WFIRM

Wake Forest Institute for Regenerative Medicine

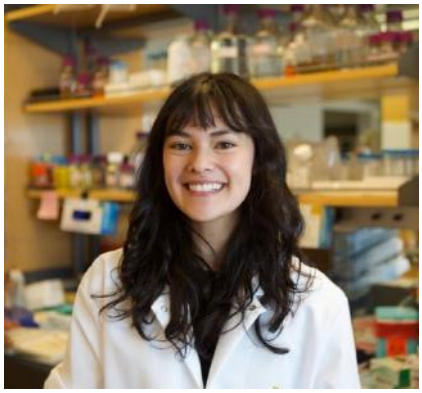
Introducing the 2025 WFIRM Summer Scholars

Offering undergraduate students mentored research opportunities to engage in impactful, multidisciplinary regenerative medicine research at the Wake Forest Institute for Regenerative Medicine

2025 – Scholar's Profiles

Elena Amonette

Biology, Belmont University



My name is Elena Amonette, and I am a junior majoring in Biology and minoring in Chemistry/Literature. I currently attend Belmont University and am originally from Nashville. I am on a pre-med track and will be applying to medical school this upcoming cycle! In my lab at home, I work under Dr. Rachelle Johnson at Vanderbilt and study α-PD1 immunotherapy in treatment of metastatic bone cancer. Outside of science, I love to read, explore new places, and hang out with friends!

Darcey Kate

Engineering, BioMed Concentration

Wake Forest University

Hello! My name is Darcey Kate, and I'm from Wilmington, NC. I am a junior at Wake Forest University, majoring in engineering with a biomedical concentration. I have previous biomedical engineering research experience working on a myotonic dystrophy project at Wake Forest University School of Medicine's BioTech Place. My goal is to pursue biomedical research, earn a PhD, and become a principal investigator. Outside of academics, I enjoy playing sports and am a member of Wake Forest's club tennis and basketball teams. I am also part of Theta Tau, an engineering fraternity, where I serve as the intramural sports chair. Additionally, I volunteer as a middle school leader in Forsyth County, mentoring students at Meadowlark Middle School on a weekly basis

Javier Cooper

Biology, Pre-Med

Xavier University of Louisiana

My name is Javier Cooper, “Javi,” a 21-year-old Biology Pre-Med student at the Xavier University of Louisiana (in New Orleans). I was born in Pontiac, Michigan, and raised in Champaign, Illinois. I am currently pursuing a career in becoming a Doctor of Physical Therapy. I balance my academic pursuits with my membership in Phi Beta Sigma Fraternity Inc., which I joined in the Fall of 2023. As a student at the nation's only private Catholic Historically Black College, I strongly commit to fitness, community service, and my faith—attending church weekly, reading the Bible daily, and participating in Bible studies. In my free time, I enjoy snowboarding, collecting vinyl records, and reading books.

Crystal Echeverria

Materials Science & Engineering

Carnegie Mellon University

My name is Crystal Echeverria, and I’m a rising senior at Carnegie Mellon University in Pittsburgh, Pennsylvania, studying Materials Science & Engineering with an additional major in Biomedical Engineering, born and raised in Harrisburg, PA. I have been a part of the Niepa MicroBioInterface Lab since April of 2024, and have evolved from labeling chemicals in the lab, to performing bacterial species encapsulations for a PhD student’s research, to developing custom devices for the research, to being the dedicated CAD expert of the lab. I am continually progressing in my contributions to the lab and hope to be a published contributor to one of the PhD students’ papers by the end of my senior year. I already have a microfluidic device that I’m working on patenting! I’m eager to learn more about regenerative medicine, especially about how to grow organs and tissue in a laboratory setting. Beyond academics, I have made significant contributions to fostering inclusivity and representation at Carnegie Mellon. As a member of the executive boards for the National Society of Black Engineers (NSBE) and the Society of Hispanic Professional Engineers (SHPE), I gained valuable leadership experience. Building on this, I founded the American Indian Science and Engineering Society (AISES) chapter at my university—the second in Pennsylvania after Penn State’s chapter. I also helped revive a historical fashion show started by Carnegie Mellon’s Black Student Union, SPIRIT Fashion Show, and designed an environmentally sustainable line of dresses and pieces in the latest production of the show! I’m also a residential advisor and volunteer with the American Red Cross (I love to stay busy). I can’t wait to meet all you brilliant people!

