GSBS Office of Career Development

Career Connections

A monthly newsletter highlighting career & funding opportunities

Sophia Huang, 3rd Year Molecular and Translational Biology, and Therapeutics & Pharmacology PhD Student

Fellowship: American Heart Association (AHA) Research Supplement

Title: *"Estrogen-related receptor targeting in diabetic peripheral arterial disease"*

Opportunity Details: AHA Research Supplement & Fellowships Multiple fellowship opportunities to support integrated research and clinical training of promising students who are matriculated in pre-doctoral or clinical health professional degree training programs and who intend careers as scientists, physician-scientists or other clinician-scientists, or related careers aimed at improving global cardiovascular, cerebrovascular and brain health.

A New Approach to Treating Skeletal Muscular Diseases

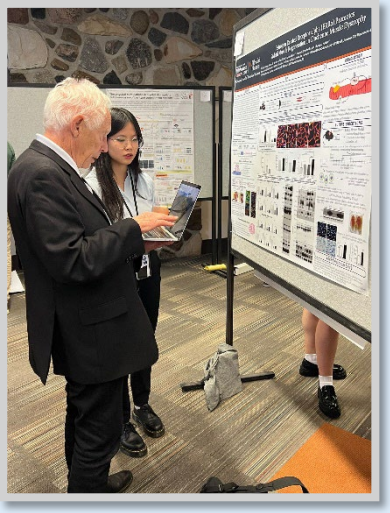
Sophia developed a keen interest in stem cells and muscle-related diseases during her undergraduate research. Her interests were the perfect fit for Dr. Vihang Narkar's laboratory, which investigates skeletal muscle diseases. The supportive environment, strong mentorship, and focus on bench-to-bedside science were the perfect combination for Sophia to develop her fellowship project. She is investigating the role of estrogen-

related receptors as a therapeutic target to promote muscle recovery in diabetic peripheral arterial disease (PAD). There are currently no treatments for diabetic PAD. While exercise is proposed as a rehabilitative therapy, physical activity is not an option for many of these patients due to underlying cardiovascular conditions. Sophia's project investigates if targeting estrogen-related receptors mimics exercise to improve muscle condition. Her work is a critical step in investigating new ways to improve blood flow, promote muscle generation, and prevent limb loss—avoiding critical complications of diabetic PAD. Success in her research also gives hope to other complex muscle wasting diseases including Duchenne Muscular Dystrophy.

Embracing a Supportive Scientific Writing Community

Sophia's biggest fellowship challenge was learning the art of grantmanship—asking for scientific funding for new research projects. She made extensive use of her resources to ensure she met all of the complex guidelines and requirements for her fellowship. From regular feedback sessions with her mentor to meetings with her Grants and Contracts Specialist, Sophia learned the ins and outs of grant submission and development. One of the biggest areas of development was learning how to effectively communicate her science in writing—making use of limited space to showcase the significance of her project in the field of muscle-related diseases.

> *"This experience showed me that I wasn't alone in the application process and had a strong support network to guide me through it"*



Left: *Sophia, 3rd from Left, enjoys lunch with the Narkar laboratory.*

Bottom: *Sophia, right, presents her current research progress at the Society for Muscle Biology Conference.*

Mentorship: The Key to Graduate School Success

Sophia also highlighted that exceptional mentorship has been a cornerstone of her success. She is committed to paying it forward by mentoring others to continue the vibrant scientific community at the graduate school. Her own journey to pursuing her PhD started during her undergraduate studies, when she met another of our current PhD students through a recruitment booth at the SACNAS conference. She credits both her fellowship success and her research success to the positive and collaborative environment the graduate school cultivates. She is grateful for the quality mentorship and guidance of her peers, faculty, and staff.

> *I initially had limited awareness of the possibilities out there and would never have considered research as a viable path without [my mentor's] guidance.*

Left: *Sophia, 3rd from left, celebrates Halloween with the Narkar lab.*