

A panoramic view of the Chicago skyline at dusk, with the city lights beginning to glow against a purple and blue sky. The Willis Tower is the most prominent building in the center. The foreground shows a park area with trees and a road.

SROP

Summer Research Opportunity Program

June 17 – August 2, 2024



A Message from the Dean

The Summer Research Opportunity Program (SROP) is a signature activity hosted by The Graduate School at Northwestern University. SROP was launched at Big Ten Academic Alliance universities in 1986 as a gateway to graduate education for underrepresented students. Over the past three-and-a-half decades, it has grown into a supervised, research-intensive experience, complemented by academic enrichment activities and exposure to graduate school as a post-baccalaureate option. And over this time we have expanded the disciplinary scope and faculty engagement so that students with broad-ranging interests may benefit from the program.

The Graduate School is proud to advocate for a diverse graduate student and postdoctoral fellow population, as well as an equitable and inclusive graduate student experience across Northwestern. We are stronger as an institution and as a society when we can learn from and consider a broad range of ideas, experiences, and perspectives. This diversity of backgrounds and experiences is a hallmark of SROP, and I hope that you have enjoyed engaging with and learning from other program participants over the course of the summer.

I am pleased that SROP continues to offer student participants a wide-ranging series of academic activities and professional development workshops to aid in preparing each of you for your steps toward graduate education. I greatly appreciate and admire your perseverance and commitment to your scholarly pursuits. I have had the pleasure of mentoring and working with a number of SROP students, and it has always been extremely rewarding to watch their careers develop.

Congratulations to all our student participants, faculty and student mentors, and staff who have made this experience possible. We hope that SROP inspires your continued learning and exploration, at Northwestern, your home institutions, and beyond.

Sincerely,

Kelly E. Mayo

Walter and Jennie Bayne Professor of Molecular Biosciences
Dean of The Graduate School and
Associate Provost for Graduate Education
Northwestern University



A Message from the **Associate Dean**

Thank you for joining us for our 39th Annual Research Forum for Northwestern's Summer Research Opportunity Program (SROP). We are extremely proud of our SROP participants who will be sharing their summer research projects through oral presentations and poster presentations.

SROP fosters diverse ideas, experiences, and identities for innovation and inclusive excellence. To remain competitive as a research university of the first rank, we must recommit, restructure, and reframe discussions that tie diversity to access, matriculation, retention, academic progress, and mentoring.

We welcomed our SROP students seven weeks ago with orientation programming including workshops on mentoring, research, and writing skills. Our SROP participants networked with current graduate students and administrators, participated in our virtual graduate school professional development series led by campus partners, and enjoyed socializing and coaching in our Purple Table Talks hosted by the SROP group leaders who are current Northwestern PhD students.

The success of SROP would not be possible without the partnership of many Northwestern colleagues. I would like to extend a sincere thank you to Dean Mayo, The Graduate School, SROP faculty mentors, and SROP group leaders, as well as Brittany Young and the entirety of The Graduate School's Office of Diversity and Inclusion. We look forward to continuing to sponsor this wonderful program in the years to come.

Congratulations to our scholars on this milestone accomplishment!

Sincerely,

Sheehan Fisher

Associate Dean for Diversity and Inclusion at The Graduate School and
Associate Professor in the Department of Psychiatry and Behavioral Sciences
Northwestern University



A Message from the **SROP Team**

Thank you for joining us today as we celebrate the achievements and research of our 39th Summer Research Opportunity Program (SROP) cohort. The Graduate School's Office of Diversity and Inclusion (ODI) team, including ODI staff, interns, and collaborators, have had the honor of engaging with the SROP students to ensure a high-quality, co-learning, and community-focused return to an in-person research experience.

We have been continually impressed by the high caliber, resilience, and joy of our students throughout this process, resulting in a cohort of forward-thinking scholars and innovators. We are proud to have worked with and learned from such gifted individuals. We are excited to see the contributions they will make to the future of academia and society.

Our success this year would not have been possible without the partnership of many Northwestern colleagues and the commitment, dedication, and focus of our students. We extend our sincere gratitude to The Graduate School staff, SROP faculty mentors, and all our guest speakers for their support. We look forward to continuing our work together and enhancing this incredible program in the years to come.

Sincerely,

The SROP Team

SROP Participants



Adriana Rodriguez

Psychology, Indiana University - Bloomington

Faculty Mentor: Changiz Geula, PhD • Mesulam Center for Cognitive Neurology & Alzheimer's Disease

Adriana Rodriguez is a rising senior at Indiana University-Bloomington studying clinical psychological science, neuroscience, and Spanish. She is originally from Chicago Heights, Illinois, but now lives in Northwest Indiana. Adriana will be working with Dr. Changiz Geula for a second summer at the Mesulam Center for Cognitive Neurology and Alzheimer's Disease at the Feinberg School of Medicine. In this lab, Adriana will be examining frontotemporal dementia and TDP-43. She is extremely grateful for the opportunity to expand her research experiences in a city she considers to be home. While at Indiana University, Adriana is an undergraduate research assistant for the Clinical Neurotrauma Lab with Dr. Keisuke Kawata exploring the relationship between lifetime exposure to sports-related head impacts and midlife brain health. In addition to being a research assistant, Adriana is also a member of the IU chapter of Nu Rho Psi, Neuroscience Club, and the Alzheimer's Student Alliance. She plans on pursuing a clinical psychology PhD with aspirations of becoming a clinical neuropsychologist studying neurodegenerative disease and dementia.



