

Dear Fellow Members of the Department of Anatomy & Neurobiology,

The 2019-2020 academic year was certainly among the most unusual and tumultuous in the 172-year history of the department. It was a year of unprecedented challenges due to the COVID-19 pandemic, and when Boston University went all-remote in mid-March, our students, faculty and staff responded with remarkable resiliency, creativity and flexibility. I'm happy to report that, despite innumerable challenges, this year was also a year of significant accomplishments, which I detail below. Furthermore, this was a year marked by important transitions, with two of our senior Professors - **Drs. Debbie Vaughan and Tarik Haydar** - departing (see accompanying profiles of these two Professors), and the recruitment of two talented new Assistant Professors to the department. Importantly, this has also been a year marked by a new awakening within the department, University and society at large to the reality of systemic racism that permeates every corner of American life, including to a critical degree, academic life. As with many basic science departments, ours suffers from a lack of racial diversity in our faculty, staff and student body. Many efforts are underway at Boston University to address this lack of diversity and other effects of systemic racism. In addition to being a major focus of the senior leadership in the department, a number of our students and faculty are working on these issues through the Diversity, Equity, Inclusion and Justice Taskforce.



The many exciting accomplishments and developments in the department this year included that: **Dr. Chand Chandrasekaran** was awarded a prestigious Moorman-Simon Interdisciplinary Career Development Professorship, **Dr. Monica Pessina** was the recipient of the Outstanding Basic Sciences Faculty Award for the Dental School and **Dr. Tara Moore** was recognized as a Distinguished Faculty of the month for distinguished service to BUSM. **Anatomy and Neurobiology faculty** research remains robust, with many new publications and grants and contracts totaling \$4.2 million during the past fiscal year. MD-PhD students **Katelyn Trecartin** and **David Swain** each were awarded an F30 NRSA Predoctoral Fellowship. *Congratulations to all!*

We successfully recruited two talented neuroscientists - Dr. Tuan Leng Tay and Dr. Michael Wallace - to our faculty and both will join us as Assistant Professors on January 1, 2021. A bit more about these two new faculty: **Dr. Tuan Leng Tay** is a joint recruit between Anatomy & Neurobiology and the Biology Department. Dr. Tay received her PhD in Developmental Neurobiology from the University of Freiburg in 2010 and then completed 6.5 years of postdoctoral work in neuroimmunology at the University Medical Center of Freiburg with Dr. Marco Prinz. Dr. Tay is an expert on central nervous system (CNS) development and neuroimmunology. Her research focuses on the contribution of various glia, in particular microglia, to CNS development and tissue repair following brain injury, neurodegeneration or neuroinflammation. **Dr. Mike Wallace** received his PhD in Neurobiology from the University of North Carolina Chapel Hill in 2014. He received postdoctoral research training in the laboratory of Bernardo Sabatini at Harvard Medical School. Dr. Wallace's research interests are largely directed towards understanding how an animal selects what action to do next and how those actions are reinforced or discouraged in the future. He is particularly interested in how the brain circuits of the basal ganglia control this process and how they go awry in disease states known to effect action selection such as Parkinson's and Huntington's disease, as well as obsessive compulsive disorder and drug addiction.

Over the past several months we have been preparing for a new academic year that begins in a few short weeks when we will welcome a new class of graduate students to our department and school. Our faculty have worked incredibly hard to prepare for the Fall courses in the face of significant uncertainty. As educators, our faculty are second-to-none, so it is with great confidence that I say that no matter what the circumstances in the Fall, we will be able to continue to provide the best possible education for our students. Our research labs have been continuing to perform their state-of-the-art work throughout this time and our research mentors are ensuring continuity of research for our graduate students through a combination of remote and in-person work. I know that all members of the department will continue to demonstrate resilience and flexibility and to excel in their academics and research. Faculty and students also gratefully acknowledge that all of this would be near-impossible without the amazing and seamless support of our wonderful A&N staff. Finally, this edition of the newsletter was developed by Masters Student Dickson Chen, so many thanks to him for doing a great job!