Krista Edwards

Kinesiology
North Carolina A&T State University

Krista Edwards is an aspiring physical therapist and recent honors graduate of North Carolina A&T State University, where she earned a Bachelor of Science in Kinesiology with a concentration in Exercise Science (May 2025). She has gained extensive clinical experience through shadowing in outpatient, inpatient, and pelvic health settings, while also engaging in diverse research endeavors. At Duke University, she contributed to cardiovascular research focused on neurovascular health and RNA sensor development for injured cardiomyocytes. At her home institution, she studied endothelial dysfunction in African American populations, exploring inflammatory responses and vascular health interventions, and worked as a research assistant in the Industrial Systems & Engineering Department, contributing to human factors and human-computer interaction studies. With a strong foundation in clinical practice and research, Krista is committed to advancing rehabilitation sciences through evidence-based interventions and advocacy. She will begin her Doctor of Physical Therapy (DPT) studies at Winston-Salem State University in January 2026, where she aims to enhance patient care and rehabilitation innovation.

Catherine Engel

Biomedical Engineering
University of Virginia

My name is Catherine Engel and I am a third year Biomedical Engineering major and Chemistry minor at the University of Virginia! At UVA, I have participated in research focused on creating centrifugal microfluidic devices as a means for improving clinical diagnostic tests. In the future, I hope to go to graduate school, so I am very excited to participate in this program to further my interest. I am originally from Northern Virginia, and in my free time I enjoy playing soccer, playing piano, and baking. I'm excited to meet everyone this summer!

Gabrielle Erwin

Biology

Winston-Salem State University

Gabrielle N. Erwin is an aspiring researcher and creative entrepreneur currently pursuing opportunities at the intersection of innovation, plant science, and medicine. She is currently a student at Winston-Salem State University and is expected to graduate with her Bachelor of Science in Biology in May 2026. Gabrielle serves as the Chair of the American Society of Horticulture Scientists Undergraduate Interest Group and is a NASA/MSI STEM Pathways Scholar, where she contributes to the North Carolina Space Grant Program. She is also the Founder and Head Designer of Idella's Garden—an atelier for botanical art and floral design. She is an oboist, bassist in a folk band, and oil painting aficionado. In addition, she plays a pivotal role as the WSSU Astrobotany Lab Student Coordinator, supporting research and student engagement in plant biology and space science. Gabrielle plans to pursue an MD/PhD and is committed to making research a priority in her future academic and professional journey.

Faith Henderson

Biochemistry

Christopher Newport University

Hi! My name is Faith Henderson, and I am a rising senior at Christopher Newport where I am majoring in biochemistry and minoring in leadership studies. I initially began my collegiate journey with the intention of attending medical school; however, after numerous exposures and experiences I developed a passion for research and learning. My first and current research experience is in an organic synthesis lab. Under Dr. Jeffrey Carney, I am learning about and working toward the synthesis of a torreyunlignan, one of four known in its family. The torreyunlignan family consists of natural products that have therapeutic potential for an array of different diseases. This project has taught me essential lab techniques and enhanced my passion for research. Additionally, in my fifth semester as an undergraduate student I had the opportunity to complete an independent research project. I wrote a review paper analyzing three different primary research articles that experimented with various methods and mechanisms for inducing pluripotency in somatic cells to create pluripotent stem cells. After an entire semester of reading articles, conducting online research, peer reviewing, editing, presenting, and writing, I got an inside look and hands-on experience into a major part of the research process. This specific project sparked my interest in the possibilities of regenerative medicine and motivated me to apply for this program. Overall, these research experiences provided me with invaluable lessons and ultimately helped me decide on a career goal of pursuing higher education in research, where I can intertwine my interests in chemistry and medicine by studying biochemical processes and their connection to human health.

On a personal note, I am originally from Powhatan, Virginia, where I grew up with my two parents, older sister, and younger brother. I have always loved sports, especially basketball where I spent two years on the women's collegiate team at Christopher Newport University. After stepping away, I devoted my extra time to research and working as a lab assistant in the chemistry department. In my free time I enjoy traveling, working out, cooking, spending time outdoors, and being with family and friends.

I am very grateful to be selected as a WFIRM Summer Scholar for 2025! I look forward to learning about regenerative medicine, building new relationships, exploring Wake Forest, and gaining an immersive research experience!

