A Look at the DIR NICHD-Howard University Partnership’s First Year

By Shana R. Spindler, PhD

“It’s great to connect institutions that are breaking down barriers,” says Janelle Burke, PhD, Associate Professor at Howard University, a historically Black university in Washington, D.C. For the last semester, Dr. Burke has led the NICHD DIR-Howard University Partnership program in collaboration with Triesta Fowler, MD, Director of Communications and Outreach in the NICHD Office of Education.* The initiative, which is part of the broader 2019 NIH Master Affiliation Agreement, aims to bolster research experience for underrepresented groups in science and provide NICHD labs with diverse perspectives from Howard University students. It’s a unique setup, where NICHD principal investigators who would like to be research mentors present their research to Howard University sophomore biology honors students. The students then reach out to the investigators for collaboration based on their interests. Once the mentor-student pairing is confirmed, the investigator becomes the student’s official research mentor and guides them in the development and execution a project over the next two years. This effort has yielded four successful pairings to date.

Dr. Burke has observed multiple benefits to the Howard University students participating in the program. Already, students have gained mentors and have explored complex scientific literature. Once COVID-19 restrictions are lifted, Dr. Burke anticipates that the students will see how a lab is structured at a research-focused institution, interact with scientists at different career stages, and gain valuable bench skills and other transferrable skills.

In addition to these tangible benefits, increasing racial and ethnic representation in the sciences has the potential to catalyze even wider effects. “The career paths we take often depend on our ability to simply imagine ourselves in a particular

* Editor’s Note: Anna Allen, PhD, Associate Professor at Howard University, has been instrumental in developing this partnership. While Dr. Allen is on sabbatical, Dr. Burke, who has been involved in the Howard honors program for eight years, is leading the initiative.

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Letter from the Editor

During a recent NICHD Office of Education meeting, we discussed what should go in the final newsletter issue of 2021. There was a clear winner: the NICHD DIR–Howard University Initiative. The aspect of the initiative that we highlight is a collaboration between NICHD principal investigators and the undergraduate students in the Howard University Biology Honors Program. This collaborative effort, spearheaded by Triesta Fowler, MD, in the NICHD Office of Education, supports the educational development of honors students from underrepresented groups in science. Supporting students at this critical point in their development as future scientists is an important step toward institutional cultural change and diversity in science. Learn more about the program in this month’s feature article, “A Look at the NICHD DIR-Howard University Partnership’s First Year,” including a Q&A with current Howard student participants.

We end each year with a recap of fellow accomplishments in the NICHD intramural program. The list is impressively long this year! Check out what your fellow fellows have been up to on page 7. And don’t forget to also visit the December announcements and this month’s Rep Report, where postdoc representative Lauren Walling shares news and announcements from the previous month’s Fellows Committee (FelCom) meeting.

I think we all hoped that 2021 would include a post-pandemic celebration. Until the youngest in our community are eligible for vaccination, many of us will continue to experience pandemic restrictions—and sometimes pandemic fatigue. But we are getting there. One step, one study, one vaccine at a time. I said it last December, and I’ll say it again now: May next year bring continued progress and abundant hope for a better tomorrow.

Your Editor in Chief,
Shana R. Spindler, PhD

This newsletter is by NICHD fellows and for NICHD fellows. We love to hear from you! Please send your questions, comments, and ideas to our editor at shana.spindler@nih.gov.
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role or profession,” explains Ajay Chitnis, PhD, mentor to Howard student Morgan Ford. “Recognition of growing polarization, disparity and racial injustice in our society, coupled with remarkable institutional resistance to efforts geared towards educating people about the deep historical roots of these problems, leaves me frustrated… This project provides a window to a career in science, where Black students are significantly under-represented.”

Henry Levin, PhD, mentor to Howard student Ayanfeoluwa Kolawole, adds that “all too often NIH trainees come from families experienced in preparing for careers in science.” For Dr. Levin, he’s drawn to the program because it creates opportunities for bright students who might not otherwise have access to the valuable training offered at NIH. “The benefits go both ways: Howard students are exposed to leading areas of research, and NIH gains a diverse research community with new ideas and approaches,” Dr. Levin says.

For other PIs, it’s the students’ optimistic and vibrant attitudes toward research that can invigorate the lab environment. For example, Harold Burgess, PhD, mentor to Howard student Katelyn Robertson, says he finds “value in including somebody who can ask fresh, enthusiastic questions and give senior researchers an opportunity to share their skills and experience.”