Take care and stay well,
Jennie

Professor Debbie Vaughan Retires After 49 Years in the A&N Department

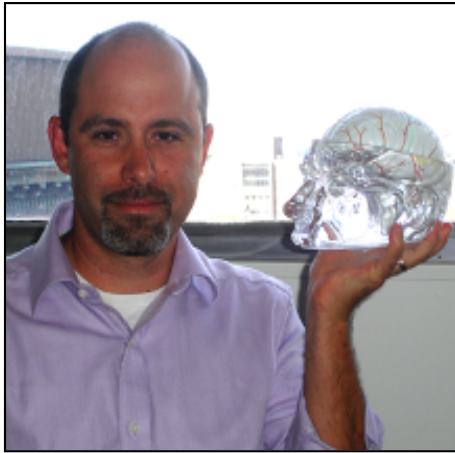
On June 1, 2020, Dr. Deborah Vaughan (Debbie) retired and became Emeritus Professor after a remarkable 49 year career in the department. After receiving her BA in Biology from the University of Vermont in 1966, Debbie came to Boston University to study Biology and she earned her PhD in this discipline in 1971. She came to the Anatomy department (as we were called at the time) in 1971 as a Postdoctoral Fellow in Neurocytology with Dr. Alan Peters, among the world's leading experts in the ultrastructure of the brain. As a postdoc in Dr. Peters lab, Debbie became an expert in electron microscopy and in the study of neurons, neuropil and effects of aging in the brain. She continued this research for two decades as an Assistant Professor and then Associate Professor. Her published research focused largely on the effects of normal aging on peripheral nerves and normative structural properties of neurons in the central and peripheral nervous systems.



In the second half of her career, Debbie focused her enormous energy and academic efforts largely on biomedical education. She was appointed Full Professor in 2003. For many years Debbie was the course director for Medical Histology; she is famous to innumerable students and faculty for her meticulous attention to detail and vast range of knowledge. She later played a key role in revision of the first year curriculum and served as Director, then co-Director, of Principles Integrating Science and Medicine (PrISM) and also as Module Director of PrISM's Cellular Foundations of Medicine. By example and active mentoring, she served as a role model of consummate professionalism to all and had a major influence on contemporaneous and future generations of educators in the biomedical sciences. Debbie's abilities as a superlative educator were recognized by many teaching awards throughout her career, including the Educator of the Year in the Pre-Clinical Medical Sciences BUSM (multiple times); the Thomas Robitscher Faculty Award in recognition of excellence in teaching the preclinical sciences at BUSM (multiple times); the Stanley L. Robbins Award for Excellence in Teaching at BUSM; the Golden Apple Award from the American Medical Student Association in recognition of excellence in teaching. Recognition of Debbie's outstanding skills as an educator culminated in her being awarded the Metcalf Cup and Prize, Boston University's highest recognition for Excellence in Teaching.

Debbie's career truly spanned every aspect of professional academic life. In addition to her research and teaching Debbie is renowned for her service to the University and the School of Medicine. For many years she served on Faculty Council and other University Committees. She was Assistant Dean for Admissions at BUSM for 17 years and thus played an important role in shaping the future of medicine. In Fall of 2016 Debbie took on one of the most challenging roles of her career, that of Faculty Accreditation Lead for BUSM LCME Accreditation, which took place on February 24-27, 2019. Due in large part to Debbie's monumental efforts and second-to-none organizational skills the school was accredited in 2019 with zero citations, something very rarely achieved.

It is hard to overstate the positive impact that Debbie Vaughan has had on the mission of the Department over her 49 years of leadership, friendship, mentorship, collegiality and engagement. She will be sorely missed in the department and we wish her all the very best for a healthy and happy retirement.



Professor Tarik Haydar Appointed as Director of Center for Neuroscience Research at Children's National Hospital in DC

After a decade as a deeply valued and vital member of the A&N faculty, Tarik left BU on August 1, 2020 to become the Director of the Center for Neuroscience Research at the Children's National Hospital in Washington DC. Tarik has been such an integral part of the research and teaching missions of A&N and such a wonderful, fun and caring friend, colleague and mentor to so many of us that it is very hard to see him go. At the same time, we are thrilled for Tarik as he takes on this important and prestigious role. Tarik will remain on the faculty as

Adjunct and we hope to continue our collaborations and interactions with him indefinitely! Here is the farewell letter Tarik wrote to the department:

Dear colleagues, friends, students and staff,

It is with a heavy heart that I write to tell you that my lab will be leaving BU at the end of the summer. I haven't been able to tell many of you in person since we have all been away from campus for such a long time. I guess it is even possible due to the limited nature of the re-opening that I also might not be able to say goodbye to many of you in person. So, I want to take this chance to express the great feelings I have about the department, the medical school, and the wider community.