Alicia Thompson

Biology with a Minor in Biomathematics, Northeastern Illinois University

Faculty Mentor: Heather Pinkett, PhD • Molecular Biosciences

Alicia Thompson is from Chicago, Illinois. She graduated from Harold Washington College in 2017 with an associate's in general studies. Before and during her time in college, Alicia worked as a science educator at various museums across Chicago where she focused on astronomy, ecology, and history. In her free time, Alicia enjoys traveling, baking, ceramics, watching anime media, and listening to music. Alicia attends Northeastern Illinois University where she earned scholarships in the McNair and Marc Star-U programs. She is majoring in biology with a minor in biomathematics, she will graduate in December 2024. Alicia currently is working on her senior thesis focusing on the effects of autophagy on levels of toxic TDP-43 in *C. elegans*. Alicia also volunteered with Expanding Your Horizons (EYH) where she created a parent program to educate parents on how to support their children's interest in STEM. Alicia plans to pursue a PhD in microbiology, where she will focus on infectious diseases and microbiomes. During her time in graduate school, she would like to continue to work within her community, encouraging the next generation of scientists from black and immigrant backgrounds. After completing her education, she hopes to continue to work in research & education.



Andrea López Otero

Interdisciplinary Psychology, Albizu University - San Juan

Faculty Mentor: Sylvia Perry, PhD • Psychology

Andrea López Otero is a rising senior at Albizu University on the San Juan, Puerto Rico campus, where she is majoring in interdisciplinary psychology. She is an active student at her university, volunteering as a teaching assistant in courses such as globalization, Spanish, language, literature, and university life. Andrea also volunteers as a student advisor, is a member of the Christian group Ekklesia, and formed part of a cyberpsychology research group. She works at the only Montessori-based recreational center for older adults in Puerto Rico, creating personalized handicrafts to recreate and giving educational workshops aimed at maintaining and improving older adults' neurocognitive domains. Andrea is a leader at her church, volunteering in various committees including the Christian education committee for children. These life experiences, along with being born and raised in Puerto Rico, have fueled her interest in neurocognitive, developmental, and learning psychology. Her research interests encompass internalized racism and colorism, particularly through children's development and ethnic and racial disparities. This summer, Andrea will be under the mentorship of Dr. Sylvia Perry and graduate student Jonathon Doriscar, working on a project about "white woman tears," comparing society's reactions to white women in distress versus women of color.

SROP Participants



Andrea Thompson

Chemistry and Biochemistry with a Minor in Mathematical and Statistical Modeling of Complex Systems, Northeastern Illinois University

Faculty Mentor: Karla J.F. Satchell, PhD • Microbiology-Immunology

Andrea Thompson is from Chicago, Illinois. She graduated with an associate degree in science from Harold Washington College in 2014. Before returning to school, Andrea worked at the Field Museum of Natural History as a researcher studying ecology and evolution in lichens and ants. She later became a lab manager in an RNA engineering laboratory at Northwestern University. Andrea attends Northeastern Illinois University where she earned scholarships in the McNair and Marc Star-U programs. She is majoring in chemistry with a concentration in biochemistry and a minor in mathematical and statistical modeling of complex systems. Andrea is working on her senior thesis, synthesizing Arsenoplatin-1, a dual pharmacophore anti-cancer agent with a PARP inhibitor to better target Triple Negative Breast Cancer. She is also a tutor that specializes in working with students with disabilities. Andrea expects to graduate in December of 2024 and plans on attending graduate school and completing a PhD in biochemistry or pharmacology. She hopes to study the mechanisms of various diseases and help to create treatments for those struggling chronic illnesses. In her free time, Andrea enjoys listening to music and scientific podcasts, playing video games, and watching movies.



Attalia Ché McDowell

Neuroscience and Creative Writing, University of North Carolina - Chapel Hill

Faculty Mentor: Joshua Glaser, PhD • Neurology

Ché McDowell is a rising junior from Archer Lodge, NC, studying neuroscience and creative writing at her home institution, the University of North Carolina at Chapel Hill (UNC). Ché's research interests revolve around psychological and injurious trauma, such as gun violence experiences on chronic traumatic encephalopathy, and understanding how they impact neurological and behavioral development, particularly in Black and brown youth from disadvantaged communities. At UNC, she currently assists in the Child Imaging Research on Cognition and Life Experiences lab where she studies how interpersonal violence impacts psychopathology risk in children. This summer, Ché is at Northwestern University studying how neural activity prompts movement and behavior through the use of neural decoding by way of machine learning techniques under the mentorship of Dr. Joshua Glaser. After her undergraduate education, she hopes to earn her PhD in cognitive or systems neuroscience and to contribute to the sphere of her research interests, not only through research but also as a professor and non-profit organizer for victims of gun violence. In her free time, Ché loves to watch films, read, and write and has been writing her own book for the past few years.



