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Researcher Workbench Hits Major Milestone

As of June 2024, more than 11,000 researchers have registered to use the *All of Us* Researcher Workbench.

There is more cause to celebrate as we consider all the researchers from diverse backgrounds who are now able to analyze the data on the Workbench. According to program data, nearly 80% are from communities historically underrepresented in the biomedical workforce. Approximately 800 institutions also have access.

More than 40 are Historically Black Colleges and Universities. More than 70 are Hispanic Serving Institutions, and more than 50 are Asian American and Native Hawaiian/Pacific Islander Serving Institutions.

To support researchers who historically have been underrepresented in the biomedical workforce, the Researcher Academy has offered tuition-free courses dedicated to topics such as analysis of *All of Us* data, networking opportunities for researchers, coaching, and related resources. The *Journal of the American Medical Informatics Association* recently highlighted the academy's work with the publication of an article, co-authored by academy staff members at RTI International, that details activities to support researchers at institutions such as HBCUs. An [advance version of the article](#) is available to read.

Simply reaching a wide array of researchers with information about *All of Us* will not ensure that they have the support they need to productively use the Workbench, so important work lies ahead. We need identify researchers who might find *All of Us* data useful. Then we need to connect them into learning networks, provide instructional resources, and champion collaboration. This will promote a future in which researchers are using publicly available data in work that contributes to our collective well-being across the United States. ■

—[Sula Hood](#) and [Brian Southwell](#), *All of Us* Researcher Academy co-leaders



Academy Announcements.....

- **Howard University’s Dr. Fatimah Jackson discusses the Researcher Academy** and its impact in a powerful *All of Us* researcher testimonial video. Fatimah Jackson, Ph.D., Director of the W. Montague Cobb Research Laboratory, shares how her work with her students has been enhanced thanks to the academy. “The *All of Us* Researcher Academy has made resources available to us that were not otherwise available,” said Dr. Jackson. [Watch the full video](#) on her experience working with the *All of Us* Researcher Academy and the importance of expanding genetics research at HBCUs.
- **New *All of Us* researcher testimonial video.** Xyanthine Parillon, Ph.D., Ed.D., Faculty Lecturer at the University of Houston-Downtown, explains how the Researcher Workbench has allowed her to collaborate with colleagues. “Science is driven through the collaborative process.... We’re going to learn so much through the *All of Us* Research Program.” [Watch Dr. Parillon explain how her team uses the Workbench.](#) Dr. Parillon was a participant in Baylor College of Medicine’s *All of Us* Biomedical Researcher Scholars Program.

Additional Fitbit data available in the Workbench



With this data, researchers can examine the type of Fitbit device used, the date the device was last synced with a Fitbit account, approximately how charged the device was when data were recorded, and more. This allows researchers to account for the differences between devices, such as how steps are counted or whether certain types of data can be collected. Fitbit data can also be analyzed alongside other data types in the Workbench to offer a more complete view of health and disease.

[Visit the User Support Hub to learn more.](#)

The new All by All tables in the Researcher Workbench map known and novel associations between genotypes and phenotypes using data contributed by *All of Us* participants. Registered researchers with Controlled Tier access can use the tables, which include about 500 billion associations, to jump-start their genomics projects and save on computational costs. With these tables, researchers can more easily uncover novel associations, dig deeper into understudied conditions, or validate other studies. No prior genomics research experience is necessary to use All by All, but experience with Python and Jupyter Notebook is recommended.

[Visit the User Support Hub to learn more.](#)

- **Funding Opportunities—*All of Us* Data and Tools.** The National Institutes of Health (NIH) makes funding available to researchers to advance precision medicine and health equity. These opportunities can harness the power of the *All of Us* Researcher Workbench. [Visit this page](#) for additional funding opportunities.
- **New Funding Opportunity Addresses Ethical, Legal, and Social Implications (ELSI) in Human Genetics and Genomics.** The National Human Genome Research Institute (NHGRI) at NIH is seeking to broaden the types of knowledge, skills, expertise, experience, and perspectives brought to bear in the field of ELSI research through a new program entitled “Building Partnerships and Broadening Perspectives to Advance ELSI Research.” NHGRI is developing this program for domestic organizations receiving less than \$30 million per year in total [NIH funding](#). These organizations are underrepresented within NHGRI’s [ELSI Research Program](#) and can help bring new approaches, community connections, and scholars into the field. Researchers across an array of academic disciplines using a range of research methods are encouraged to apply. Please see NIH’s Notice of Intent to Publish ([NOT-HG-24-027](#)) for more information.