It has been a great 10 years for my lab and the biggest reason for this is the sense of solidarity and kindness that permeates the department from all corners. In many ways, I have learned how a successful department is run by observing and interacting with all of you, and the strong emphasis on the students and pedagogy will stay with me always. I knew I had come to the right place immediately, and you will not be surprised that my first and lasting impression came from Rob Bouchie. His efforts at organizing the lab space we moved into were above and beyond, and it was this selflessness and kindness that I soon saw all around me. The department is a unique and truly special place. We have all made it that way on purpose and I will speak your names and accomplishments with pride for the rest of my life. I will use all of this to emulate the same sort of community in my new position.

I have accepted an offer to be the Director of the Center for Neuroscience Research at the Children's National in Washington DC. Home to a dozen basic science labs and 20 or so clinical research programs, the mission of the center is to further translational brain research to address a variety of pediatric disorders including autism, epilepsy, hypoxic brain injury, cortical malformations and a list of other congenital disorders. I will also lead academic collaborations and teaching efforts with George Washington University, Georgetown University, the University of Maryland and Virginia Tech and will plan the move of the center to the new Research Innovation Campus under construction on the site of the old Walter Reed Army Hospital Center. Although writing that description just now caused a bit of hyperventilation, I know that the experiences and opportunities at BU will greatly serve me in these efforts and for that I thank you.

With my deepest gratitude and respect,
Tarik Haydar



Written by JoColl Burgess

Being Black & Female in the Biomedical Sciences

While working on my Ph.D., I am constantly bombarded with news of racial unrest and a global pandemic which disproportionately affects minority communities. I moved to New York City before the COVID-19 pandemic, and I saw firsthand how the virus crippled the Big Apple. I watched a man cry out for help as his life was extinguished over a span of 8 minutes and 46 seconds. I read the headlines about a female EMT responder who was slaughtered in her home by those sworn to protect her #justiceforbreonnataylor. Every day I am reminded of the pipeline effect -- I sit in meetings and attend academic events where those around me do not mirror my face. In my

field, I am a minority within a minority. I have been described as strong and independent, but I am here to tell you that although I look "resilient," I am not resistant to the pain and fear of uncertainty that surrounds us -- I cry too. Conversely, during these trying times, I have received an abundance of support and compassion from my PI and my department. I see firsthand the blossoming of a new wave of thinking and activism regarding black racial inequality in the Department of Anatomy & Neurobiology. The zeal and support from the students, staff, and faculty are contagious. I am so proud of my department, and I look forward to seeing everyone's hard work in tackling this issue.

Student Spotlight

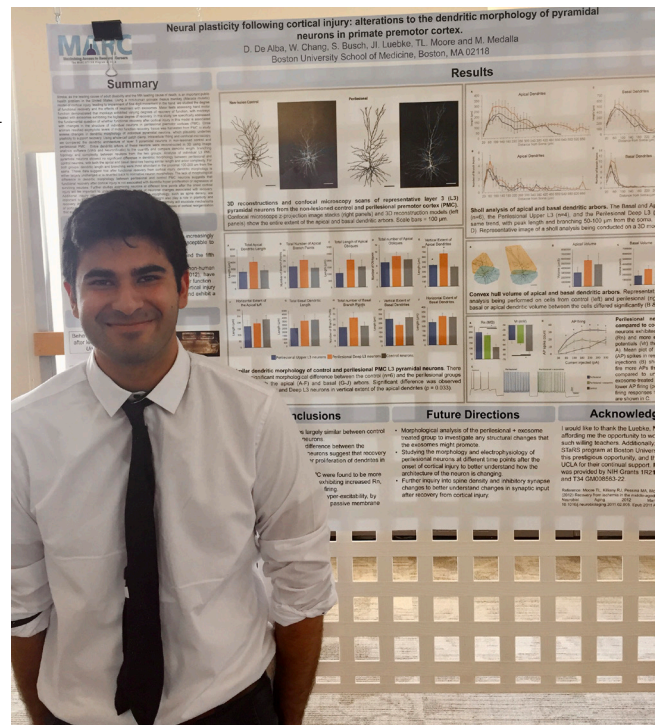
Diego De Alba - STaRS & BU PREP Scholar

Diego first joined the department as an undergraduate researcher as a STaRS Student during the 2018 summer where he was paired (rather serendipitously!) with Dr. Maria Medalla. He was brought on to help with a study characterizing the morphology and electrophysiology of pyramidal neurons in the premotor cortex exposed to a novel treatment of exosomes. Diego was so fascinated by the project and its potential as a therapeutic, that he went on to present his work at small research seminars and ABRCMS during his last year at UCLA.

