

# ALIVIA GLAS

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## Georgia Institute of Technology

Bachelor of Science in Biomedical Engineering, Minor in Chemistry & Biochemistry

Atlanta, GA | Aug 2022 – May 2026

GPA: 3.82

### Relevant Coursework:

*Systems Physiology, Cellular Physiology & Lab, Intro to Biomedical Design, Problems in Biomedical Engineering, Organic Chemistry I & II, Biochemistry I, Calculus III, Biology & Lab, Genetics & Lab, Physics, MATLAB*

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**Technical & Laboratory Skills:** Autodesk CAD, Cell Culturing, Aseptic Technique, GraphPad, Microsoft Office

**Interpersonal Skills:** Leader, Strong Work Ethic, Team-Player, Self-Starter, Problem-Solver, Motivated, Articulate,

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### Academic Projects:

**Transcutaneous Electrical Nerve Stimulating Foot Insole** | Peripheral Neuropathy **Aug 2024 – Dec 2024**

- Lead user interviews and observations to identify design inputs for device based on user needs. Assisted in interpreting FDA controls and MAUDE data to integrate requirements into product design, prototyping, and testing. Created CAD of final design and testing protocols for verification testing, helped ideate validation plans.
- Skills gained: Autodesk CAD, User Interviews, Understanding Design Inputs & Regulatory Pathways, Verification Testing, Experimental Design, Designing Validation Tests, Market Segment Analysis, Agile Sprint Project Timeline

**Autophagy Induction by Aspirin, Omeprazole, & Metformin** | Esophageal Adenocarcinoma **Aug 2024 – Dec 2024**

- Lead experimental design and created written protocol. Performed literature review on the PI3K pathway in relation to medications tested. Analyzed CCK-8 results in GraphPad to determine the inhibitory concentration (IC50) for each medication and identified next steps based on results.
- Skills gained: Wet Laboratory Experimental Design, Protocol Writing, Serial Dilutions, Cell Imaging and Counting, Muse Flow Cytometry, Clonogenic Assay, CCK-8 Assay, GraphPad, Poster Presentations, Technical Report Writing

**Portable EMG Monitor** | Postpartum Hemorrhaging & Maternal Mortality **Jan 2024 – May 2024**

- Oversaw physiological research on uterine atony and performed literature review on rural disparities in women's health. Worked with team on identifying design constraints, evaluating concepts with a weighted PUGH matrix, and in creating project testing protocols and analysis.
- Skills gained: Arduino Microcontroller, Basic Concept Sketching, EMG Sensors, Creating Testing Protocols, Concept Evaluation, Identifying Health Disparities and User Needs, Waterfall Project Timeline

**Mutating RFP in E Coli 35.a1 to Change Fluorescence** | Ancestral Sequence Reconstruction **Jan 2023 – May 2023**

- Analyzed Sanger Sequencing results to identify nucleotide changes and correlated the mutations to potential alterations in protein structure that could be responsible for change in fluorescence visualized.
- Skills gained: Micro-pipetting, Mutagenic PCR, Gel Electrophoresis, Fluorescent Assays, Phylogenetic Analysis

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### Research:

**Davis Lab – Undergraduate Researcher** | Cardiac Bioenergetics & Extracellular Vesicles **Aug 2023 – May 2024**

- Learned wet laboratory techniques while working under the guidance of a PhD student mentor to study if Cardiac Progenitor Cell extracellular vesicles can transport intact mitochondria to Cardiomyocytes to restore bioenergetics
- Skills gained: Literature Review, Aseptic Technique, Cell Culture & Passaging, Pipetting, Bicinchoninic acid assay

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### Professional Experience:

**Georgia Tech Finance & Planning** | Student Assistant to Associate Vice President **Aug 2022 – Present**

- Works closely with senior directors and managers on various tasks as needed, including co-leading a service project to sponsor families of Georgia Tech employees experiencing hardships over the Holiday Season.
- Skills gained: Leadership, Microsoft Office, Event Planning, Digitizing & Archiving files, Project Management, Organization, Streamlining Processes, Time Management

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**Certificates:** CITI Good Clinical Practice Health Information Privacy and Security (HIPS) and CITI Human Research & Biomedical Research Investigators and Key Personnel

**Extracurricular Activities:** *President of:* Beta Beta Beta Biology Honors Society (Ensured chapter is nationally recognized and increased enrollment by 227% in one year). *Member of:* Alpha Chi Sigma Chemistry Fraternity, Honors Program, Emerging Leaders Advisory Board (inaugural member), Society of Women Engineers