



PennFERBS

After an extraordinary year of learning, listening, engaging, fundraising, and even publishing, we take a look back at the 2022-2023 year of FERBS, highlighting our outstanding fellows and their achievements! We thank everyone who made this year possible and look forward to the future of FERBS.

Summer Awards

This summer an impressive number of FERBS fellows obtained prestigious fellowships to conduct research all around the country and world! Highlighted are each student and their fellowship, fellows traveling as far as Spain and California! **Diego Barragan** - Undergraduate Pipeline Network *University of New Mexico*, **Arianna Mejia** - Pre-Renal Initiative Fellowship, *Stanford University*, **Peace Oloko** - Summer Program for Undergraduate Rising Stars, *Columbia University*, **Angelina Jala** - Pathology and Laboratory Medicine for Underrepresented Minority Summer Internship, *University of Pennsylvania*, **Anisa Robinson** - Forest REU Summer Program, *Harvard University*, **mmayh Siddiqua** - Undergraduate Translational Research Immersion Program (TRIP),

Amy Vidal - Harvard Amgen Scholars Program, *Harvard University*, **Reginald Kwarteng** - Yale BioMed Amgen Scholars Program, *Yale University*, **Azeeza Sarour** - Summer Undergraduate Minority Research Program Wharton LDI, *University of Pennsylvania*, **Amy Fernandez** - Summer Research Abroad, *Polytechnic University of Madrid, Spain*. First year FERBS fellow **Alondra Betancourt** - Neurophytes Scholars Program, *Johns Hopkins University*. Congratulations to all first year fellows on obtaining summer research stipends through Student Financial Services, Career Services, and SAS support programs. Join us in celebrating their achievement and wishing them enriching summer research experiences.

Publishing and Presenting

We are enormously proud to share the achievements of our fellows this year in presenting and publishing their research. Third year fellow **Amy Fernandez** (Sniegowski Lab) working with mentor Dr. Ben Galeota-Sprung co-authored 'Changes to the mtDNA copy number during yeast culture growth'.

<http://doi.org/10.1098/rsos.211842>.

Recent Graduate **Criston Young** Co-authored two publications during his time in -

News Highlights



Merck & Co., Inc., Rahway, NJ, USA Donates over \$500,000 to the scholarship of our fellows!

Merck has pledged a generous yearly renewable scholarship grant of 520,000 USD to support the retention, education and training of our fellows. Thank you to Merck & Co., and the FERBS team for making it possible.

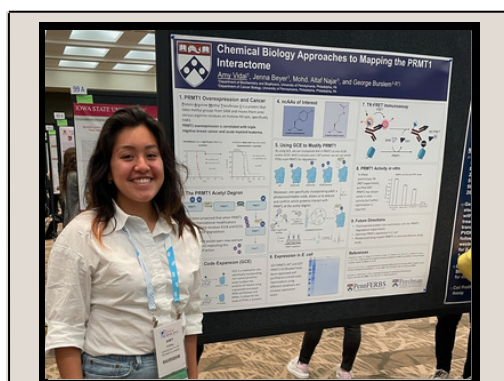
FERBS Fellow Criston Young Graduates with Honors!



Pictured here with PhD student and mentor Heather Schiller, We congratulate **Criston** and all his accomplishments, including two publications while in the Pohlschroder lab! See below for more about Criston.

VISIT OUR WEBSITE FOR INFO OR TO GET INVOLVED!

the Pohlschroder lab, 'Accessible and Insightful Scientific Learning Experiences Using the Microorganism *Haloferax volcanii*' Archaea. https://doi.org/10.1007/978-1-0716-2445-6_34, and 'A Twist to the Kirby-Bauer Disk Diffusion Susceptibility Test' <https://doi.org/10.1128/jmbe.00234-21> with mentor Dr. Heather Schiller. Congratulations to both of them, outstanding work! We also celebrate our yearly growing number of FERBS



Fellow Amy Vidal Presenting her work at the Discover BMB 2023 conference!

