MESSAGE FROM THE CO-DIRECTOR

I hope you are doing as well as may be expected during this stressful time of the COVID-19 pandemic! I know our scientific work, education, careers, and personal life have changed dramatically over the past weeks, and there are many still unanswered questions regarding the return to what we may come to call a new ‘normalcy’ in our lives. The need to ramp down the academic classrooms and research laboratories has been especially impactful to the progress of research and completion of your degrees. I recognize this and appreciate your continued willingness to work remotely and serve as an essential person in maintaining the laboratory’s baseline function. Please know that the Brown University IMSD Program is committed to your health, safety, and continued academic successes. We are all working together in previously uncharted territory to develop the best possible plans for a return to our scientific and academic endeavors, once conditions permit.

While this season is usually one of in-person meetings that allow us to catch up with colleagues through scientific meetings, thesis defenses, celebrations of accomplishments, and commencements, we’re finding new ways to connect to community, excellence, and collaboration in a virtual world. For the IMSD Program, this means offering community gatherings and check-ins online, helping faculty to adjust interactive modules to virtual settings and providing new content, supporting students through virtual attendance at defenses, and celebrating accomplishments through weekly email digests. We’re still supporting the development of our students and working with faculty to support diversity.

I know this is a time of uncertainty, stress, anxiety, and isolation; so it is very important to remember the things that mean the most to you, such as family, friends, neighbors, colleagues, pets, music, laughing, exercising, dancing, and sharing. We are missing in-person events, including commencement, thesis defenses, and other personal celebrations. I encourage you to stay connected with others and each other to remain well balanced and healthy.

With our community now spread across a greater area, we’re still trying to maintain the connection of our small community while we look forward to a time when we can return to campus and bring our community together.

Take care and stay safe and healthy.

Elizabeth O. Harrington, Ph.D.
Associate Dean for Graduate and Postdoctoral Studies
Professor of Medicine

Message from the Program Manager

The program’s success depends on all of us coming and working together towards a common goal which is to provide training and professional development opportunities for our graduate students in STEM. While we are exploring this new way of working, it is essential that we find creative ways to collaborate. At the IMSD program, we are working diligently to partner with community members both on campus, as well as outside of Brown.

With the help of our dedicated faculty, staff and senior scholars, we have been able to organize various modules designed to help trainees develop both professionally and academically. Modules focusing on research data management, marketing yourself as a scientist for success as well as scientific writing and its key principles have been offered to our trainees. We are very grateful for our faculty, senior scholars and staff for working together to deliver on the program’s mission. We are working alongside faculty and leaders of various STEM programs across Brown to coordinate an Internal Advisory Board which will center its attention on strategic planning around community and collaboration. Our External Advisory Board also consists of faculty as well as IMSD alumni who are now thriving in their fields and are offering their knowledge and expertise to help the success of our program.

Our program goals are to form an enriched community of diverse, strong, connected and collaborative professionals. As we navigate the current challenges brought to us by these unusual and unprecedented times, we are reminded of the importance of collaboration and community and hope to continue to make strides towards achieving our common goal.

Rosenny Taveras
IMSD Program Manager

IMSD Nods for 100 Inspiring Black Scientists in America

In February, Cell Press published a list of “100 Inspiring Black Scientists in America” and our IMSD community received a few notable mentions including Andrew G. Campbell, IMSD Co-PI; Avery August, IMSD External Advisory Board member; Breann Brown, IMSD program alum, and Manu Platt, a guest seminar speaker in the last year. Please join us in congratulating them on this acknowledgement of their inspirational careers!

Marlina Duncan Receives Wilson-DeBlois Award

Congratulations to Marlina Duncan, Associate Dean of Diversity Initiatives and Assistant Vice President for Academic Diversity and IMSD Community member, on receiving the Wilson-DeBlois award! Each year the Graduate Student Council at Brown University selects a recipient for the Wilson-DeBlois award as a way to honor and thank staff members who have made outstanding contributions to graduate education at Brown. Duncan was selected for her unwavering support and commitment to doctoral students, specifically for helping to create a positive and supportive community. The Graduate Student Council shares, “She has been instrumental in supporting graduate students of color and helping them broadly handle the complications of student life.”

Save the Dates!

- TBD September- STEM Fellowship Applications Module
- Tuesdays and Fridays - Open Office Hours with Rosey and Jen

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Kavin Nunez, a former IMSD trainee, has been selected as a recipient for the NIH Outstanding Scholars in Neuroscience Award Program (OSNAP). The Outstanding Scholar in Neuroscience is a new postdoctoral recruiting effort designed to recognize and support those who are conducting exceptional research with an interest in neuroscience and have a great academic potential in their scientific PhD programs across the nation. “To be recognized for my dissertation research thus far is very rewarding and this allows me to take the next step in my career towards a post-doctoral position, as I get to directly interact with potential mentors studying neuroscience within the NIH,” Kavin says. In addition to support in his program, Kavin also cites support from IMSD as a factor in his success. “IMSD is a community of graduate students and mentors that are there for you throughout the up-and-downs of graduate school,” he says. “They provided me with training experiences that gave me the proper foundation to achieve my goals and further opportunities for my development towards becoming an independent-scientist.