During his final year as an undergraduate, he also applied to the PREP Program ready to take a gap year to hone his research skills. He returned excitedly to BUSM and the Medalla lab to continue his work on the exosome project, which had evolved to look at the effects the exosome treatment had on GABAergic specific cell type activation and receptor density. Like the previous year, he made sure to get his results out of the lab by participating in BU sponsored seminars or presenting his work at the New England Science Symposium. Additionally, given the extended length of his stay at BU, he also

began working with Dr. Medalla on an individual project that aims to identify age-related changes in layer 3 pyramidal cells of the monkey anterior cingulate cortex.

Diego deeply valued his time at BU and the Anatomy & Neurobiology Department. It is in the opportunities - whether that was getting an insight into industry, the plethora of support he received when applying to graduate school, or getting the opportunity to attend SFN for the first time - afforded to him this past couple of years that he found some of the foundational building blocks for his scientific career going forward. And this path has led him to the Molecular, Cellular, and Developmental Biology Department at UC Santa Barbara where he will begin his Ph.D. this fall.





Chelsey LeBlang

Chelsey LeBlang completed her Ph.D. in Anatomy & Neurobiology this past Spring. Initially, Chelsey joined the department in the Fall of 2014 as a member of the Forensic Anthropology MS program, aiming to study sexual dimorphism in craniofacial measurements, to aid in establishment of the biological profile. She then transitioned to the PhD program in Anatomy & Neurobiology in the Fall of 2015, expanding her studies of the human body beyond the skeletal system. She carried out her predoctoral work under the mentorship of Dr. Jennifer Luebke and Dr. Benjamin Wolozin (Department of Pharmacology and Experimental Therapeutics), investigating the role of a stress-granule nucleating RNA-binding protein in neuroinflammation and neurodegeneration in tauopathy. Through this exciting and novel work, she was able to learn molecular, histological, and ultrastructural methods and present her findings at national conferences and seminars. During her time in the department, Chelsey dedicated herself to teaching and mentorship activities, preparing herself for future leadership positions, and upholding the A&N core value to enhance teaching in biomedical sciences. Her favorite part of her time at BU was the community that the Anatomy & Neurobiology department provided, and she will truly miss the support of A&N faculty and fellow students. Chelsey

recently began her postdoctoral work as a researcher in the department of Pathology at Stanford University under the mentorship of Dr. Inma Cobos, MD, PhD. She will be exploring selective vulnerability of entorhinal cortex neurons to tauopathy in human Alzheimer's Disease subjects at the single-cell level. This project will contribute to the Chan-Zuckerberg Initiative, Neurodegeneration Challenge Network. During her postdoctoral training she is most looking forward to learning high-throughput molecular techniques, and advanced computational analyses.

Recent Department Publications

Adams JS, Nelson HM, Strong E, **Wisco JJ**, Klappa S. A Mentors' Experience in Teaching Basic Science Concepts in the Community Outreach Program, Anatomy Academy: A Phenomenological Study. *HAPS Educator*. 2020 (IN PRESS)

Adhikari R, Steed KS, Hutchinson B, Wang B, Mendoza M, Staudte R, Atmojo M, Cox P, Hancock T, Barkdull K, Harris M, Watt R, Bangerter N, **Wisco JJ**. Hippocampal T2 Signal Loss and Decreased Radial Arm Maze Performance in Transgenic Murine Model for AD. *Brain and Nerves*. 2020; doi:10.15761/JBN.1000127

Atkinson ML, **Tallman SD**. Nonmetric cranial trait variation and ancestry estimation in Asian and Asian-derived groups. *Journal of Forensic Sciences*. 2020;65(3):692-706

Aziz NM, Klein JA, Brady MR, Olmos-Serrano JL, Gallo V, **Haydar TF**. Spatiotemporal development of spinal neuronal and glial populations in the Ts65Dn mouse model of Down syndrome. *Journal of Neurodevelopmental Disorders*. 2019;11(1). doi:10.1186/s11689-019-9294-9

Bhagwandin A, Debipersadh U, Kaswera-Kyamakya C, Gilissen E, **Rockland KS**, Molnár Z, Manger PR. Distribution, number, and certain neurochemical identities of infracortical white matter neurons in the brains of three megachiropteran bat species. *J Comp Neurol*. 2020;10.1002/cne.24894. doi:10.1002/cne.24894

