardo Sabatini as a post-doctoral researcher at Harvard Medical School. Dr. Wallace's current research focuses on how specific circuits within the basal ganglia (BG) guide motivated behaviors, control goal-directed motor actions, and how these circuits are affected in disease.

Where are you from?

Born and raised in New Jersey USA

Where and what did you study for your degree?

I did my bachelors at Rutgers University in New Jersey and my PhD in Neuroscience at the University of North Carolina, Chapel Hill with Benjamin Philpot. More recently I finished a post-doc with Bernardo Sabatini at Harvard Medical School

What does your lab and research focus on?

My lab focuses on the synapses and circuits of the basal ganglia. We are interested in how coordinated activity in these circuits controls action selection and evaluation and how this activity is disrupted in diseases such as depression and in substance use disorders.

Do you teach any classes?

I recently taught a few lectures in "Methods in Neuroscience", more classes TBD

Tell us about your recent grants/awards/papers.

I have been focused on a peculiar part of the basal ganglia known as the entopeducular nucleus in rodents of globus pallidus internus in primates. I identified a group of cells in this brain area that are capable of releasing both GABA and glutamate from the same synapse (and even the same vesicle). I am fascinated by this biology and we are working hard to determine the function of this strange property in this circuit and its role in synaptic plasticity and behavior. Check out our new preprint here: https://www.biorxiv.org/content/10.1101/2021.03.23.436594v1.

How do you like the department? What is your favorite thing about BU?

The department is wonderful and I have been warmly



welcomed by the community. I would love to meet more graduate students and postdocs. Hopefully we can all meet in person soon! BU seems like an awesome place to do science.

What are your hobbies?

I am a life long surfer and ocean enthusiast (yes there is good surfing in New England year round). I love catching (fishing) and growing (gardening) my own food, and brewing my own beer. I love hanging around a campfire with my wife and daughter too.

Please contact me if you want to talk mlwall12@bu.edu ! And check out my lab's website: <u>https://sites.bu.edu/wallacelab/</u> and Twitter @WallaceLab1 to stay up to date on lab news. Things are still getting set up in my lab, but we will be starting experiments soon!

SPOTLIGHT

Virtual Pizza Night!







Donation Drive: Rosie's Place



GMS student organizations collected 646 items and 37 tenpiece care kits in a donation drive to benefit Rosie's Place. Katie Babcock and Raissa Souza from our department took part in this collaboration!



Cambridge Science Festival



Many volunteers joined to create science videos for the Cambridge Science Festival in April. Cameron Hulbert made a TikTok about blood flow in the heart, and Katie Babcock made a TikTok on neuroanatomy! Check them out on their <u>website</u>!



The Wellbeing Challenge: Project Shake It Off

Project Shake It Off was a series of free virtual exercise events for all members of the GMS community. Organized by Raissa Souza, Sydney Mosaheb from our department along with others from GMSSO, these sessions promoted health and exercise from the comfort of home during the pandemic. Annie from our department led two Yoga sessions!



Grads! Congratulations!











This spring we celebrate the accomplishments and milestones made by these recent graduates from our department. Four Ph.D students and four Masters students can now proudly call themselves alumni!

Let's join and congratulate them on this amazing milestone in their lives and wish them the best to come!



Happy graduation, Chris, Dickson, Will, Christina, Katelyn, David, Jinyan, and Raissa!



Here are some wellness resources provided by the Associate Provost at BU:

- <u>Headspace</u>, a research-backed app for mindfulness and meditation. Available for free to all BU degree-seeking students.

- <u>Wellnest</u>, a voice-powered journaling app that has daily check-ins and guided content on topics like imposter syndrome, happiness, resilience, and much more. Available for free to all BU students.

- <u>The Wellbeing Project Virtual Resources</u>, a curated list of BU mental health and wellbeing resources available to all BU students.

- <u>Behavioral Medicine Groups</u>, virtual groups on topics such as managing anxiety, grief, mindfulness, as well support groups for graduate students, Black students, and the LGBTQ+ community.

- Programming at the Howard Thurman Center and through the BU Arts Initiative.

- <u>Food Insecurity Resources</u>, a list of food and nutrition resources at BU and within the local area.

- <u>Graduate Education Health & Wellness Resources</u>, a list of many local and BU resources and initiatives pertinent to graduate and professional students.

Recent Publications

Au, R., Li, J., & Liu, C. (2021). Au et al. Response to Body mass index and risk of dementia- potential explanations for lifecourse differences in risk estimates and future research directions. American journal of epidemiology, kwab097. Advance online publication. https://doi.org/10.1093/aje/kwab097

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Recent Publications

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