Incoming students should know that a focus on learning the scientific literature is a hallmark of the program, especially when interaction is limited to virtual meetings during the pandemic. All participating PIs agreed that students should choose mentors who satisfy their curiosity and that the pair should establish expectations early on. “Most important is to find a mentor whose work is of interest to you, and then work with the mentor to set clear goals for the experience,” says Jack Yanovski, MD, PhD, mentor to Howard student Alexa Moore. “Make sure the plan will allow both the trainee and the mentor to feel expectations were met—or exceeded, as was the case for my time with Alexa.”

Looking forward, everyone anxiously awaits a return to lab, where Howard students can apply their hard-earned knowledge to wet lab experiments, problem solving, and data analysis. The pause to in-person research for students has made one thing clear: the PIs participating in the program have a real devotion to mentorship, and their enthusiasm for getting their students in the lab is palpable.

Dr. Burke looks forward to new NICHD collaborations and continued progress for years to come. “Any partnership that can increase collaboration and access is something I embrace wholeheartedly, because it’s beneficial for everyone at multiple career stages,” she says.

In honor of a successful first year—albeit virtual—for this NICHD DIR-Howard University initiative, we asked Howard University students Morgan Ford, Ayanfeoluwa Kolawole, Alexa Moore, and Katelyn Robertson about their experiences in the program so far.

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What benefits have you experienced from this partnership?

Morgan Ford (MF): In partnering with an NICHD investigator while at Howard University, I have gained a better understanding and background in complex cellular phenomena and learned how to compartmentalize, evaluate, and interpret computer coding data.

Ayanfeoluwa Kolawole (AK): I have grown (and I am still growing) from the wide breadth of knowledge that Dr. Levin imparts in our weekly research meetings. What excites me the most is that in every research meeting there is always something new to learn. There is always a gap in knowledge that we highlight, understand, and seek to solve.

Alexa Moore (AM): I have built a relationship and mentorship with someone that can extend beyond academic research. I also have had access to some of the most brilliant minds, which has undoubtedly furthered my steadfast passion for learning.

Katelyn Robertson (KR): I am getting a viewpoint of what my career looks like after undergrad. Additionally, it allows me to expand my knowledge and apply it here at Howard University.

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What are your goals for your second year in the program?

MF: My goals for my second year in the program are to exhibit the ability to summarize a scientific talk, identify scientific issues, and work to have a stronger insight on my forthcoming honors research.

AK: When COVID restrictions are lifted, I hope to conduct wet-lab research looking at the genetic role of Holiday junction repair in retrotransposition. My long-term goal for the second year of the program is to test a hypothesized mechanism for resolving the single-stranded gaps in DNA that occur after transposition events.

AM: My goals for the second year in the program are to increase my knowledge in the realm of obesity research, build stronger relationships with my mentor and other investigators in the lab, and learn more about the other opportunities provided at the NIH.

KR: My goal for the second year in the program is to continue to make progress on my project. I want to practice thinking abstractly and critically like a research scientist does. I feel as if this skill is fundamental to the success of a researcher and takes experience and time to develop.

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How has this program influenced your overall career goals?

MF: The nature of Dr. Chitnis’ research focuses on intricate components of cellular networks and interactions, which intrigues me. It has influenced me to investigate computer simulations models and encouraged me to pursue more research in cellular mechanics.

AK: I hope to competitively pursue MD and PhD degrees. I had this goal long before the program started, and although my guiding principle is to always be open-minded, I had an inkling that I wanted to become a surgical oncologist and conduct cancer research. This program solidified my interest in medicine and human genetics, but it also broadened my interest to immunology. Specifically, I am interested in understanding the integration of retrotransposons and the mechanisms of oncolytic adenoviruses. I hope to translate this understanding to the development of effective gene and cell therapeutics for cancer and other genetic-related diseases.

AM: This program has encouraged me to pursue a master’s degree before matriculating into medical school, as I have been made aware of health disparities certain racial and ethnic groups face.