Introducing the Researcher Academy’s 2024 Interns

The following students will be paired with mentors as part of this paid internship experience. Interns will receive training on accessing and analyzing data from the Researcher Workbench.



Shane Appiah
Howard University



Saul Ashle
Meharry Medical College



Jordanne Davenport
NC A&T State University



Pamela Djan
Meharry Medical College



Naoko Little-Jackson
Howard University



Uchenna Okefi
NC A&T State University



Atiya Shahid
Tuskegee University

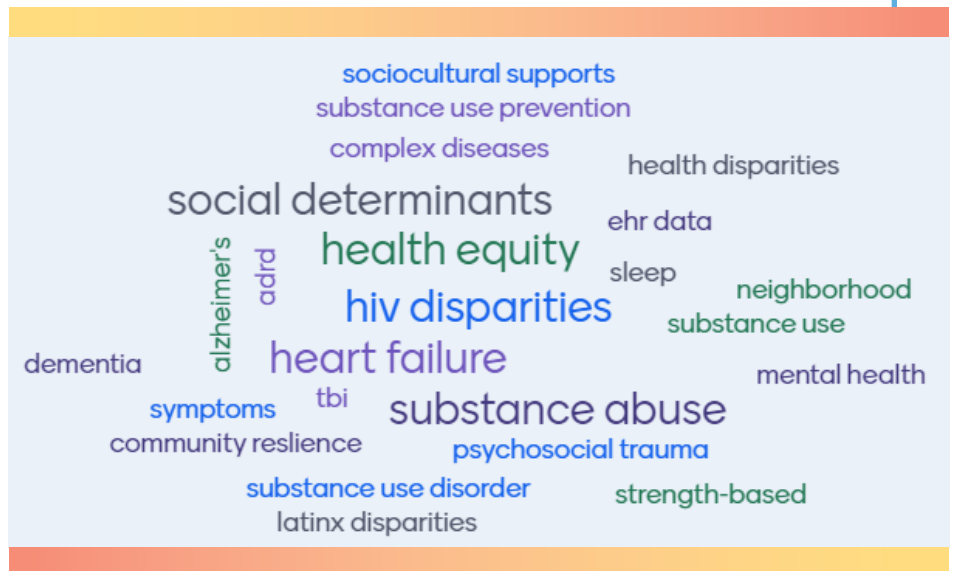
New Institutional Champion Workgroup to Build Capacity and Connection

In February, the *All of Us* Researcher Academy welcomed its third group of Institutional Champions from Florida Atlantic University, Florida International University, Northern Arizona University, San José State University, the University of Nevada, Las Vegas, and the University of Puerto Rico Medical Sciences Campus. Researchers from these institutions are participating in a new workgroup aimed at empowering their research teams. The workgroup will facilitate joint projects and initiatives, allowing members to leverage each other's expertise and resources.

During these sessions, Group 3 workgroup members can engage in research and dissemination activities at both the individual and collective levels. The collaborative environment helps foster community, networking opportunities, and knowledge sharing among the team. Participants have access to a repository of *All of Us* Researcher Academy resources, including templates, best practices, and cutting-edge research tools.

In addition to monthly group meetings, office hours are available to individuals seeking further support or guidance. Opportunities for mentorship and networking will be provided, connecting emerging researchers with seasoned experts and helping them build a supportive community. "Above all, the workgroup meetings are meant to serve as a space for collaboration, innovation, and camaraderie," says Lissette Saavedra, RTI International researcher and Group 3 workgroup leader. "The goal is to ultimately increase the success rate of grant applications and research projects using *All of Us* data in the Researcher Workbench."

The workgroup convened its first meeting in June, with nearly 30 members in attendance. Participants discussed topics they wanted to explore going forward and identified areas where they needed support. Together, they created a word cloud of research topics each was interested in to identify commonalities in the individual studies. Future meetings will include support for individual projects and collective professional development discussions.



Twenty-nine workgroup members shared their research topics to generate this word cloud.

HBCU Road Tour Recap: Jackson State University

The spring *All of Us* Researcher Academy HBCU Road Tour was held at Jackson State University in Jackson, Mississippi, on April 23. Seventy-nine people attended the hybrid event, organized by Community-Campus Partnerships for Health and RTI International. It was entitled “From Data to Equity: How Mississippi HBCUs Are Moving Health Research and Teaching Forward with the *All of Us* Database.” Attendees learned how Jackson State and Coahoma Community College are leveraging the innovative *All of Us* database to create new research opportunities, support professional growth, and advance health research and teaching. Faculty members from both institutions discussed how they used the *All of Us* database to study disparities in substance abuse and asthma rates. Jackson State student and faculty panelists discussed their experiences using the *All of Us* database in the classroom. RTI shared opportunities for training, technical assistance, and networking available through the Researcher Academy.