Ayesha Mohammed

Anthropology and American Studies, Northwestern University

Faculty Mentor: Elizabeth Smith, PhD • Anthropology

Ayesha Mohammed is a rising junior at Northwestern University majoring in anthropology and American Studies and is a Mellon Mays Undergraduate Fellow from Gurnee, Illinois. Her research interests include the impacts of foreign policy on diasporic American communities and discourses on gender and identity in Muslim American communities. She is also interested in the unique ways incarceration affects those racialized as Muslim. Ayesha is especially fond of teaching and after obtaining a PhD, she hopes to contribute to creating academic environments that inspire and defend liberatory thinking. On campus, she is involved in NU Community for Human Rights, the Jasmine Collective, and Hobart House. In her free time, Ayesha likes hanging out with her friends, playing Word Hunt, and drinking blue raspberry slushies.

SROP Participants



Bryce Askew

Chemical Engineering, Arizona State University

Faculty Mentor: Jeffrey Richards, PhD • Chemical and Biological Engineering

Bryce Askew is a rising senior from Gilbert, Arizona, studying chemical engineering in the Ira A. Fulton Schools of Engineering at Arizona State University. Their academic interests include polymer chemistry and polymer membranes, water treatment, and sustainable energy. At Arizona State, they conducted research on polymer membranes for application in water treatment, using a separation method known as pervaporation to separate volatile organic compounds from water. Through Northwestern University's SROP, they worked on the usage of carbon suspensions for electrical conduction in a battery, focusing on studying the anode of the battery system. After graduating from Arizona State in Spring 2025, Bryce hopes to begin a PhD in chemical engineering. Bryce also enjoys spending their free time playing with their cat, going on walks, and playing video games. They hope to serve as an inspiration and mentor for aspiring queer scientists and engineers to pursue their passions in research, and to be loud and proud in their advocacy outside of their work. As a queer person, Bryce hopes to support underrepresented groups establish a footing and succeed in STEM fields.



Claire Nesathurai

Psychological Science, Vassar College

Faculty Mentor: Wendi Gardner, PhD • Psychology

Claire Nesathurai is a returning SROP Northwestern student. She is working towards her dual degree BA-MPH at Vassar College and Columbia University. At Vassar, her concentration is psychological science with a correlate in evolutionary anthropology. At Columbia, she is in the Department of Sociomedical Sciences. After her MPH, Claire intends to complete a PhD in psychology focusing on brain health in marginalized groups. This year, she served as the president of the Biracial Students Alliance at Vassar College. This summer, she is working with Dr. Wendi Gardner and Jonathon Doriscar to research racialized defense mechanisms. In her free time, Claire enjoys painting. She has participated in group exhibitions at Crypt Gallery and James W. Palmer III Gallery in New York.



Daniel Campos

Physics with a Minor in Mathematics, Northwestern University

Faculty Mentor: Mahdi Hosseini, PhD • Electrical and Computer Engineering

Daniel Campos is a rising third-year undergraduate student attending Northwestern University who grew up in New Jersey. He is majoring in physics and minoring in mathematics at the Weinberg College of Arts and Sciences. Daniel's academic interests lie in quantum physics, particularly the emerging fields of quantum optics and information. The previous summer, Daniel conducted research with Professor Dahl's high-energy physics group, where he built several electric systems and used a cryo chamber to test the survivability of acoustic sensors that would be used in a dark matter detection experiment. This summer, Daniel will be working with Professor Mahdi Hosseini and his quantum atom optics group. He will design and run an experiment that utilizes levitated mirrors for precision force sensing. This upcoming fall, Daniel intends to apply to physics PhD programs in hopes of one day specializing in quantum science and engineering. His long-term goal is to contribute to the advancement of quantum technologies and their applications in various fields. During his free time, Daniel enjoys playing piano and soccer, which provide a balance to his rigorous academic and research activities. These hobbies help him maintain a well-rounded lifestyle and inspire creativity in his scientific pursuits.