KR: This program has sparked my interest in neuro-behavioral science. I want to continue learning more and am excited to see how this experience will contribute to my overall career.
THE FELLOWS’ ANNUAL MEETING

The NICHD Office of Education hosted a fully VIRTUAL 16th Annual Meeting for Postdoctoral, Clinical, and Visiting Fellows and Graduate Students on Tuesday, May 25, 2021. The day included a keynote lecture on sickle cell disease by Dr. John F. Tisdale, a mentorship perspective by Dr. Gisela Storz, ten career-focused Q&A breakout sessions, and six outstanding scientific talks by NICHD fellows. Throughout the day, fellows had the opportunity to network and share their research during morning and afternoon live, virtual poster sessions. Check out the full recap of the event here!

NIH-WIDE RECOGNITION

Susanna Mitro, PhD (Grantz lab) placed 2nd overall in the NIH-wide TmT Competition on June 25, 2021, with her talk “Healthy pregnancies: Do uterine fibroids change over gestation?”

Congratulations to the 15 NICHD fellows who received a 2022 Fellows Award for Research Excellence (FARE), an NIH-wide competition that recognizes the important research of intramural fellows. See a complete list of NICHD winners here.

Shreeta Chakraborty, PhD (Rocha lab) and Abhinav Sur, PhD (Farrell lab) were the Scientific Interest Group Awardees for the Developmental Biology Scientific Interest Group and Single-Cell Genomics Interest Group, respectively.

Congratulations to the 11 NICHD postbacs who received an Outstanding Poster Award for scoring within the top 20% of all posters at the 2021 Virtual Postbac Poster Day, held April 27–29, 2021. See a complete list of NICHD winners here.

Josette Wlaschin (Le Pichon lab) received a Graduate Student Research Award in the Behavioral Sciences/Psychology/Neuroscience category at the 17th Annual NIH Graduate Student Research Symposium, held February 17–18, 2021.

Velencia Witherspoon, PhD (Basser lab) received a K99 MOSAIC Award (Maximizing Opportunities for Scientific and Academic Independent Careers) for her work on the quantitative characterization of the extracellular matrix components of connective tissue.

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NICHD AWARD PROGRAMS

Congratulations to the 22 NICHD fellows who received an Early Career Award. See a complete list of NICHD recipients here.

Postbaccalaureate fellows Andrea Munoz (Porter lab) and Tiara Tillis (Storz lab) joined NICHD as Developing Talent Scholars awardees.

The Fellows Recruitment Incentive Award went to Todd Macfarlan, PhD, for his recruitment of postdoctoral fellow Mohamed Mahgoub Mohamed, MBBS, PhD.

Susanna Mitro, PhD (Grantz lab) and Jennifer Panlilio, PhD (Burgess lab) were selected as the two finalists for the 2021 NICHD TmT competition. See here for a complete list of the seven semi-finalists.

Congratulations to the 2021 Intramural Research Fellowship awardees:

» Alan Kessler, PhD (Maraia lab)
» Gergo Gulyas, PhD (Balla lab)
» Thien Nguyen, PhD (Gandjbakhche lab)
» Anna Dorothea Senft, PhD (Macfarlan lab)

PROGRAM SPECIFIC AWARDS

The Center on Compulsive Behaviors Fellowship awardees include the following NICHD fellows:

» Thien Nguyen, PhD (Gandjbakhche lab)
» Adam Caccavano, PhD (McBain lab)
» Geoffrey Vargish, PhD (McBain lab)
» Wen-Chieh Hsieh, PhD (Serpe lab)

Aisha Burton, PhD (Storz lab) and Rachel Crosby, PhD (Macfarlan lab) both received NIGMS Postdoctoral Research Associate Training (PRAT) Awards.

A big THANK YOU to our 2021 newsletter contributors: Colin Echeverría Aitken, Mor Alkaslasi, Harry Burgess, Aisha Burton, Ajay Chitnis, Nickolas Chu, Jacob Clarin, Stephanie Cologna, Paul Elizalde, Frances Fernando, Chelsi Flippo, Morgan Ford, Triesta Fowler, Jessica Gleason, Theemeshni Govender, Michael Hilzendeger, Nicholas Johnson, Celine Kisimba, Ayanfeoluwa Kolawole, Esther Kwarteng, Henry Levin, Mengying Li, Anne Martini, Patrick McCarter, Leah Meuter, Alexa Moore, Kristen Polinski, Ashley Pratt, Brian Rafferty, Megha Rajendran, Jason Riley, Katelyn Robertson, Joe Sanchez, Fady Hannah Shmouni, Hayli Spence, Shana Spindler, Constantine Stratakis, Ashim Subedee, Nichole Swan, Canace Tingen, Jolien Tyler, Anna Vlachos, Lauren Walling, Erin Walsh, Jeremy Weaver, Jack Yanovski.
The Rep Report