Borra E, Luppino G, Gerbella M, Rozzi S, **Rockland KS**. Projections to the putamen from neurons located in the white matter and the claustrum in the macaque. *J Comp Neurol*. 2020;528(3):453-467. doi:10.1002/cne.24768

Braso-Vives M, Povolotskaya IS, Hartasánchez DA, Farre X, Fernandez-Callejo M, Raveendran M, Harris RA, **Rosene DL**, Lorente-Galdos B, Navarro A, Marques-Bonet T, Rogers J, Juan D. Copy number variants and fixed duplications among 198 rhesus macaques (*Macaca mulatta*). *PLoS Genetics*. 2020;16(5). doi:10.1371/journal.pgen.1008742

Brooks C, Kabiri NS, **Mortazavi F**, Auerbach S, Bonato P, Erb MK, Czech M, Karlin D, Rolph T, Bhangu J, **Thomas K**. Variations in rest-activity rhythm are associated with clinically measured disease severity in Parkinson's disease. *Chronobiol Int*. 2020;1-13. doi:10.1080/07429527.2020.1715998

Calderazzo SM, Busch S, **Moore T**, **Rosene D**, **Medalla M**. Distribution and overlap of entorhinal, premotor, and amygdalar connections in the monkey anterior cingulate cortex. *J Comp Neurol*. Accepted Author Manuscript. 2020. doi:10.1002/cne.24986 (IN PRESS)

Carmichael CY, Kuwabara JT, Pascale CL, Moreira JD, Mahne SE, Kapusta DR, **Rosene DL**, Williams JS, Cunningham JT, Wainford RD. Hypothalamic Paraventricular Nucleus Gαi2 (Guanine Nucleotide-Binding Protein Alpha Inhibiting Activity Polypeptide 2) Protein-mediated Neural Control of the Kidney and the Salt Sensitivity of Blood Pressure. *Hypertension*. 2020;75(4):1002-1011. doi:10.1161/HYPERTENSIONAHA.119.13777

Casas J, **Chandrasekaran C**. openEyeTrack – A high speed multi-threaded eye tracker for head-fixed applications. *Journal of Open Source Software*. 2019;4(42):1631. doi:10.21105/joss.01631

Chandrasekaran C, Blurton SP, Gondon M. Audiovisual detection at different intensities and delays. *Journal of Mathematical Psychology*. 2019;91:159-175. doi:10.1016/j.jmp.2019.05.001

Chandrasekaran C, Hawkins GE. ChaRT: An R toolbox for modelling choices and response times in decision-making tasks. *Journal of Neuroscience Methods*. 2019;32. doi:10.1016/j.jneumeth.2019.108432

Recent Department Publications (cont.)