Kavin’s research investigates how an animal’s internal state (fear, stress, hunger, etc.) can affect the reward and memory processing circuits to motivate behavior. More specifically, it looks at how food-deprivation directly impacts the reward and memory processing circuits within the adult Drosophila melanogaster brain to affect memories for alcohol, as a drug of abuse. The project also looks across behavior and neural circuits, down to neural dynamics at single cell level to understand how these neurons affect memory and behavior. Congratulations on your success, Kavin!

Kiara Lee, a current IMSD trainee, is the recent recipient of two awards! First, she has received an NSF Graduate Research Fellowships Program (GRFP). The NSF GRFP recognizes and supports outstanding graduate students in NSF-supported science, technology, engineering, and mathematics disciplines who are pursuing research-based Master's and doctoral degrees. Recipients are anticipated to become knowledge experts who can contribute significantly to research, teaching, and innovations in science and engineering. Secondly, she has received a Ford Predoctoral Fellowship which is awarded to 60 recipients, recognizing those who have demonstrated superior academic achievement, are committed to a career in teaching and research at the college/university level, show promise of future achievement as scholars and teachers, and are prepared to use diversity as a resource for enriching the education of all students. She credits her success to not giving up (this was her second application) and her support network that provided important feedback on her essays and research statements. Congratulations to Kiara on her well-earned success!

Kiara is ecstatic to use these awards to further her research theme which she describes as “the creation of low-cost diagnostic tools that extract DNA and RNA from small volumes of patient samples”. This research would use devices that manipulate small volumes of liquid and biological material, which would allow for on-site testing that limits the use of complex equipment. She goes on to explain further uses for her research in relation to COVID-19 testing. “This technology would avoid the need of the virus tests to be sent off to a secondary laboratory for testing, and would require less of the patient sample. This would mean less resources used for 1 person, expanding the capacity of testing materials and faster results”.

Treshaun Sutton, another current IMSD trainee, has received an honorable mention on her NSF Graduate Research Fellowship. “Even though I did not receive the NSF fellowship, receiving honorable mention is a significant achievement. I can add this achievement onto my CV and I have access to cyberinfrastructure resources through the Extreme Science and Engineering Discovery Environment (XSEDE),” she says. Treshaun’s research seeks understanding how the base excision repair enzymes work on chromatin, which is a complex combination of DNA and proteins that makes up chromosomes. “This research is important because we currently do not know how these enzymes work in repairing DNA damage in chromatin. The compact structure of chromatin imposes a barrier where certain regions of DNA are inaccessible to repair, which if not repaired, can cause mutations that lead to aging and cancer. My project is understanding how these enzymes work to overcome this barrier,” she explains. When asked for advice on applying for fellowships, Treshaun says “start early and work on your fellowship along with your advisor and/or mentor. I also encourage students to keep in touch with previous advisors and mentors so when you ask them to write a recommendation letter, they can with updated information. Lastly, everyone has a story as to how we became interested in our fields and our passions. I will say try to highlight those achievements and passions onto your personal statement.” Congratulations again, Treshaun!

Amanda Ruiz, another current trainee, was recently nominated to Sigma Xi - the Scientific Research Honor Society. Congratulations, Amanda!

Eulalia Karina Santamaria, another former trainee is the recipient of the 2020 Nora Kahn Piore Award. “The NK award for me means two things,” Karina said. “1) a great opportunity to do research that advances our understanding of why HIV prevention services have yet to fully reach populations that need it most and 2) funding that allows graduate students to take on relevant research projects and apply their skills outside of the classroom”. Her research focuses on Latinx men who have sex with men (a disproportionately high risk group for HIV infection) and their use of PrEP, an effective treatment for HIV prevention. While they report high willingness for PrEP use, an effective treatment for HIV prevention, their use of it is low compared to White men who have sex with men. Previous research indicates that lack of PrEP intentions is a significant barrier to PrEP use regardless of high willingness expressed. Her research seeks to unpack determinants of behavioral intentions for PrEP use in these two populations in order to understand such discrepancy in HIV prevention services. Karina also cites IMSD student advocacy and support as playing a role in her success. “This program looks out for its students. As a non-traditional student of color, this (community) has been very important to me,” she says. Congratulations again, Karina!
Community

IMSD Mentors

Nikos Tapinos, PhD, is an Associate Professor of Neuroscience (Research) who has mentored three IMSD trainees. His two current students are Kristen Fregoso and Blessing Akobundu. Another student, Maydelis Minaya, graduated last year. He believes the most important characteristics for an IMSD trainee are “dedication, focus, and excitement to overcome adversities to become a successful scientist and a role model for younger generations of scientists”. But in addition to the students themselves, he sees the program as a valuable resource that allows students to build their professional and interpersonal skills, demystify the PhD experience, helps them to become confident, aspiring scientists, and reach their highest potential. “The IMSD program is an extremely valuable resource for my students. It provides a network and a safety net for students to navigate through their graduate years and successfully respond to all the requirements. It is also a learning platform for the students through the different training seminars and workshops. Finally, IMSD covering the stipend of students for up to two years, helps me as a mentor to allocate more funds in support of their research projects”.