Amy presented 'Chemical Biology Approaches to mapping the PRMT1 Interactome' a project she has been developing in the Burslem lab with PhD student and mentor Jenna Beyer. Amy is spending her summer at *Harvard* in the Amgen Scholars Summer Research Program

fellows presenting their work both on and off campus. Amy Vidal for presented her work at *Discover BMB 2023 international conference*. Sean Hilgendorf presented his work at *The Stanford Undergraduate Research conference*. David Kedeme presented his work at *Penn Neuroscience Society Research Expo*. Fellows from 2020 and 2021 cohorts presented their research at this years 2022 Penn CURF Fall Research Expo including Peace Oloko, David Kedeme, Amy Vidal, Olivia Howard, Kevin Huang, Arianna Mejia, Marco Garcia, Brian Dinh, Reginald Kwarteng, Amy Fernandez, Anisa Robinson, Sarah O'Konski, Ummayh Siddiqua, and Sean Hilgendorf We celebrate each fellows participation and training in research communication and thank all of the mentors involved in making it possible.

FERBS Welcomes

This academic year, FERBS fellows had the opportunity to meet with extraordinary scientists currently at Penn and from institutions and organizations across the country. We mention a few of these visits here and communicate the impact

each had on our fellows. FERBS fellows welcomed Dr. Bil Clemons, professor in the Division of Chemistry and Chemical Engineering at California Institute of Technology and member of the National Academy of Sciences. He shared his academic trajectory and connected with students about his experiences in STEM and beyond. FERBS was also honored to welcome Dr. Katalin Karikó who met and discussed with our current fellows. Dr. Karikó, a first-generation student herself, now senior vice president of BioNTech RNA Pharmaceuticals, adjunct professor at Penn, and leader in the world on mRNA vaccine technology and biology, shared her inspiring story and perspective on life, science, success and failure. Dr. Karikó's humble and genuine nature was inspiring, resonating with our fellows. Here we highlight reactions from current fellows: Wrapping up the year, FERBS sat down with Dr. Ala Standford, the



Dr. Bil Clemons (center-left)
Dr. Clemons connected with students about his experiences in STEM



Dr. Ala Stanford
Dr. Stanford gave a public lecture and sat down with fellows to discuss health equity this spring




Dr. Katalin Karikó, global leader in mRNA vaccine biology (center) presented, and engaged with fellows this spring

former Region III Director of the U.S. Department of Health and Human Services and Founder of the Black Doctors consortium and the Ala Stanford Center for Health Equity, to discuss health equity, research, scientific communication and more. We were grateful to welcome such an accomplished and inspiring group of senior scientists this year, all having lasting impacts on the FERBS fellows and community.


Community Engagement

In addition to fellows individual contributions to organizations at Penn and in the greater Philadelphia community, students engaged with their community through two projects within the scope of their spring semester course 'Research in the Biological Sciences and its Social Impact' **Funded by SNF Paideia**. One group, **SCOPE Sickle Cell Outreach Program Endeavor**, was a continuation of last years project initiated by the 2021-22 cohort and focused on bringing awareness to Sickle Cell disease. This year fellows worked to create a multilingual video providing fundamental information on Sickle Cell with a focus on accessibility across populations. In addition to continuing to build out the webpage forum created last year, fellows sat down with Dr. Alexis Thompson at CHOP, chief of hematology to record and post an educational and



Community partnerships

The community initiatives were led by **Jean Marie Kouassi**, FERBS' community partnerships coordinator, with guidance from Dr. Carlos Moreno, Assistant Professor Department of Occupational Therapy (St. Joseph's University), and Mrs. Zemora Brandon, Administrator/ Social Worker, Sickle Cell Disease Association of America



formative interview about these topics. The second group this spring initiated **SHE, Stress-Handling Empowerment for Women**, a group focused on helping women face physical and emotional trauma. Through interaction with leaders of womens shelters and listening and learning about the importance of these establishments in society, students gained a profound understanding of the undervalued and underfunded nature of such organizations within the city. The group worked to provide self-care packages and are planning to deliver workshops and volunteer moving forward.

Funding and Support

The FERBS fellowship program is excited and humbled to share we were granted support from **Merck & Co., Inc., Rahway, NJ, USA**, in the form of a 520,00 USD yearly renewable scholarship grant to support the retention, education, and training of our fellows in the biological sciences. FERBS thanks the **School of Arts and Sciences** for its support this past year. Funding helped develop our second and third-year leadership component. Continued support from SNF Paideia has been critical in the training and community engagement components and we appreciate their support.

We report FERBS and the **IDEAL** (Inclusion, Diversity, Equity, and Learner) Research Program formed a partnership this year working with director **Dr. Donita Brady** to enhance connection and exchange between the programs. Housed in the School of Medicine the IDEAL Research Program aims to create, nurture, and maintain a Penn Medicine research community that embodies diversity, values inclusivity, and promotes equity. FERBS will support an IDEAL Fellow for the 2023-24 academic year to bridge both programs events and further support our joint missions towards inclusivity, diversity, and equity in the biological and biomedical sciences.