By Lauren Walling, PhD

As the current NICHD Basic Sciences Institutes and Centers (IC) Representative, I represent NICHD postdoctoral fellows at the Fellows Committee (FelCom) meeting every month and share the latest news with you here. Do you have a concern or question that you want brought up at the next meeting? Contact me at lauren.walling@nih.gov!

The Health and Recreation Subcommittee has two social events in December. There is a holiday lights run on December 2nd and a family-friendly hike on December 5th. If you are looking for more social activities and a place to connect with other fellows, please join the postdoc Slack page using a non-NIH email: https://join.slack.com/t/bethesdapostdocs/shared_invite/zt-h67vb550-GM_t9zGrTAQWMSdSBfa0bA.

The November FelCom meeting included a short presentation by Joelle Mornini (informationist) and Li Jia (bioinformatician) from the NIH Library. They provided information on the abundance of resources available at the NIH Library, including training classes, bibliometric services, literature searches and systematic reviews, bioinformatics services, and a technology hub including virtual workstations with access to licensed software, a digital production studio, and 3D printing. For more information on these resources, please visit the NIH Library website (https://www.nihlibrary.nih.gov/agency/nih).

The FAES liaison announced that FAES healthcare now includes access to TalkSpace online therapy and psychiatry, as well as Lasting, a relationship support service. Information and registration can be found at https://www.training.nih.gov/talkspace. If you have additional questions, you can reach out to the FAES insurance department (faesinsurance@mail.nih.gov).

I hope everyone has a safe and happy holiday season!
December Announcements

THANK YOU TO THE SCIENTIFIC RETREAT ORGANIZERS, PRESENTERS AND ATTENDEES
On Friday, November 5, over 150 NICHD investigators, fellows, and staff gathered virtually for the 2021 NICHD DIR/DIPHR Scientific Retreat. The talks and subsequent online poster presentations exemplify the diversity of research in the NICHD intramural program. Check back next month for a full recap of the event!

CONGRATULATIONS TO THE 2021 NICHD MENTOR OF THE YEAR Awardees
The NICHD Mentor of the Year Award is an opportunity to recognize individuals whose mentoring has made a difference in someone’s life at NIH. Nominations were invited from all trainee groups in the Division of Intramural Research (DIR) and the Division of Population Health Research (DIPHR). Congratulations to the following individuals, who have shown a remarkable commitment to mentorship throughout the year:

DIR FELLOW: Cole Malloy, PhD
Nominated by Ashley Pratt

DIR INVESTIGATOR: Tom Dever, PhD
Nominated by Sara Young-Baird, PhD

DIPHR INVESTIGATOR: Tonja Nansel, PhD
Nominated by Jenna Cummings, PhD, and Evelyn Liu

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December Announcements

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SEEKING IMAGE SUBMISSIONS FOR THE 17TH ANNUAL FELLOWS MEETING
We are beginning our search for the feature image of the 17th Annual NICHD Fellows Meeting.

The winning image will be showcased on the fellows retreat website, on posters, and used as the front cover of the event program. Also, to highlight everyone’s imagery, all submissions we receive will be used to produce a collage posted on the 2022 retreat website. You can always view image submissions from previous years at http://retreat.nichd.nih.gov.

In addition to image resolution and quality, selection criteria include the relevance to our institute’s mission and artistic view of the image. All submissions (at the highest possible resolution) should be sent to Nicki Swan (jonasnic@mail.nih.gov) by January 31, 2022, with a brief caption for the image.

INTERESTED IN TAKING AN FAES COURSE FOR YOUR PROFESSIONAL DEVELOPMENT?
The Office of Education will sponsor several NICHD fellows and graduate students to enroll in a career/professional development FAES course or workshop for the spring 2022 semester. Course information can be found in the FAES 2021–2022 course catalog.

If you are interested, please contact Katherine Lamb (katherine.lamb@nih.gov) at least four weeks before class begins. It is important that you discuss this with your mentor and that he/she is supportive of your participation.