- Cheng C-H, **Koo BB***, Calderazzo S, Quinn E, Aenlle K, Steele L, Klimas N, Kregel M, Janulewicz P, Toomey R, Michalovicz L, Kelly KA, Heeren T, Little D, O'Callaghan J, Sullivan K. Alterations in high-order diffusion imaging in veterans with Gulf War Illness is associated with chemical weapons exposure and mild traumatic brain injury. *Brain Behavior and Immunity*. 2020. (IN PRESS)
- Cieslak SG, Hutchinson B, Adhikari R, Steed KS, Staudte RS, Cox P, Rasch A, Black E, Araujo A, **Wisco JJ**. The effects of L-Cysteine on Alzheimer's disease pathology in APOE2, APOE3, and APOE4 homozygous mice. *Brain and Nerves*. 2020. doi:10.15761/JBN.1000128
- Coogan P, **Schon K**, Li S, Cozier Y, Bethea T, Rosenberg L. Experiences of racism and subjective cognitive function in African American women. *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring*. 2020. doi:10.1002/dad2.12067 (IN PRESS)
- Dunne MF, Stern C, Storer TW, **Schon K**. Improving fitness increases dentate gyrus/CA3 volume in the hippocampal head and enhances memory in young adults. *Hippocampus*. 2020;30(5):488-504. doi:10.1002/hipo.23166
- Dvir Y, Frazier JA, **Joseph RM**, Mokrova I, Moore PS, O'Shea TM, ... ELGAN Study Investigators. Psychiatric symptoms: Prevalence, co-occurrence, and functioning among extremely low gestational age newborns at age 10 years. *Journal of Developmental & Behavioral Pediatrics*. 2019;40:725-734. doi:10.1097/DBP.0000000000000744
- Go V, Bowley BGE, **Pessina MA**, Zhang GZ, Chopp M, Finklestein SP, **Rosene DL**, **Medalla M**, Buller B, **Moore TL**. Extracellular vesicles from mesenchymal stem cells reduce microglial-mediated neuroinflammation after cortical injury in aged Rhesus monkeys. *Geroscience*. 2020;42(1):1-17. doi:10.1007/s11357-019-00115-w
- Goodliffe J, Rubakovic A, Chang W, Pathak D, **Luebke J**. Structural and functional features of medium spiny neurons in the BACHD Δ 17 mouse model of Huntington's Disease. *PLoS One*. 2020;15(6):e0234394. doi: 10.1371/journal.pone.0234394
- Guillamon-Vivancos T, Tyler WA, Medalla M, Chang WW, Okamoto M, **Haydar TF**, **Luebke JI**. Distinct Neocortical Progenitor Lineages Fine-tune Neuronal Diversity in a Layer-specific Manner. *Cereb Cortex*. 2019;29(3):1121-1138. doi:10.1093/cercor/bhy019
- Guo W, **Koo B***, Kim J, Bhadelia R, Seo D, Hong S, Joo E, Lee S, Lee J, Cho K, Shon Y. Defining the optimal target for anterior thalamic deep brain stimulation in patients with drug-refractory epilepsy. *Journal of Neurosurgery JNS*. 2020;1-10. doi:10.3171/2020.2.JNS193226
- Haydar TF**. Neurogenesis, Myelination, and Circuitry: The Case for a Distributed Therapeutic Regimen in Down Syndrome. *American Journal on Intellectual and Developmental Disabilities*. 2020;125(2):100-102. doi:10.1352/1944-7558-125.2.100
- Ho RX, Amraei R, Corcino De La Cena KO, Sutherland EG, **Mortazavi F**, Stein T, ... Rahimi N. Loss of MINAR2 impairs motor function and causes Parkinson's disease-like symptoms in mice. *Brain Communications*. 2020;2(1). doi:10.1093/braincomms/fcaa047
- Hwang H, McGowan C, Bollinger K, Bynum N, **Botch-Jones S**. Comparison of sample preparation techniques for the detection and quantitation of twenty-three drugs in oral fluid. *Journal of Analytical Toxicology*. 2020 (IN PRESS)
- Hwang J, Bank AM, **Mortazavi F**, Oakley DH, Frosch MP, Schmahmann JD. Spinal cord a-synuclein deposition associated with myoclonus in patients with MSA-C. *Neurology*. 2019; 93(7):302-309. doi:10.1212/WNL.0000000000007949