Fellow Amy Fernandez Enjoying Picasso While Abroad in Spain

Third year fellow **Amy Fernandez** is abroad in Madrid with the Penn in Madrid Program, working with Dr. Alejandro Couce at The Polytechnic University of Madrid, working on experimental evolution and learning CRISPR!

Growing FERBS Family

FERBS welcomed another cohort 2022-23 of outstanding fellows this past fall. These students joined our growing group of fellows this past year, while completing their first year at Penn. Additionally FERBS welcomed new graduate student coordinator **Marisa Egan** who did an outstanding job mentoring, teaching, and training the new cohort. FERBS



Graduate Fellow Marisa Egan

Marisa joined FERBS and lead a fantastic year working with the 2022-23 cohort!

also welcomed our new administrative assistant **Morgan Kelly** and are grateful for all her support. We look forward to continuing to grow and are currently searching for graduate student fellows, host labs, mentors, and anyone passionate about equity and training in the Biological Sciences! Reach out if you are interested in getting involved.



Fellow David Kedeme

Second-year fellow David Kedeme working a student table for the Student Harm Reduction Coalition at Penn

FERBS in the news

This year the Penn community celebrated many of our fellows with five individual features in Penn Today! Each student had the opportunity to be interviewed and share various aspects of their research experience and life on campus. Take a look at the featured fellows here: **Winson Liu**, **Anisa Robinson**, **Abetzi Vazquez**, **Sean Hilgendorf**, **Diego Barragan**.

Contact Us

Director: Dr. Mechthild Pohlschroder
pohlschr@sas.upenn.edu

Graduate Fellows:

marisa.egan@pennmedicine.upenn.edu
prallw@sas.upenn.edu
sdilones@sas.upenn.edu

Student Leadership

Second- and third-year FERBS fellows participated in leadership development and served as leaders across campus and within the Philadelphia community. We share some of their activities from this past academic year, and encourage readers to contact them if they are interested in getting involved! **Anisa Robinson** serves as the Co-President of the Penn Black Scientist Collective. **Sean Hilgendorf** serves as chapter president of Phi Delta Epsilon Medical Fraternity. **Angelina Jala** continued her work as a Program Assistant for a pipeline program for Philadelphia High School students, Provost's Summer Mentorship Program, **Reginald Kwarteng** worked with Road2Research in Philadelphia Schools to promote science education, **Diego Barragan** continued his work with Penn Bens Counseling, **Brian Dinh** served as the student director of Penn Bens Counseling and worked as a Columnist and Designer at Synapse, **Rhoda Kaddu** served as an external chair for the Shea Collective, **Azeeza Sarour** served as the SNMA Liaison for MAPS, **Abetzi Vazquez** worked as a mentor for PennMAPS, **David Kedeme** worked with Matriculate as a volunteer advising fellow, **Yasmeen Haruna** served on the community engagement leadership committee of MEDlife, **Peace Oloko** serves as Vice President of Finance for Penn Women's Biomedical Society, **Ummayh Siddiqua** served as Co-chair of Penn Traditions Student Philanthropy Council, **Marco Garcia** and **Winson Liu** supported the Biology department K-12 partnership team. Important to highlight is the work of our third-year fellows who serve as peer mentors for the first and second year cohorts! We celebrate all of our fellows work and passion beyond the laboratory and classroom and wish their initiatives the best.

FERBS Graduates

Join us in congratulating the first graduating FERBS fellow, **Criston Young**! Criston worked in the Pohlschroder lab for three years, graduated with honors and co-authored two publications. While at Penn Criston was involved in Penn Band, New Spirit of Penn Gospel choir, Alpha Chi Rho fraternity, and was an invaluable mentor and leader in FERBS. We are excited for his future and are grateful for his contributions to our program and Penn. ●



FERBS Workshop Series

FERBS students were joined by graduate students and post docs from across schools on Penns campus, developing research, presenting, and professional skills this year.

Special Thank You

We extend a big thank you! to The Department of Biology, Department of Biochemistry and Biophysics, the School of Arts and Sciences, The Perelman School of Medicine, SNF-Paideia, The Center for Neuroscience and Society, and The Pre-Freshman-Program for their continued support. We thank all professors, labs, mentors, graduate students and postdocs who participated in the training and developing of each fellow and those that continue to support our mission of equity and retention in the biological sciences.

Thank you all for a great year, we are looking forward to Fall 2023!