Seth Kinoshita

Biochemistry

Georgia Institute of Technology

Hi! My name is Seth Kinoshita, and I am from Roswell, Georgia. I am a rising fourth year at the Georgia Institute of Technology majoring in biochemistry with which I hope to pursue an MD/PhD in bioengineering.

My current research has pulled me in a myriad of directions. I primarily do research with Dr. Younan Xia on the use of nanoparticles for biomedical repair and imaging purposes. My most recent project involved the creation of a sodium hyaluronate scaffolding system that contained engineering bio-nanoparticles as a drug delivery mechanism. The goal of this project was to provide a less invasive alternative to intrasynovial tendon repair in the hand and is currently undergoing *in vivo* testing at Columbia School of Medicine. Additionally, I have also developed a one-shot method for gold nanoparticles, reducing synthesis time drastically while allowing for proper scaling for different sizes of nanoparticles. These nanoparticles have shown promise in biomedical imaging as an alternative to contrast due to their lack of biotoxicity and ability to display clear scans. It is through both experiences that my interest in regenerative medicine grew. I saw exactly what this research was capable of - improving clinical outcomes for patients in need of good news and providing cutting-edge research to the public. I knew that I had to gain more exposure to it, and I know WFIRM is the best place to do so.

I am beyond excited to explore regenerative medicine more through WFIRM and gain more hands-on experience with clinical translation of the research I do. I am also looking forward to broadening my horizons and gaining exposure to more aspects of regenerative medicine so I can work to connect the multifaceted, complex field. Outside of research and academia, I love to be outdoors and go on hikes. I also love photography, movies, sports (ask me about baseball), and singing! I cannot wait for the summer and to meet all of you amazing people. Looking forward to an amazing program!

Sofiia Kuklina

Biotechnology

Florida Southern College

I'm Sofiia Kuklina, originally from Saint Petersburg, Russia, and I've been living in Florida for the past three years. I'm currently a junior at Florida Southern College, majoring in Biotechnology and minoring in Math. I've always been passionate about biology, especially research in regenerative medicine and bioengineering. I'm also really interested in drug development and cancer research. I'm excited to be part of the WFIRM internship because I'm eager to learn from experts and contribute to cutting-edge research. Outside of my academic interests, I enjoy stretching, meditation, and painting, which help me stay focused and creative. In the future, I hope to pursue a career in biomedical engineering and continue working on projects that can make a real impact. A fun fact about me is that I can cook a variety of traditional Russian dishes and enjoy sharing our cuisine with others. I'm looking forward to meeting everyone and learning together this summer!

Anjali Malali

Neuroscience

Illinois Wesleyan University

My name is Anjali Malali. I am a junior neuroscience major at Illinois Wesleyan University in Bloomington, Illinois. I completed my primary education up until high school in Bangalore, India, and moved to the US for university. I am currently doing research on campus in a developmental biology lab, and I am also a tutor for the Anatomy & Physiology course. I am currently the president of the International Student Organization (ISO) and a captain of the Illinois Wesleyan Ethics Bowl Intercollegiate Team. A few fun facts about me are that I previously worked as a barista, I once saw baby raccoons and I recently hiked in the Smoky Mountains during Spring. I am super excited to be part of the WFIRM Summer Program cohort this summer and can't wait to learn a bunch of new things!

Lottie Miller

Regenerative Bioscience & Applied Biotechnology
University of Georgia

Lottie Miller is a rising fourth year student at the University of Georgia, originally from Chattanooga, TN. She is majoring in regenerative bioscience and applied biotechnology, with a strong passion for regenerative medicine research. Her experience includes assisting in a translational pig model study testing a neural stem cell-derived exosome therapy for pediatric traumatic brain injury. After completing her degrees at UGA, Lottie plans to pursue a career in the biotechnology industry, working to advance regenerative therapies by ensuring they meet safety and efficacy standards to become available to patients. Beyond academics, Lottie serves as a resident assistant for University Housing, where she enjoys helping new students find their place at UGA. In her free time, she loves cheering on the Dawgs at football and other sporting events, exploring new restaurants in Athens, and playing a wide variety of intramural sports, including volleyball and ultimate frisbee.

