

RIYA MURUGESAN

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EDUCATION

University of North Carolina at Chapel Hill, Chapel Hill, NC August 2024 - May 2028

- *College of Arts and Sciences*: Biology (BS) & Computer Science (BS) | *GPA*: 4.0
- *Relevant Coursework*: Introduction to Medical Physics, Foundations of Statistics and Data Science, Cell Biology
- *Honors and Awards*: American College of Cardiology Young Scholar, Ethics Ambassador

RESEARCH EXPERIENCE

Cardiovascular Modeling and Simulation Laboratory, *Research Assistant*, Chapel Hill, NC April 2025 - Present

- Intend to conduct literature review to investigate a relationship between aortic valve diameter and calcification.
- Aim to develop skills in C++ while enhancing cardiovascular models to better represent valvular anatomy.

Bautch Lab, *Research Assistant*, Chapel Hill, NC February 2025 - Present

- Assist in genotyping procedures including tissue collection, DNA extraction, PCR, and gel electrophoresis.
- Intend to support research analyzing the effect of simulated shear stress from the Ibidi flow system on endothelial cell cultures.

UNC Heart Valve Clinic, *Research Intern*, Chapel Hill, NC August 2023 - June 2024

- Actively observed 20+ procedures in the catheterization and electrophysiology lab, gaining a comprehensive understanding of transcatheter aortic valve replacement (TAVR) and other cardiovascular procedures.
- Organized and analyzed postoperative data for 215 patients using Excel, EPIC and the chi-square test, finding no significant relationship between artificial valve size and blood leak after TAVR.
- Authored and presented a research abstract to ~15 attendees at the NY Valves 2024 Conference, practicing effective scientific communication.

WORK EXPERIENCE

UNC Health Cardiology Department, *Medical Scribe*, Chapel Hill, NC January 2025 - Present

- Meticulously document history and information for 10 patients weekly through chart review in a fast-paced clinical environment
- Reinforcing knowledge of cardiovascular medications and terminology.

VOLUNTEERING

UNC Heart Valve Clinic, *Structural Heart Program Aide*, Chapel Hill, NC January 2025 - Present

- Maintain and update the Heart Valve Clinic website, gaining proficiency in Wordpress.
- Guide patients through completing the Kansas City Cardiomyopathy Questionnaire.

UNC Biology Department, *Peer Mentor*, Chapel Hill, NC January 2025 - Present

- Instruct ~10 students on BIOL 103 (How Cells Function) topics during weekly tutoring sessions.

ADDITIONAL SKILLS

Wet lab: DNA extraction, PCR, gel electrophoresis

Web technologies: HTML, CSS, Excel, RStudio

Languages: Tamil (Fluent), Spanish (Beginner)