SROP Participants



Emelina Laura St. John

Neuroscience, Vanderbilt University

Faculty Mentor: Steven H. DeVries, MD, PhD • Ophthalmology

Emelina St. John is a Chicagoland local from the northern suburbs. She loves to play pool, work out, and try new restaurants. Emelina is a hardworking student who wants to become an MD/PhD, hoping to apply focused translational research to her clinical practice. She loves to travel and experience new cultures, as she recently studied abroad in Seville, Spain, in an immersive Spanish-speaking program. This experience taught her the essential skills to successfully communicate with her Columbian relatives and showed her the importance of linguistic diversity in medicine. Emelina has been active in the Arthritis Foundation as a Junior Ambassador, where she had the opportunity to advocate for change on Capitol Hill, volunteer at overnight camps, and fundraise. She is determined to make a difference in medical research, especially for less fortunate populations who need more equitable medical treatment. Emelina wants to change her community to ensure individuals feel safe, accepted, and healthy. Her peers, professors at Vanderbilt, and individuals in the science community have always found her work fascinating and inspiring because she is always eager to discover new things for the long-term goal of improving global health.



Esther Omolola

Media Studies, Hunter College - CUNY

Faculty Mentor: Moya Bailey, PhD • Communication Studies

Esther Omolola is a Media Studies student at CUNY Hunter College in New York City, minoring in Africana Studies, and pursuing a certificate in Arts Management and Leadership. Her research interests lie at the intersection of communication, media, and sociology, with a focus on issues related to Black women. Under the mentorship of Dr. Bailey, Esther's summer research will examine misogynoir in medicine, particularly its life-or-death implications. At CUNY Hunter College, Esther is a Ronald E. McNair Scholar, a Mellon Public Humanities and Social Justice Scholar, and a Roosevelt Honors Scholar. She also serves on the e-board for the African Student Union and The Envoy, Hunter's student-run publication. Esther aims to obtain a master's or PhD in the humanities. Her career goal is to become a creative director in the arts of media industry, contributing to projects that address and engage with topics related to her intersectional identity. In her free time, Esther enjoys watching films and reading.



Gabriel Urbina

Biology, Northeastern Illinois University

Faculty Mentor: Zhe Ji, PhD • Pharmacology

Gabriel Urbina is a rising senior at Northeastern Illinois University where he is majoring in biology. He grew up in Chicago and still lives there. His research interests include the tumor micro-environment, the immune system's involvement in this environment, and how cancer cells can evade and recruit the immune system to proliferate and spread throughout the body. During his spare time, Gabriel enjoys painting, color pencil drawing, folding miniature origami, and tending to his orchids and cacti. This summer, Gabriel will be working in the Ji Lab learning and getting experience with the computational part of biology and how to implement it in cancer research. Gabriel is looking to start his PhD next year and his hoping to go further into cancer immunology research, he is also looking to feature some of his artwork in a gallery within the next few years.

SROP Participants



India Glenn

Anthropology with a Minor in Japanese, Kenyon College

Faculty Mentor: Mark Hauser, PhD • Anthropology

India Glenn (she/her) is a rising second-semester senior from Boston, Massachusetts majoring in Anthropology, with a focus on African diasporic archaeology, and minoring in Japanese at Kenyon College in Gambier, Ohio. Her research centers around reading histories of Blackness for joy, resistance, and liberation through archaeological work. India is also working to integrate ideas from Black studies into the praxis of African diasporic archaeology to ensure research holds Black being with care. She has experience working at four archaeological sites: Monticello, Thomas Jefferson's presidential estate and plantation, Estate Little Princess (ELP), a former plantation in the U.S. Virgin Island of Saint Croix, Kenyon College, and the city of Boston at large. With Dr. Mark Hauser and Dr. Casidy Campbell, India intends to explore how the spatial arrangement for ELP's enslaved village influenced the possibilities for community under the conditions of enslavement and lasting colonial rule. After graduation, India hopes to continue doing archaeological work in Boston and to pursue a PhD in archaeology or Black studies. Outside her academics, India avidly enjoys taking naps in nature, spending time with her cat Wink, eating food, and playing video games.



Javon Key

Secondary Mathematics Teacher Education, University of Pittsburgh - Pittsburgh Campus

Faculty Mentor: Marcelo Worsley, PhD • Learning Sciences

Javon Key (he/him) is a rising senior at the University of Pittsburgh majoring in Secondary Mathematics Teacher Education. He is a substitute teacher and a coordinator of the Black Youth Connection mentorship program in conjunction with the University of Pittsburgh and the Corner Community Center. Javon is interested in the impact of creating a stronger bond between traditional schooling and the community for advancement in math education. He is a consultant for the Pennsylvania Educator Diversity Consortium and an advocate for culturally relevant and sustaining education. Over the summer at Northwestern, he focuses on informal education spaces. Javon is an avid basketball fan and enjoys his time coaching the Pitt Women's Club Basketball team. In the future, he hopes to build and manage a community center in his hometown that fosters love, learning, and innovation.