Dimitrios Owen

Biomedical Engineering
Duke University

Dimitrios Owen is a driven and highly accomplished biomedical engineering student at Duke University, pursuing the Materials Science & Engineering as well as the Innovation and Entrepreneurship Certificates. At Duke, Dimitrios has developed expertise in biomaterials, cellular engineering, and MedTech prototyping through his course work and contributions to the Gall Group and Gerecht Lab. Dimitrios has gained hands-on experience working on micro-physiological models developed with stem cell differentiation and in the industry as an intern at Gilero Inc. Beyond academics, Dimitrios leads projects for Duke eNable, Boys Nation, and combat robotics and cheers on Duke University's football and basketball teams as a member of the Spirit Squad!

Chaeyeon (Lucia) Park

Biostatistics/Mathematics
University of North Carolina, Chapel Hill

My name is Chaeyeon (Lucia) Park, and I'm a rising senior at UNC-Chapel Hill studying biostatistics and mathematics, with a minor in business administration. I'm originally from Seoul, South Korea. My passion for research was first sparked by a presentation I gave on disparities in kidney transplants. After learning about self-growing heart valves and xenotransplantation, I realized that regenerative medicine was something I wanted to pursue. I'm especially interested in applying biostatistics to regenerative medicine, with a focus on areas like biomarker analysis, clinical trial design, and predictive modeling. The WFIRM Summer Scholars Program is exactly the kind of opportunity I've been searching for, and I'm excited to engage with the innovative research happening at the institute.

Outside of academics, I love cross-stitching, trying new workout classes, going to cafes, and journaling. Teaching math is also something I always make time for. I can't wait to meet my fellow scholars and have an amazing summer!

Zephyr (Zoe) Paxton

Biomedical Engineering
Worcester Polytechnic Institute

My name is Zephyr Paxton and I'm a third-year biomedical engineering major at Worcester Polytechnic Institute. I'm from Burlington, Vermont, I'm interested in Star Trek and history, and I'm autistic. I've been learning German for four years and I studied abroad in southern Germany last summer. This summer, I'm hoping to make new friends and explore the Winston-Salem area.

Aditi Rao

Biomedical Engineering

Arizona State University

Hi! My name is Aditi Rao, and I am a junior in Biomedical Engineering at Arizona State University (ASU). At ASU, I work as an undergraduate researcher in Dr. Vincent Pizziconi's BioInspired Complex Adaptive Systems (BioICAS) Laboratory on a project in association with the Mayo Clinic. My research is focused on the isolation, purification, degradation, and biocompatibility of the proteins of *Bombyx mori* silk for the development of tunable, regenerative orthopaedic surgical hardware. In addition, I serve on the executive board for the Biomedical Engineering Society (BMES) and am an active member of the Society of Women Engineers (SWE) chapters at ASU. Through the WFIRM Summer Scholars program, I hope to dive deeper and explore the intersections of engineering, medicine, and research in the fields like cardiology, neuroscience, and nephrology to innovate improved technologies that enhance patient care. I'm excited to connect and work with seasoned researchers and fellow summer interns and look forward to a summer of research and collaborations at Wake Forest!

Tarun Rao

Bioengineering

University of Illinois Urbana Champaign

Hi everyone, my name is Tarun Rao. I am a junior majoring in Bioengineering on the Cell and Tissue Engineering track and pursuing a minor in computer science at the University of Illinois Urbana Champaign. I'm from San Jose, California and some of the things that I look to do in my spare time are playing basketball, football, and weightlifting. I am excited to join the WFIRM Summer Scholars program and explore amazing opportunities in regenerative medicine and tissue engineering as well as make lots of new friends.

Aastha Shukla

Biochemistry

Wake Forest University

Hi! My name is Aastha Shukla, a current second-year student at Wake Forest University studying Biochemistry, and I am thrilled to participate in the 2025 WFIRM Summer Scholars Program. I've had different research experiences that each take on different angles, from ultrafast laser spectroscopy & AI colorectal cancer detection machines to the role of DNA methylation in cancer progression. In this program, I am looking forward to taking on a different side of research involving drug delivery immunotherapy treatments. Outside of academics, I am an avid Indian classical dancer, I have a black belt in Karate, and I love spending my time painting and drawing. In the future, I would like to pursue an MD-PhD and continue research on drug delivery immunotherapy treatments.

Angadh Singh

Biology & Economics

Rensselaer Polytechnic Institute

Hello, my name is Angadh Singh from Wayne, NJ. I currently go to Rensselaer Polytechnic Institute in Troy, NY and am studying Biology and Economics. I'm extremely excited to be joining the WFIRM Summer Scholars Program and contributing to cutting-edge research in regenerative medicine. My academic interests lie at the intersection of biology, health policy, and innovation, and I'm eager to apply what I've learned in the classroom to real-world biomedical research. Outside of academics, I enjoy playing tennis, soccer, and spending time with friends and family. I'm looking forward to learning from the talented scientists at WFIRM, connecting with fellow scholars, and gaining hands-on experience that will help shape my path toward a career in medicine and biomedical research.