- Ibañez S, **Luebke JI**, Chang W, Draguljić D, Weaver CM. Network Models Predict That Pyramidal Neuron Hyperexcitability and Synapse Loss in dlPFC Lead to Age-Related Spatial Working Memory Impairment in Rhesus Monkeys. *Front Comput Neurosci*. 2020;17:13:89. doi: 10.3389/fncom.2019.00089
- Ikezu S, Yeh H, Delpach JC, Woodbury ME, Van Enoo AA, Ruan Z, Sivakumaran S, You Y, Holland C, Guillamon-Vivancos T, Yoshii-Kitahara A, Botros MB, Madore C, Chao PH, Desani A, Manimaran S, Kalavai SV, Johnson WE, Butovsky O, **Medalla M**, **Luebke JI**, Ikezu T. Inhibition of colony stimulating factor 1 receptor corrects maternal inflammation-induced microglial and synaptic dysfunction and behavioral abnormalities. *Mol Psychiatry*. 2020. doi: 10.1038/s41380-020-0671-2
- Katona L, Hartwich K, Tomioka R, Somogyi J, Roberts JBR, Wagner K, Joshi A, Klausberger T, **Rockland KS**, Somogyi P. Synaptic organisation and behaviour-dependent activity of mGluR8a-innervated GABAergic trilaminar cells projecting from the hippocampus to the subiculum. *Brain Struct Funct*. 2020;225(2):705-734. doi:10.1007/s00429-020-02029-2
- Kilroy G, **Tallman SD**, DiGangi EA. Secular change in morphological cranial and mandibular trait frequencies in European Americans born 1824-1987. *American Journal of Physical Anthropology*. 2020. doi:10.1002/ajpa.24115 (IN PRESS)
- Kuban KC, Jara H, O'Shea TM, Heeren T, **Joseph RM**, Fichorova RN, ... Douglass LM. Association of circulating proinflammatory and anti-inflammatory protein biomarkers in extremely preterm born children with subsequent brain magnetic resonance imaging volumes and cognitive function at age 10 years. *The Journal of Pediatrics*. 2019;210:81-90. doi:10.1016/j.jpeds.2019.03.018
- LeBlanc CJ, **Medalla M**, Nicoletti NW, Hays EC, Zhao J, Shattuck J, Cruz AL, Wolozin B, **Luebke JI**. Reduction of the RNA Binding Protein TIA1 Exacerbates Neuroinflammation in Tauopathy. *Front Neurosci*. 2020;14:285. doi:10.3389/fnins.2020.00285
- Li Z, Tyler WA, **Haydar TF**. Lessons from single cell sequencing in CNS cell specification and function. *Current Opinion in Genetics & Development*. 2020;65:138-143. doi:10.1016/j.gde.2020.05.043
- Maleki N, Tahaney K, Thompson BL, **Oscar-Berman M**. At the intersection of Alcohol Use Disorder and chronic pain. *Neuropsychology*. 2019;33(6):795-807. http://dx.doi.org/10.1037/neu0000558
- Masood F, Abdullah H, Seth N, Simmons H, Brunner K, Sejdic E, Schalk D, Graham W, Hoggatt A, **Rosene D**, Sledge J, Nesathurai S. Neurophysiological Characterization of a Non-Human Primate Model of Traumatic Spinal Cord Injury Utilizing Fine-Wire EMG Electrodes. *Sensors*. 2019;19(15):3303. doi:10.3390/s19153303
- Medalla M**, Chang W, Calderazzo SM, Go V, Tsolias A, Goodliffe JW, ... **Moore TL**. Treatment with Mesenchymal-Derived Extracellular Vesicles Reduces Injury-Related Pathology in Pyramidal Neurons of Monkey Perilesional Ventral Premotor Cortex. *Journal of Neuroscience*. 2020;40(17):3385-3407. doi:10.1523/jneurosci.2226-19.2020
- Molnár Z, **Rockland KS**. Cortical columns. In Rubenstein J & Rakic P. *Neural Circuit and Cognitive Development*. Academic Press, Chapter 5, pp. 103-126. 2020. doi:10.1016/B978-0-12-814411-4.00005-6
- Nauer RK, **Schon K***, Stern CE* Cardiorespiratory fitness and mnemonic discrimination across the adult lifespan. *Learn Mem*. 2020;27(3):91-103. doi:10.1101/lm.049197.118
- Naeser MA, Martin PI, Ho MD, Kregel MH, Bogdanova Y, Knight JA, Fedoruk A, Hamblin MR, **Koo BB**. Transcranial, red/near-infrared light-emitting diode therapy for chronic traumatic brain injury and poststroke aphasia: clinical studies. In Hamblin MR & Huang YY *Photobiomodul in the Brain*. Academic Press, Chapter 25, pp. 309-331. 2019. doi:10.1016/B978-0-12-815305-5.00025-7