Jun Park

Political Science and International Studies with a Minor in Environmental Policy & Culture, Northwestern University

Faculty Mentor: Reuel Rogers, PhD • Political Science

Jun Park is a rising junior at Northwestern University, majoring in political science and international studies with a minor in environmental policy and culture. Originally from Pembroke Pines, Florida, Jun has developed an interest in urban politics, transportation policy, and sustainable development. With backgrounds in Korean, Spanish, and Italian, Jun brings a diverse cultural perspective to his research. This summer, Jun is researching the effectiveness of a single transportation authority in Chicago to help minorities, comparing this study with Singapore. His academic focus is on improving urban environments to create more livable and sustainable cities. He hopes to continue his studies at the PhD level, with a particular interest in comparative urban politics. Jun aims to contribute solutions to urban challenges by comparing different cities' approaches to governance and policy. In addition to his academic pursuits, Jun is actively involved in soccer as a referee, officiating games from youth leagues to semi-professional levels. His passion for travel complements his academic interests, allowing him to explore different cities and their approaches to urban planning and sustainability. Through his dedication and diverse experiences, Jun is committed to making cities better places to live.

SROP Participants



Kalaiya Corbin

Sociology and Psychology, Northwestern University

Faculty Mentor: Sally Afia Nuamah, PhD • Political Science

Kalaiya Corbin is a third-year undergraduate student at Northwestern University studying sociology, psychology, and Russian and Eastern European Studies. She is a first-generation student and Mellon Mays Undergraduate Fellow from Raleigh, North Carolina. Her undergraduate research interests revolve around the study of African Americans and their participation in global affairs, educational inequities, and the pathologization of African Americans. Kalaiya's research this summer will examine African Americans' interactions with the Soviet Union and Communism in the 20th century. Her interests in educational inequities extend beyond research; Kalaiya mentored students at Gale Community Academy as a DeBerry Civic Scholar. She also sits on the Diversity and Inclusion and Engagement committees of Supplies for Dreams. Most recently, Kalaiya was awarded the Benjamin E. Gilman grant to study Russian in Kazakhstan. By engaging in cultural immersion as a Gilman Scholar, she hopes to gain a knowledge of narratives beyond U.S. hegemony and further her Russian language skills. In the future, she plans to attend graduate school and pursue a PhD in sociology with a focus on education, social inequality, and African American history. In her free time, she loves to crochet, paint, and spend time with friends.



Karen Garcia-Ramos

Chicanx/Latinx Studies, Pomona College

Faculty Mentor: Katherine Ryan Amato, PhD • Anthropology

Karen Garcia-Ramos (she/they) is a first-generation, low-income rising senior at Pomona College pursuing a degree in Chicanx/Latinx Studies. Her research interests lie at the intersection of gender, decolonization, religion, transnationality, and storytelling. As a Mellon Mays Undergraduate Fellow, Karen explores traditional medicine—rooted in Indigenous conceptualizations of healing—as a tool for immigrant Latinas' autonomy and resistance in the U.S. They are also curious about how spirituality and collectivism operate within these non-Western healing practices. Karen was raised in Southern California's Inland Empire and is proudly a daughter of Mexican immigrants hailing from the states of Michoacán and Nayarit. Her background and lived experience have heavily inspired her research interests, and they hope to continue this work by attending graduate school and obtaining a PhD. Outside of academia, Karen enjoys reading, photography, and listening to music.



Kaya Dierks

English, Yale University

Faculty Mentor: Michelle Huang, PhD • English

Kaya Dierks is a rising junior at Yale University majoring in English. As a researcher, writer, and editor, she is curious about the power of stories to mutate—and transform—how we imagine people who live with marginalized identities. Her research interests include contemporary fiction and film, Asian American Studies, postcolonial theory, critical race and ethnicity studies, and what it means to hold mixed Asian identity. Born and raised in San Francisco, she edits for The Yale Review and has placed fiction in The Adroit Journal, SmokeLong Quarterly, GASHER Journal, and other publications. She was a 2023 Anthony Veasna So Scholars in Fiction Finalist.

SROP Participants



Megan Lin

Social Policy and Sociology, Northwestern University

Faculty Mentor: Vilna Bashi, PhD • Sociology

Megan Lin was born in Peoria, IL, and moved multiple times before ending up near Portland, Oregon. In her journey through various cities, Megan became interested in the ways housing could reinforce other forms of discrimination such as access to education. For college and life after, Megan decided to return to the first major city where her family sought their immigration lawyers: Chicago. Her interests and experiences have inspired her to study social policy and sociology at Northwestern. During her time thus far as an undergraduate student, Megan has become a tutor at Stateville Correctional Center, a One Book Fellow for *Crying in H-Mart*, a performer for NU K-Dance, an outreach chair for Liberty in North Korea, a Transportation Committee Facilitator and Budget Delegate for Participatory Budgeting Evanston, and an events chair for the Undergraduate Prison Education Program. Last summer, Megan was an intern at Housing Opportunities & Maintenance for the Elderly in Chicago where she helped document the organization's coalition-building efforts. This summer, Megan will be exploring relationships between neoliberalism, community organizing, and disinvestment in Chicago. Megan hopes to further engage in policy analysis work in the future. During her free time, Megan enjoys watching television, dancing, watercoloring, food blogging, and city exploring.