Jackson State Panelists (L-R): Kendal Smith, Ph.D., Assistant Professor, Department of Psychology; Caleb Cauthen, LPC, Psychology Student, Graduate Research Assistant; Tiffany Hoard-Aaron, MA, Assistant Professor, Criminal Justice and Sociology; Ihunanya M. Kanu, MBBS, MPH Student, Graduate Research Assistant.

[A recording of the event is available for viewing.](#)



Stacy Jones, Ph.D., Science Educator, Jackson State University and Coahoma Community College, presented on his study using *All of Us* data to explore the effects of chemical exposures associated with cotton production.

2024 HBCU Engage Conference

Historically Black Colleges and Universities (HBCUs) and their potential partners have much to gain by collaborating for research and program development. Furthermore, U.S. government agencies are increasing investment in HBCUs to strengthen research capacity and stimulate external research funding through solicitations that require multi-party collaboration. The HBCU Engage conference is hosted by [UIDP](#) (University Industry Demonstration Partnership), which launched the inaugural event in 2022. It is a unique forum that brings together representatives from all sectors to enhance partnerships and forge new collaborations.

In April, Dr. Sula Hood, Researcher Academy co-leader, attended and presented at the 2024 event in Baltimore, Maryland. The theme, “Partnerships to Expand Research Capabilities,” focused on engaging representatives from HBCUs, industry, national labs and government agencies, and other universities. Practical sessions and candid discussions offered opportunities for attendees to advance a range of goals, from multi-party collaboration for federal research programs to strengthening and enhancing research capacity.

Dr. Hood presented on the Researcher Academy as part of a session about leveraging the *All of Us* Research Program. The session detailed the HBCU Working Group established by the *All of Us* Division of Engagement and Outreach. The group works with seven national and community partners and 40 HBCUs to introduce students and faculty members to the *All of Us* Researcher Workbench. The objective is to foster familiarity with available datasets, while gaining trust to partner with community members to enroll and participate in the program. “This panel was a great opportunity to inform HBCU faculty about the importance of the program and to raise awareness about the *All of Us* dataset and the Researcher Workbench for their students and themselves,” said Dr. Hood.

Fellow speakers included Romuladus Azuine, Program Director, *All of Us* Research Program, NIH; Faith Blackburne-Proctor, Engagement Specialist/Program Officer, NIH; Aaron Johnson, Director, Department of Campus Health, Howard University Student Association; KiTani Lemieux, Associate Professor, Xavier University of Louisiana; and Cheryl Thomas, Principal Investigator, Delta Research and Educational Foundation.



Dr. Sula Hood presented on the Researcher Academy as part of a panel on the importance of engaging HBCUs and communities of color with the *All of Us* Research Program.



HBCU Engage conference attendees like Dr. Cadavious M. Jones, Dean of the Division of Science and Mathematics at Rust College learned how the Researcher Academy supports training and technical assistance for researchers using the Researcher Workbench, peer-to-peer learning, and network building.

Dr. Kristen Rhinehardt, NC A&T State University



Dr. Kristen L. Rhinehardt is an Associate Professor in computational data science and engineering at North Carolina A&T State University (NC A&T), one of the Researcher Academy’s inaugural Institutional Champions. Since 2022, her involvement with the academy has enabled many NC A&T students to actively work with the Researcher Workbench and its historic dataset.

This access provides them with expanded training and hands-on experience as they pursue degrees and careers in health research. “The ease of use and the support network that the Researcher Academy has built around the platform add significant value for new and early-career researchers,” says Dr. Rhinehardt.

NC A&T—a top-flight research university based in Greensboro, NC—is the largest Historically Black University (HBCU) in the country and is nationally recognized for excellence in science, technology, mathematics, and engineering education.

As a faculty member there since 2019, Dr. Rhinehardt explains why it is so important for HBCUs like NC A&T to actively engage with the *All of Us* Research Program data. “As of 2022, 70% of Black dentists and physicians, 50% of Black teachers, and 40% of Black engineers earned degrees at HBCUs,” she says. “This network not only impacts the education of these professionals but brings awareness to our communities on the importance and impact of the *All of Us* Research Program.”

“.....
The ease of use and the support network that the Researcher Academy has built around the platform add significant value for new and early-career researchers.”

