

Jiang Lab | Surgery & Biomedical Engineering April 1 – June 30, 2025

 **From the PI's Desk:** Spring has been an exciting and fulfilling quarter for the Jiang Lab. We celebrated the graduation of our first PhD student, participated actively in a national conference, and advanced our ongoing research with new publications and recognitions.

Society for Biomaterials 2025 Annual Meeting | April 9–12 | Chicago, IL

We had a strong presence at this year's SFB meeting:

- **Brandon Applewhite** and **Taylor Brown** delivered oral presentations on their research.
- **Nikita John** and **Fang Tang** presented their latest work in the poster sessions.
- **Bin Jiang** co-chaired a scientific session, contributing to a vibrant exchange of ideas.

Publications & Manuscripts

- **Natalia Matiuto's** review article titled "Harnessing Mitochondrial Transplantation to Target Vascular Inflammation in Cardiovascular Health" was accepted in *JACC: Basic to Translational Science*.
- **Calvin Chao's** manuscript on sympathetic innervation in AAA was reviewed by the *American Journal of Physiology: Heart and Circulatory Physiology* and is currently under revision.
- **Brandon Applewhite's** paper on targeted mitochondria delivery technology is in revision at *Cellular and Molecular Bioengineering (CMBE)*.



Brandon

Fang

Bin

Nikita

Taylor

Grants & Proposals

- **NHLBI R01:** "Translational Mitochondrial Therapeutics for Endothelial Repair in Vascular Surgery" MPI: **Bin Jiang**, Bowen Wang, Submitted June 2025
- **NHLBI R01:** "Role of Skeletal Muscle Circadian Clock in Peripheral Artery Disease" MPI: Clara Peek, **Bin Jiang**, Submitted June 2025
- **NIH F31 Predoctoral Fellowship:** "Localized Butyrate Delivery for Critical Limb Threatening Ischemia" PI: **Nikita John**, Submitted April 2025
- **Pharma Foundation Predoctoral Fellowship:** "Mitochondrial Transplantation Therapy for Diabetic Endothelial Dysfunction" PI: **Natalia Matiuto**, Pre-proposal submitted April 2025—now invited for a full proposal submission due August 2025

Milestones & Celebrations

- **First PhD Graduate:** On June 20, **Taylor Brown** successfully defended her thesis and became the **first PhD graduate from the Jiang Lab**. We are incredibly proud of her accomplishments and look forward to her next chapter.
- **Master's Graduate:** **Ana Martins** completed her master's in biotechnology and now works as a research technologist at AbbVie.
- **Summer internship:** **Nikita John** is spending the summer as an intern at Bristol Myers Squibb (BMS) in New Jersey—a valuable opportunity to gain industry experience and expand her scientific training.



Taylor Brown, Ph.D. 6/20/2025

🏆 Awards & Recognition

- **Calvin Chao** received the **2025 Allen B. Kanavel Surgical Scholars Award**, recognizing his exceptional research contributions.
- **Bin Jiang** received the **2025 Research Mentor Award** from the Department of Surgery for outstanding mentorship and dedication to trainee success.

👨‍🔬 Lab Community & Trainee News

We're excited to host four outstanding undergraduates this summer, each supported by a summer undergraduate research award:

- **Briana Harris** (Howard University)
- **Shervin Naini**, **Nadia Lotfi**, and **Skye Ellis** (Northwestern University)

Welcome Back:

- **Nidhi Reddy**, now returning to Northwestern as an Integrated Vascular Surgery Resident, following her previous research training with us.

Send-Off:

- **Nicola Habash**, our dedicated medical student fellow, completed his 1-year research fellowship in the lab and is returning to medical school to complete his MD.

🧬 Innovation & Entrepreneurship

- In June, Bin launched a new biotechnology startup: **MitoWay Therapeutics**, aimed at accelerating the clinical translation of targeted mitochondrial delivery technologies. This venture builds on years of foundational research in the lab and reflects a deep commitment to bridging innovation from bench to bedside.

🔍 Coming Up Next

- Pilot studies in mitochondria transplants for diabetic wound healing, aneurysm and angioplasty
- Finalizing manuscript submissions for **Fang, Nikita, Nicola** and **Taylor**.
- Strategic outreach to industry partners through Feinberg Corporate Relations office and Northwestern Corporate Engagement office
- Startup funding efforts, including applications for the CBC Innovation Award and a NIH STTR to support translation of our mitochondrial delivery platform through MitoWay Therapeutics



Jiang Lab Summer Picnic 2025 at Milton Lee Olive Park.

Back row (left to right): Nicola, Skye, Nadia, Taylor, Natalia, and Fang.
Front row: Brandon and Bin.