Natalia Szponder

Biology, Northeastern Illinois University

Faculty Mentor: Vadim Backman, PhD • Biomedical Engineering, Biochemistry & Molecular Genetics

Natalia Szponder is a current undergraduate researcher, conducting a summer research project in the lab of Dr. Backman at Northwestern University. She is local to the Chicago area and has always had an interest in science from a young age. When she was young, she would make terrariums for bugs. Working the Backman Lab this summer, Natalia has enriched her knowledge on how the role of the physical organization of the genome plays a crucial role in determining cell phenotype and function, which can be applied to understanding the behavior and heterogeneity of cancer cells, and specifically cancer stem cells. She's currently studying this phenomenon using the ovarian cancer stem cell model to explore the influence of chromatin and its dynamic structure and organization changes in response to chemotherapy treatment. She plans to someday earn her PhD in a field in biology and run her own lab in the future. Outside her role as a researcher, Natalia has a deep love for animals and enjoys taking care of them. She owns a cat named Peter, a hamster named Einstein, and a parrot named Philip. As well as her love for animals, she enjoys art, such as painting landscapes.



Nourdean Shraim

Biomedical Engineering, San Jose State University

Faculty Mentor: Guillermo Ameer, D. Sc • Biomedical Engineering

Nourdean is a biomedical engineering student hailing from San Jose State University who aims to perform life changing research in tissue engineering to further help underserved communities in medicine. He grew up in the United Arab Emirates for fourteen years of his life before moving back to the United States to continue his education. He did research on regenerative medicine under the mentorship of Dr. Guillermo Ameer, who guided his work on regenerating endothelial and smooth muscle cells through electrical stimulation to address issues faced by aging individuals and those with diabetes, particularly concerning bladder health. Some of his hobbies include writing literature, programming statistics-based software in Python, listening to music albums, hiking, editing and animating videos, and gaming. His interdisciplinary knowledge allowed him to give a TEDx speech, do research in various different fields, present his findings at multiple events, and work in patient care. Ultimately, his goal is to enter an MD-PhD program or obtain the degrees separately to further his research talents and contribute profoundly to the rising needs for multifaceted solutions for neurodegenerative disorders in healthcare.

SROP Participants



Olivia Vanden Assem

Biological Sciences, Fordham University

Faculty Mentor: Jennifer Kearney, PhD • Pharmacology

Olivia Vanden Assem is a rising senior at Fordham University studying biological sciences at the Rose Hill campus. Olivia's research interests are epilepsy, language learning models (LLMs), and computational neuroscience. She began her undergraduate research career during her sophomore year in Fordham's Department of Chemistry and Biochemistry, working on computational chemistry projects with Dr. Joshua Schrier. Her initial research focused on material sciences and LLMs. She presented her research on teaching LLMs general chemistry at the Spring 2024 Fordham Undergraduate Research Symposium. Olivia switched research paths and studied Dravet Syndrome with Dr. Jennifer Kearney at the Feinberg School of Medicine during Northwestern's SROP. Passionate about mentorship and teaching, Olivia served as a board member of the Physics Club and the Surgical Society, plans to continue her involvement in the Surgical Society, and is also a member of the Sigma Xi Fordham Chapter. Olivia plans to pursue a PhD and hopes to continue studying epilepsy and developing her computational skills. Olivia's long-term goal is to lead a research team that develops innovative computational tools to advance the understanding and treatment of epilepsy. In her free time, she loves to explore NYC with her friends, listen to music, and try out new coffee shops.



Sebastian Haney

Materials Science and Engineering, University of California - Berkeley

Faculty Mentor: Sossina Haile, PhD • Materials Science and Engineering

Sebastian Haney is a rising senior from the University of California, Berkeley studying Materials Science and Engineering. Originally from the Southern California desert, Sebastian's fascination with chemistry and interest in climate change rhetoric inspired him to pursue research in sustainable energy. His research experience includes experimentation with high temperature energy storage and design of lithium-ion batteries with abundant minerals at Lawrence Berkeley National Laboratory. He also studied shape stability of heat-storing phase change materials for cost-effective building temperature regulation at Texas A&M. Sebastian plans to pursue a PhD and work in industry to develop technology that helps unburden future generations from the threat of environmental crises. This summer he is working under the mentorship of Dr. Sossina Haile and PhD student Megan Burrill on the characterization of hydrated cerium oxide nanoparticles, an abundant material with a special range of applications in the fields of catalysis, electrolysis, and biology. Outside of his research endeavors, Sebastian enjoys running, photography, and spending quality time with friends and family.