In addition, she stresses that trust is vital in healthcare. “Like any issue, awareness is key to understanding and addressing the problem,” she says. “*All of Us* has brought attention to an information gap that has had a direct impact on healthcare approaches and treatment.”

Dr. Rhinehardt can trace the passion and motivations that have shaped her career to early experiences as a child. When she was just 5 years old, her father was diagnosed with kidney disease and congestive heart failure. She recalls then and there declaring she was going to be a doctor so that she could make him well. “I remember the day the doctor told us that a heart transplant was not an option because we could not afford the nearly million-dollar price tag to get on the list and pay for the surgery,” she said. “Afterward, I witnessed how the dialysis that was supposed to extend his life slowly harmed his heart, mind, and spirit. In furthering my education, I learned this cyclic phenomenon was present in the treatment of many diseases.”

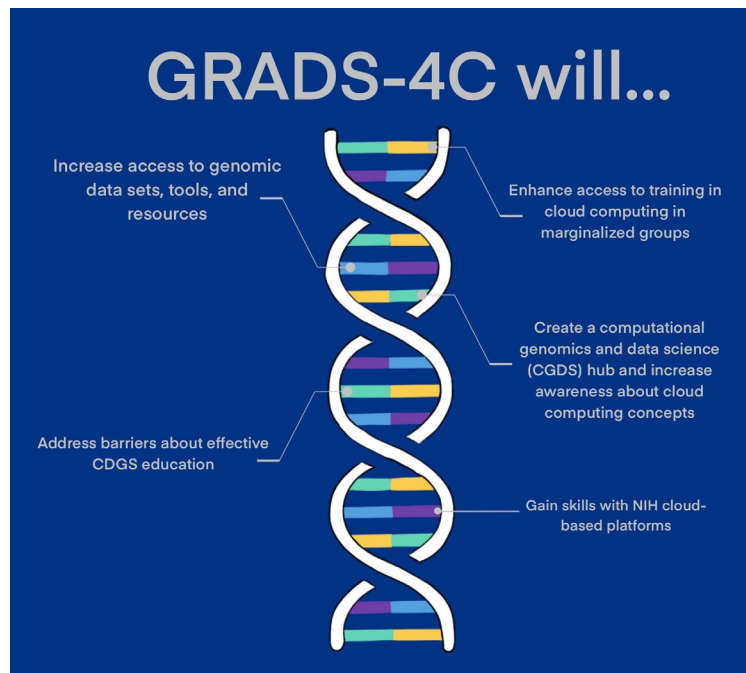
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In the pursuit of her studies, Dr. Rhinehardt dedicated much of her secondary and post-secondary education to understanding diseases at the genomic and molecular level. Her ultimate goal was to aid in the early detection and treatment of disease. In 2010, she graduated from Cornell University with a minor in biomedical engineering and a degree in biological engineering. Later she worked with patients, technicians, and researchers in both clinical and academic settings.

As time went on, she concentrated her efforts on bridging the gap between medicine and engineering. In 2012, she completed her master's degree at NC A&T, becoming the first person there to earn a degree in nanoengineering. In 2015, she earned her Ph.D. in nanoengineering focusing on *in vitro* and *in silico* biosensor design. "It is so vital," she says, "to educate future engineers on the importance of engineering in the medical field."

Currently, Dr. Rhinehardt is the director and founder of the Computational Molecular Engineering Lab at NC A&T, where she is committed to conducting research that improves the quality and understanding of biological systems while bridging the gaps between communities and technological advancement. "In my lab, our goal is to foster interdisciplinary, molecular-level, computing-enabled research in genomics, material science, drug discovery, and biosensors," she says. "We are making a difference bit by bit."

“**All of Us has brought attention to an information gap that has had a direct impact on healthcare approaches and treatment.**”



She is expanding her efforts as the Principal Investigator and Co-Director of the Genomic Research and Data Science Center for Computation and Cloud-Computing (GRADS-4C). This is a \$5.8M effort supported by the National Institutes of Health's National Human Genome Research Institute, the *All of Us* Research Program, the Office of Data Science Strategy, and the National Institute on Minority Health and Health Disparities. "Our mission is to bring training and information in computational genomics, data science, and cloud computing research to students, faculty, and communities—particularly those among historically marginalized populations."