Recent Department Publications (cont.)

Naeser MA, Ho MD, Martin PI, Hamblin MR, **Koo BB**. Increased Functional Connectivity Within Intrinsic Neural Networks in Chronic Stroke Following Treatment with Red/Near-Infrared Transcranial Photobiomodulation: Case Series With Improved Naming in Aphasia. *Photobiomodul Photomed Laser Surg*. 2020;38(2):115-131. doi:10.1089/photob.2019.4630

Oscar-Berman M, Maleki N. Alcohol dementia, Wernicke's encephalopathy, and Korsakoff's syndrome. In Stern RA & Alosco ML (Eds.) *Oxford Handbook of Adult Cognitive Disorders*. Oxford: Oxford University Press, Chapter 33, pp. 719-722. 2019. doi:10.1093/oxfordhb/9780190664121.013.33

Oscar-Berman M, Ruiz SM, Maleki N, Marinkovic K, Valmas MM, Harris GJ, Sawyer KS. Brain responsivity to emotional faces differs in alcoholic men and women. *PLoS One*. 2019; doi:10.1101/496166 (PENDING REVISION)

Pignatelli M, **Rockland KS**. Organization and development of hippocampal circuits. In Rubenstein J & Rakic P. *Neural Circuit and Cognitive Development*. Academic Press, Chapter 9, pp. 201-219. 2020. doi:10.1016/B978-0-12-814411-4.00009-3

Qiu S, Joshi PS, Miller MI, Xue C, Zhou X, Karjadi C, **Au R**, . . . Kolachalama VB. Development and validation of an interpretable deep learning framework for Alzheimer's disease classification. *Brain*. 2020;143(6):1920-1933. doi:10.1093/brain/awaa137

Rockland KS. What we can learn from the complex architecture of single axons. *Brain Struct Funct*. 2020;225(4):1327-1347. doi:10.1007/s00429-019-02023-3

Ruan QT, Yazdani N, Blum BC, Beierle JA, Lin W, Coelho MA, Fultz, EK, Healy AF, Shahin JR, Kandola AK, Luttik KP, Zheng K, Smith NJ, Cheung J, **Mortazavi F**, . . . Bryant CD. A Mutation in Hnnp1 That Decreases Methamphetamine-Induced Reinforcement, Reward, and Dopamine Release and Increases Synaptosomal hnRNP H and Mitochondrial Proteins. *J Neurosci*. 2020;40(1):107-130. doi:10.1523/JNEUROSCI.1808-19.2019

Sawyer KS, Adra N, Salz DM, Kemppainen MI, Ruiz SM, Harris GJ, **Oscar-Berman M**. Hippocampal Subfield volumes in abstinent men and women with a history of Alcohol Use Disorder. *PLoS One*. 2020. doi:10.1101/715292 (IN PRESS)

Sawyer KS, Maleki N, Urban T, Marinkovic K, Karson SA, Ruiz SM, Harris GJ, **Oscar-Berman M**. Alcoholism gender differences in brain responsivity to emotional stimuli. *Elife*. 2019;8:e41723. doi:10.7554/eLife.41723

Tallman SD, Blanton AI*. Distal humerus morphological variation and sex estimation in modern Thai individuals. *Journal of Forensic Sciences*. 2020;65(2):361-371 (IN PRESS)

Tallman SD, Bird CE. Diversity and Inclusion in Forensic Anthropology: Where We Stand and Prospects for the Future. *Forensic Anthropology*. 2020. (IN PRESS)

Taylor EN, Huang N, **Wisco JJ**, Wang Y, Morgan KG, Hamilton JA. The brains of aged mice are characterized by altered tissue diffusion properties and cerebral microbleeds. *J Transl Med*. 2020;18(1):277. doi:10.1186/s12967-020-02441-6

Tomlinson MS, Santos HP, Stewart JR, **Joseph R**, Leviton A, Onderdonk AB, . . . Fry RC. Neurocognitive and social-communicative function of children born very preterm at 10 years of age: Associations with microorganisms recovered from the placenta parenchyma. *Journal of Perinatology*. 2020;40(2):306-315. doi:10.1038/s41372-019-0505-8

Venkatesh KK, Leviton A, Hecht JL, **Joseph RM**, Douglass LM, Frazier JA, . . . Kuban, KC. Histologic chorioamnionitis and risk of neurodevelopmental impairment at age 10 years among extremely preterm infants born less than 28 weeks of gestation. *American Journal of Obstetrics and Gynecology*. 2020. doi:10.1016/j.ajog.2020.05.001

Zajac L, **Koo BB**, Tripodis Y, Mian A, Steinberg E, Mez J, Alosco M, Arslanian AC, Stern R, **Killiany R.**, Hippocampal Resting-State Functional Connectivity Patterns are More Closely Associated With Severity of Subjective Memory Decline Than Whole Hippocampal and subfield volumes. *Cerebral Cortex Communications*. 2020. doi:10.1093/texcom/tgaa019

Congratulations Graduates! Class of 2020

Wei Zhang	Rakin Nasar
Elva House	Junwoo Park
Kayla Nist	Yi Guan
Amara Ayoub	Yuxin Zhou
Karim Ismat	Anastasia Murati



Not pictured: Anastasia Murati



CONTACT US

Department of Anatomy & Neurobiology
Boston University School of Medicine
72 East Concord Street (L1004)
Boston, Massachusetts 02118



buanatneuro



bumc.bu.edu/anatneuro



facebook.com/groups/buanatneuro

Newsletter Editor
Dickson T. Chen