Maddie Stevenson

Biological Engineering
Purdue University

Hi! My name is Maddie Stevenson, and I am a junior at Purdue University majoring in biological engineering and minoring in biotechnology. I have been involved in research for the past two years working with polymer diffusion systems, fibrosis treatments, and bacteriophage characterization. My diverse research projects have exposed me to the engineering challenges that arise when scaling benchtop discoveries to patients. I am passionate about innovating treatments that not only solve medical challenges but are also translatable and accessible. I plan on pursuing a PhD after graduation to expand my problem-solving skills and make meaningful contributions. I am excited to learn more about regenerative medicine and the integration of research and medicine at WFIRM!

In my free time, I love running, and I recently ran my first half marathon. I also enjoy playing tennis and pickleball and spending a lot of time outdoors. I'm a huge Purdue basketball fan and rarely miss a home game. I'm so excited to meet everyone, and I'm looking forward to a great summer!

Isa Voinescu

Biochemistry & French
Grinnell College

Hello, my name is Isa Voinescu! I grew up in Santa Fe, NM, but my family is originally from Romania. I am a rising senior at Grinnell College studying Biochemistry and French. Last semester I conducted research on nanotechnology, but I am excited to work on a project on regenerative medicine because it is a field that I want to pursue after undergrad. At Grinnell, I am also a member of the women's tennis team and the track team. Outside of school and athletics, I enjoy learning languages, baking and spending time outside. I am fluent in Spanish, Romanian, and French, and I spent the past semester studying abroad in Nantes, France. While I was abroad, I enjoyed making classic French desserts, like macarons and financiers. I am really excited for this opportunity at Wake Forest and to spend the summer with you all. I am looking forward to meeting everyone in the program!

Jonah Zaas

Classics/Classical Literature and Biology
Hamilton College

My name is Jonah Zaas, and I am a 19-year-old from Durham, North Carolina. I lived in North Carolina my whole life until attending boarding school in Massachusetts for high school and am now a freshman at Hamilton College in New York. I am hoping to major in Classical Civilizations with a minor in biology. I am also working as an intern at the Community Foundation of Oneida and Herkimer County who works to serve and fundraise for other non-profits in the area. I have many passions in my life including hiking, rock climbing, soccer, and community service as well as the Duke Blue Devils.

Kaylee Zhang

Molecular Biology & Biochemistry
Rutgers University

Hi! My name is Kaylee Zhang, and I'm a sophomore studying Molecular Biology and Biochemistry at Rutgers University. At Rutgers, I currently conduct research in the lab of Dr. Maribel Vazquez in the biomedical engineering department on diabetic retinopathy, a disease that causes progressive vision loss due to the breakdown of the inner blood-retinal barrier. Currently, I'm working on a project investigating how hyperglycemia, high glucose levels often associated with diabetes, affects cell barriers in the retina. I'm interested in furthering research on how this condition may disproportionately affect postmenopausal women by studying the impacts of estradiol on these retinal cell barriers. I discovered my interest in regenerative medicine through my research as there are no treatment options for vision loss caused by diabetic retinopathy, and I am super excited to have the chance to further explore research in the topic this summer through WFIRM! Outside of research, I am involved with my school's Asian Student Council, serve as a mentor for an undergraduate research program, and am an ambassador for the historically women's college community at Rutgers! I also love going to concerts, reading, and discovering cute cafes. I hope to attend graduate school in the future and continue research in cellular therapies or regenerative medicine, so I am grateful for the opportunity WFIRM provides me to explore those topics. I'm looking forward to connecting with the other scholars and my mentor over the summer!

Sophie Zhang

Biochemistry

Rice University

Hi everyone! My name is Sophie Zhang, and I'm a sophomore at Rice University majoring in Biochemistry on the pre-med track. I'm also a student-athlete on the Rice Soccer team. I grew up in the greater Seattle, WA area and love hiking, trying new foods, and painting. I also really enjoy working with kids. I'm interested in regenerative medicine because of its potential to stimulate tissue recovery after injuries. I can't wait to meet everyone!