AAAS MASS MEDIA SCIENCE & ENGINEERING SUMMER FELLOWSHIP
Applications due January 2!

From the AAAS Mass Media Fellowship website:
“This highly competitive program strengthens the connections between scientists and journalists by placing advanced undergraduate, graduate, and post-graduate level scientists, engineers, and mathematicians at media organizations nationwide. Fellows work as journalists at media organizations such as National Public Radio, Los Angeles Times, WIRED, Milwaukee Journal Sentinel, and NOVA...

...For 10 weeks during the summer, the AAAS Mass Media Science & Engineering Fellows collaborate with media professionals at radio and television stations, newspapers, and magazines. As part of their job, the scientists and their journalist-hosts strive to make science news easy for the public to understand.”

For additional information about the program visit aaas.org/mmfellowship.

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UPCOMING CAREER PLANNING WEBINAR SERIES (DECEMBER–FEBRUARY)
Led by Lauren Celano, CEO and Co-founder of Propel Careers

Career Opportunities for Graduate Students & Postdocs
Wednesday, December 8, 1–2 p.m.
This comprehensive webinar will provide an overview of career opportunities for graduate trained students with emphasis on the various skills, aptitudes, competencies, and personalities that thrive in sectors including academia, industry, government and non-profit. For each sector, the following will be explored:
» Research and non-research career paths
» The importance of transferable skills and how to highlight these for specific roles
» Advice on networking to identify career opportunities
» Ways to utilize informational interviewing
» Tips to effectively tailor resumes and cover letters

How to Evaluate, Build, and Highlight Transferrable and Career Relevant Skills
Wednesday, January 12, 1–2 p.m.
Lauren Celano will provide insight on how to evaluate the transferable skills that are valued in various scientific careers, highlighting the essential non-scientific skills you can build while performing research, and demonstrating ways to apply these skills in your desired career to achieve your goals. Advice will be provided for various career paths, including research and non-research roles. Lauren will also provide guidance on how to package scientific and non-scientific skills on resumes, cover letters, and during interviews.

Building a Positive Online Personal Brand using LinkedIn
Wednesday, February 9, 1–2 p.m.
For those of you interested in creating or improving your LinkedIn page, this webinar will provide guidance on leveraging this platform for developing your professional online brand. You will dive deep into which parts of a profile to focus on and how to customize your profile to your career area(s) of interest. Lauren Celano will discuss:
» Strategies for highlighting your background and experiences as a compliment to your resume
» How organizations use LinkedIn to identify talent for open positions and which sections are most important
» How to use the job preference features to inform internal and external recruiters about what you’re looking for

Each webinar is appropriate for trainees at all levels—postbacs, graduate students and postdocs are encouraged to attend. To register, please email Ms. Katherine Lamb (katherine.lamb@nih.gov) and indicate which session(s) you plan to attend. The Zoom link will be circulated a few days prior to each.
December Events

WEDNESDAY, DECEMBER 8, 10:30 AM–4:30 PM

Ethics in Research: Online Training for Postdocs
This training is required for ALL NICHD postdocs within their first year of training and only needs to be completed once.

From the OITE website:
Research Ethics is at the foundation of everything we do in the scientific endeavor, and training in Responsible Conduct of Research is an essential component of your development as a scientist as you train here at the NIH. OITE is offering this course specifically for postdocs to ensure that you have the foundation to both conduct rigorous and ethical research and to train others to do the same.

This workshop uses a combination of lecture, video, writing exercises, small group discussions, and full class discussions. Certificates will be issued to those who successfully complete the entire course.

Please follow the link for registration: Ethics in Research Training for Postdocs.

Participation is tracked by the NICHD Office of Education. Please contact Ms. Veronica Harker (veronica.harker@nih.gov) if you have any questions.

WEDNESDAY, DECEMBER 8, 1–2 PM

Career Opportunities for Graduate Students & Postdocs (Zoom)
Led by Lauren Celano, CEO and co-founder of Propel Careers

If you are interested in attending, please email Katherine Lamb (katherine.lamb@nih.gov) to register. The Zoom link will be circulated before the session.

ONGOING EVENTS AROUND CAMPUS

NIH-Wide Office of Intramural Training and Education (OITE) Events
For more information and registration, please visit Upcoming OITE Events.

NIH Library Training and Events
For more information and registration, please visit the NIH Library Calendar.