Stephanie Pedraza Marin

Psychology with a Minor in Mathematical Studies and Complex Systems, Northeastern Illinois University

Faculty Mentor: Adriana Weisleder, PhD • Communication Sciences and Disorders

Stephanie Pedraza Marin was born in Chicago and raised by Mexican parents who instilled in her a deep appreciation for their Hispanic culture and upbringing. She enjoys staying active by going to the gym and taking dance classes. As a first-generation student, Stephanie is a rising senior with aspirations to pursue a PhD in communication sciences and disorders. She is also a MARC Scholar, McNair Scholar, and Honors student at her home institution. Last summer, she conducted research on health promotion initiatives, specifically focusing on cancer prevention through HPV vaccination. During this time, she also had the opportunity to shadow a speech pathologist which significantly heightened her interest in language and the field of communication sciences and disorders. Her research interests include language development and stuttering. Her current research focuses on these areas, specifically examining whether bilinguals or monolinguals are more likely to stutter and whether bilinguals stutter more in their first or second language. This summer, Stephanie will be working with Dr. Weisleder in the Child Language Lab, further expanding her research experience and expertise.

SROP Participants



Tahmid Ullah

Chemistry with a Minor in Mathematics, Hunter College - CUNY

Faculty Mentor: Richard Silverman, PhD • Chemistry

Tahmid Ullah is a rising senior at CUNY Hunter College, where he is majoring in chemistry with a minor in math. He is a first-generation student from New York and a McNair Scholar. He has interests in the use of chemistry within the drug discovery process. This summer, Tahmid will be studying the synthesis of analogues of a compound that has been shown to be active in an assay important for ALS at the Silverman Lab. Tahmid also conducts research within a chemical biology lab at the Memorial Sloan Kettering Research Center, where he studies the synthesis and optimization of small molecule therapeutics to obtain potent and selective inhibitors of the Grp94 protein and other relevant proteins that play a role in the survival of cancer cells. Tahmid hopes to pursue a PhD in chemistry and to become a research chemist in the pharmaceutical industry. Outside of academia, Tahmid enjoys playing and watching soccer and listening to music.



Zakyra Chanelle Ashby

English with Minors in Performance Studies and Film/Media Studies, Northwestern University

Faculty Mentor: Ivy Wilson, PhD • English

Zakyra Chanelle Ashby is a rising third-year from Syracuse, New York, completing her undergraduate degree at Northwestern University in the English Literature Department. With minors in Performance Studies and Film/Media Studies, Zakyra aims to integrate her interests in music, media, and performance throughout her academic career. As a Mellon Mays Undergraduate Fellow, Zakyra plans to continue her studies and obtain a PhD in Performance Studies. Zakyra's current research project focuses on how modern rap music and party music created by Black Americans exist in predominantly white spaces. Zakyra primarily involves herself in the Northwestern community as a playwright, an actor, a radio show host, and an executive member of the University's Black Mentorship Program. Additionally, Zakyra works as a research assistant for scholar Dr. Tracy Vaughn-Manley through Northwestern's Undergraduate Research Assistant Program (URAP). Zakyra's favorite pastimes include crocheting, analyzing concept albums, and attending concerts.

SROP Group Leaders



Anthea Weng

PhD Candidate, Driskill Graduate Program

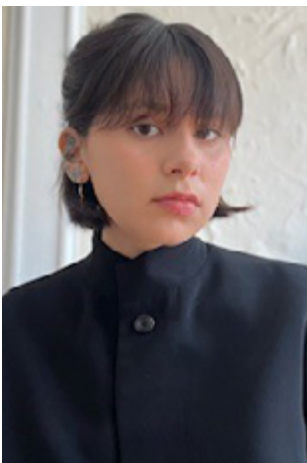
Anthea Weng is a second-year student in Northwestern University's Driskill Graduate Program in Biomedical Sciences. Anthea currently works in a pulmonary fibrosis lab on Northwestern's Chicago campus, but has also pursued Alzheimer's research. Anthea has an interesting perspective of having attended Northwestern for both undergraduate and graduate degrees, and also founded and led an undergraduate mentorship program and the department's journal club. Anthea is from the Midwest originally but loves the West Coast and is hoping to move out there following graduation. Outside of school, Anthea loves to travel, go to concerts, and try new things in general!



Anthony Morales

PhD Candidate, Clinical Psychology

Anthony Morales is a queer, first-generation, Latino student in his second year of the Clinical Psychology PhD program at Northwestern University's Feinberg School of Medicine. His research aims to understand the impact of minority stress and explore how mind-body approaches can be tailored to support underrepresented communities. Anthony graduated summa cum laude from Indiana University with a bachelor's degree in psychology and minor in counseling. During his time at Indiana, he served as the Director of Social Impact for student programming and was selected as a fellow in the Kovener Teaching Fellowship Program, where he addressed pedagogical issues and promoted inclusive practices in higher education. Currently, Anthony is a member of the Korn Ferry Charitable Foundation's Leadership U for Humanity program and is eager to assume his role as a group leader for NU-SROP, as an alumnus himself. As a first-generation Latinx student, Anthony is passionate about mentoring students and creating spaces for underrepresented and diverse backgrounds.