And what advice does Dr. Rhinehardt have for her students who also want to make a difference and follow her lead to a career in research? "Multidisciplinary computational work is a challenging and rewarding field," she affirms. "But remember, research is the systematic exploration of a query to understand the facts. Though it may not fall into your expected solution or predicted outcome, continue to be inquisitive and persistent." ■

Part 2: Securing a Job in Research

In the first part of this article ([Connections, Spring 2024, p.7](#)), we discussed two strategies—the importance of developing a strong academic background and actively networking—to secure a job in research. In this second part, we will explore three additional strategies that will further enhance your chances of success in the research field. Let’s dive in!

- 1 Strategy 3: Gain relevant research experience.** Real-world experience is highly valued by employers in the research industry. It is one sure way to demonstrate your passion for the field, and it displays your ability to conduct independent research and contribute to a team. Seek opportunities to gain experience through internships, research assistantships, or volunteering in research projects. This practical experience will enhance your skills and knowledge. This can give you a competitive edge in the job market. Consider reaching out to professors, research institutions, or industry professionals to inquire about potential research opportunities.
- 2 Strategy 4: Publish and present your research findings.** These activities can help you establish your credibility as a researcher. Aim to publish your work in reputable academic journals and present at conferences or symposiums in your field. This not only demonstrates your ability to contribute new knowledge to the research community, but it also highlights your communication and presentation skills. Additionally, these opportunities allow you to network with other researchers and potential employers who may be interested in your work. Be sure to highlight any published papers or presentations on your resume and during job interviews to make a strong impression.
- 3 Strategy 5: Develop transferable skills.** In addition to subject-specific knowledge, it is critical to develop and hone transferable thinking and communication skills. These include critical thinking, problem-solving, data analysis, project management, and effective communication. You should look for opportunities to develop these skills through courses, workshops, or extracurricular activities. Highlighting skills on your resume and during job interviews will make you stand out as a well-rounded candidate. Employers are often looking for individuals who can bring a diverse set of abilities to the team.

By following these five essential strategies, you will position yourself as a highly competitive candidate. With commitment, hard work, and a proactive plan, you can forge a path to a successful and fulfilling career in research.

1. Build a strong academic background
2. Network
3. Gain research experience
4. Publish and present
5. Develop transferable skills



Freda Green is a Senior Talent Acquisition Partner at RTI International and serves on the Equity, Diversity, Inclusion and Belonging Leadership Council. Freda also co-leads RTI’s Historically Black Colleges and Universities program, RTI MOVE. She is an HBCU advocate and a proud alumna of Alabama Agricultural & Mechanical University. Connect with Freda on [LinkedIn](#) or via email. **Connect with Freda on [LinkedIn](#) or via email.**

Upcoming Academy Courses

Register for the following 2024 [tuition-free course](#):

Course	Instructors	Overview	Date
Advanced Topics in Publishing Health Data: Promoting Your Publications	Dr. Vabren Watts	This three-session course helps participants plan their career paths. It begins with an overview of scholarly publishing and its importance in research. Next, participants will learn tips for promoting their manuscripts and research. This includes how to identify opportunities beyond scholarly publishing, such as conference presentations and social media. By completing this course, participants will learn about essential requirements and a variety of opportunities that will support their success in STEM or STEM-related research. <i>Live virtual course.</i>	August 8, 15, and 22, 2024 3:00-4:00 pm ET

This course is ideal for graduate students and above who are looking for a good refresher on publishing. According to course evaluation feedback, past participants strongly agree they would recommend this course to a classmate or colleague.



San José State University, an *All of Us* Researcher Academy Institutional Champion, hosted an *All of Us* Journey event on campus April 16-18, 2024.

The *All of Us* team engaged with more than 700 individuals who attended the San José event and reported that 14 participants decided to take their first steps to enroll in the program by ordering salivary kits onsite.

All of Us Researcher Academy

The [All of Us Researcher Academy](#) is a comprehensive program that provides training and technical assistance for researchers who are conducting research with the [All of Us Researcher Workbench](#)—the cloud-based analytics platform where registered researchers can access data from *All of Us* participants. The academy also supports peer-to-peer learning and network-building among researchers and students.

The academy is dedicated to providing support to institutions that have a documented historical mission or historical commitment to training underrepresented students. Currently, the *All of Us* Researcher Academy resources are free for students, faculty, and post-docs at institutions with a track record of training researchers underrepresented in the biomedical workforce. See the Notice of [NIH's Interest in Diversity](#) for examples of groups that have been shown to be underrepresented in the biomedical research workforce.

All of Us Researcher Academy Partners



Community - Campus Partnerships for Health
Advancing Health Equity & Social Justice Through Partnerships for 25 Years

[Allofus.nih.gov](https://allofus.nih.gov)

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