Thesis Defenses

Four former IMSD trainees, Mayara Grizotte-Lake, Arjee Restar, John Santiago, and Ashleigh Lovette, have completed their thesis defenses. Congratulations to all of them on their success and hard work!

Mayara successfully defended her thesis titled “The role of commensal bacteria in regulating Vitamin A metabolism in the gut” on February 28th. Mayara’s research seeks to understand the role of the gut microbiome in vitamin A metabolism. She’s particularly interested in how bacteria modulate vitamin A metabolism as a way to regulate host-microbe interactions and its effects on immune functions. She works with her mentor, Shipra Vaishava, to facilitate this research. Through her experiences with IMSD, Mayara has appreciated the structural support provided and being able to network with a diverse group of scientists. We wish her much success in her career after Brown!

Arjee Restar successfully defended her thesis “Modeling the Socio-Ecological Factors of HIV Prevention Services among Filipinx Trans Women & Cis Men” on April 17th. Best wishes on your future success, Arjee!

John Santiago defended his thesis, “Mitonuclear Genotype, Tissue Type, and Sex Modify the Effects of Rapamycin on Transcription and Metabolism” on April 23rd. He describes his research as investigating the role of the mitochondrial genome, sex and tissue on metabolic signaling networks. “I found that each of these conditions alter the adaptive response induced by pharmacological disruption specific metabolic pathways with the drug rapamycin. These studies associated network-level effects with these factors through transcriptomics and metabolomics assays. Altogether, the results of my thesis provide novel insights into the context dependent efficacy of rapamycin as a therapeutic”. John has been very active on campus with the Brown Junior Researchers and he says that IMSD has played a large role in shaping his sense of community at Brown. He says “I was not aware of the IMSD program before starting at Brown, but they were here for me from the start. Not just in the sense “we are here for you”, but actually there, like Andrew Campbell, was at every one of my graduate committee meetings while I did my lab rotations. The modules were also incredibly helpful. Not only did they provide great training and experience, but they also provided a safe community for talking about graduate school life and the many questions I had. Later, the modules continued to help me as I became a senior scholar and got to take on a leadership role. The skills, confidence and community that I have gained with the IMSD program have played a huge role in my success as a graduate student.”.

John is also the recipient of 2020 Graduate Student Contribution to Community Life Award! Congratulations, John!

Ashleigh Lovette defended her thesis, “Resilience in the context of HIV risk: A strengths-based perspective for HIV prevention among South African girls and young women” on April 24th. “My dissertation research examines the concept of resilience in the context of HIV risk by studying connections between resilience and sexual health among South African girls and young women. It also explores narratives of resilience as South African women transition to adulthood as this is a critical time for HIV prevention for this population.” Ashleigh would like to thank IMSD for their continued support and attention to creating community for underrepresented scholars at Brown. “IMSD support was critical to me successfully completing my academic journey at Brown,” she says. “Particularly as a first-generation doctoral student and as a woman of color. The support allowed me to focus on completing my degree requirements, and gave me space to really think about plans for my dissertation research. Being a part of IMSD also introduced me to a wonderful community of scholars that have helped me along my academic journey. Being a part of this community and attending the modules also provided insights into the “hidden curriculum” of doctoral programs, which certainly helped me to effectively navigate this journey.”

Ashleigh is also the recipient of the 2020 Public Health Diversity & Inclusion Catalyst Award! Congratulations, Ashleigh!
The IMSD program at Brown titled "Advancing the culture of PhD learning and scholarship in Biology and Health Sciences" provides research training support for students in underrepresented groups to significantly increase the participation of these groups within the fields of biomedical and behavioral research. The program has been funded by grant R25GM083270 from the National Institute of General Medical Sciences of the National Institutes of Health since April 2008.

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**Funding Opportunities**

**National Science Foundation - Biological Anthropology Program - Doctoral Dissertation Research Improvement Grants (BA-DDRIG)**
Application Deadline: July 20, 2020
https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505067

**Science and Technology Studies**
Application Deadline: August 3, 2020

**National Institutes of Health - Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (Parent F31)**
Application Deadline: August 8, 2020

**Partners in Institutional Change and Support**
- St. John's University, New York, NY
- York College of the City University of New York (CUNY), Queens, NY
- North Carolina A & T State University, Greensboro, NC
- The College of Mount Saint Vincent, Bronx, NY
- Morgan State University, Baltimore, MD

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