Daisy Matias

PhD Candidate, Performance Studies

Daisy Donaji Matias is a Oaxacan-American writer, curator, and performance scholar from Richmond, Virginia. As a PhD student in the Department of Performance Studies, Daisy works at the intersection of performance theory, psychological anthropology, and phenomenology to consider the transformative potential of meditation, hypnosis, sound healing, and other emergent phenomena upon the minoritarian body. Highlights of her time at Northwestern have included participating in the Dissertation Proposal Development Program and co-convening Object Relations: Performance and Race at the Edge of Theory. Daisy also serves as a Statement of Purpose Advisor for the Institute for Recruitment of Teachers. Daisy holds dual BAs in Art History and Gender, Sexuality, and Women's Studies from Virginia Commonwealth University and an MA in Performance Studies from Northwestern University.

SROP Group Leaders



Erica Rosario

PhD Candidate, Interdisciplinary Biological Sciences Program

Erica Rosario is currently a PhD candidate in the Interdisciplinary Biological Sciences Program (IBIS) at Northwestern University. Currently, Erica is leading several projects which investigate how membrane dynamics impact organelle distribution and membrane contact site formation. She received her bachelor's with honors from CUNY Hunter College, where she developed her interest in science communication. Erica has taken part in several STEM outreach and DEI initiatives in the Chicago area, partnering with organizations such as Society for Advancement of Chicanos and Hispanics in Science (SACNAS), Girls4science, and Diversity in Biological Sciences (DiBS). Erica joined the Summer Research Opportunity Program (SROP) as a STEM group lead the Summer of 2023.



Kayla Boyden

PhD Candidate, English

Kayla Boyden is currently a PhD student in the English Graduate Program at Northwestern University. Her research explores Black contemporary poetry and poetics, Black feminist thought, and critical theory. While Kayla was an undergraduate student at the University of California: Irvine she began working with various student organizations focused on outreach and retention of BIPOC students. There she realized that along with her academic passions, she was invested in supporting marginalized students like herself in their academic pursuits. During her master's degree at the University of California: Los Angeles, Kayla served as the 2020-2021 graduate mentor for the Ronald E. McNair Research Scholars program where she supported 14 undergraduate students of color in their journey towards graduate school. Currently, Kayla is a Poetry and Poetics Mellon Cluster Fellow. She is also a First-Generation Low-Income (FGLI) graduate mentor at Northwestern.



Manny Obisie-Orlu

PhD Candidate, Clinical Psychology

Manny is a second-year PhD student in Clinical Psychology at Northwestern University's Feinberg School of Medicine. She works with Dr. Tina Boisseau in the Study of OCD, Anxiety, and Related Disorders (SOAR) Lab, where she is interested in investigating incompleteness as a transdiagnostic construct and as a core feature of obsessive-compulsive disorder, along with ways to improve OCD treatment efficacy. She also works as a therapist-in-training at a private practice in Chicago. Manny received a bachelor's degree in psychology and a certificate in American Sign Language from the University of Pittsburgh. During her time there, she was involved in research related to stress, coping, anxiety, and OCD in the context of COVID-19. As a former NU SROP (2021) student and someone passionate about demystifying graduate school for underrepresented folks in particular, Manny is excited to serve as a group leader this summer. In her spare time, you can find her enjoying all that Chicago has to offer, getting involved in intramural sports leagues, reading outdoors, and raving about Love Island UK.

SROP Group Leaders



Spencer Nabors

PhD Candidate, Philosophy

Spencer Alexandria Nabors is a PhD candidate in philosophy at Northwestern University. She began her philosophy journey at Spelman College where she graduated in 2020 with honors. Her research interests are in critical phenomenology, social epistemology, and philosophy of race. At Spelman, Spencer was a Mellon-Mays Undergraduate Research Fellow. In 2019, she served as president of the Martin Luther King Jr. Chapel Assistants Program at Morehouse College. She is only the second woman to hold the esteemed position. At Northwestern, Spencer is a Critical Theory Mellon Cluster Fellow. She also serves as a fellow in the Office of Diversity & Inclusion where she assists with retention programming and serves as a graduate mentor in the Summer Research Opportunities Program. In her free time, Spencer enjoys reading by the lake and exploring Chicago.

The Office of Diversity and Inclusion

The Graduate School's Office of Diversity and Inclusion (ODI) focuses on the recruitment and support of underrepresented populations to foster an inclusive environment and facilitate community engagement. ODI is committed to the personal and intellectual growth of our diverse student population. ODI partners with the University's Office of Institutional Diversity and Inclusion (OIDI) and the Office of Equity, among others, to provide a transformative educational experience for graduate students and postdoctoral scholars at Northwestern.



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Special Thanks

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Big Ten Academic Alliance

Office of the President
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Mellon Mays Undergraduate Fellowship Program
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Office of Payroll
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Office of the Registrar
Northwestern University

All Guest Speakers and Panelists

SROP Faculty Mentors and Alumni

Ronald E. McNair Post-Baccalaureate Achievement Program

We would also like to thank all of the graduate students, postdoctoral scholars, and faculty members whose guidance and support were of great importance to our SROP participants.