

BENJAMIN AHN

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EDUCATION

ALPERT MEDICAL SCHOOL OF BROWN UNIVERSITY

First year medical student, Fall 2022

GEORGIA INSTITUTE OF TECHNOLOGY

GPA: 4.0, Bachelor of Science in Biological Sciences (Computational Biology), Spanish Minor
Gold Scholar – top 2% merit scholars program, Honors Program, Senior Research Thesis

Providence, Rhode Island

May 2026

Atlanta, Georgia

May 2022

WORK EXPERIENCE

GEORGIA INSTITUTE OF TECHNOLOGY

Neuroinflammation Researcher

Atlanta, Georgia

11/18 - present

- Investigate temporal dynamics of microglia in response to inflammatory factors to develop novel therapeutic strategy
- Conduct immunoassays & fluorescent microscopy to quantify biomarkers *in vitro* & *in vivo* mouse models
- Lentiviral transduction and flow cytometry of microglia to characterize single-cell temporal ERK dynamics in real-time
- Conduct image-processing, program pipelines to quantify cell morphology & single-cell fluorescence (MATLAB)
- President Undergraduate Research Award (2021, 2022), Presidential Travel Award (2021)

IONIS PHARMACEUTICALS

Neuro Drug Discovery Intern

Carlsbad, California

Summer 2021

- Developed *in vitro* astrocyte model to be used for proof-of-mechanism studies for drugs against neuroinflammation
- Conducted qRT-PCR and whole-transcriptome analysis to quantify astrocyte response to 100+ cytokine cocktails
- Used principal component analysis to characterize astrocyte response according to gene modules (Python, R)
- Demonstrated efficacy of astrocyte model with company-developed oligonucleotide drugs

NORTHSIDE HOSPITAL

Anesthesia Technician

Atlanta, Georgia

Summer 2018, 2019

- Stocked & organized anesthesia supply carts & equipment for 17 General Surgery Operating Rooms
- Shadowed surgeons and anesthesiologist including orthopedic, brain, & gastric surgeries

LEADERSHIP & EXTRA-CURRICULAR

GEORGIA TECH DEPARTMENT OF HOUSING

Resident Assistant

Georgia Tech

2/19 - 5/22

- Trained, certified & respond to student mental health, drug & alcohol, suicide, & security situations
- Mentor 400+ freshmen, provide social & academic advice, resolve roommate conflicts, organize social events

GOLD SCHOLAR AMBASSADORS

Committee Chair

Georgia Tech

5/20 - 5/22

- Lead team of 9 scholars to advocate for scholarship program changes with the Office of Special Scholarships
- Plan annual retreat for 50+ scholars; execute recruitment weekend for 200+ scholars & candidates;

CONSULTORIO MEDICO HISPANO

Clinical Assistant

Chamblee, Georgia

8/15 - 1/21

- Spanish-speaking employee at government-subsidized clinic for economically disadvantaged Latino patients
- See 1000+ patients, check vital signs, conduct glucose analysis, manage patient charts, assist physicians

PUBLISHED/PRESENTED WORK

- **Ahn, B.**, Wood, L. "Understanding Single-cell ERK Temporal Dynamics in Microglia", oral, Georgia Tech Research Symposium (2022)
- Bitarafan, S., **Ahn, B.**, Sherrard, B., Rangaraju, S., Wood, L., "CSF1R Agonists Elicit Distinct ERK Activation and Heterogeneity Profiles in Homeostatic and Diseased Microglia", poster, Biomedical Engineering Society (2022)
- Datta Roy, P., **Ahn, B.**, Wood, L., LaPlaca, M. "Mild repetitive traumatic brain injury induces change in microglial morphology", National Neurotrauma Society (2022)
- **Ahn, B.**, Weinstock, L., Wood, L. "Microglia Pro-inflammatory Dynamics in Alzheimer's Disease", poster, Biomedical Engineering Society (2021)
- Bitarafan, S., **Ahn, B.**, Chen, M., Rangaraju, S., Wood, L., "Distinct Patterns of MAPK Pathway Activation in Homeostatic and Pro-inflammatory Microglia", oral, Biomedical Engineering Society (2021)
- **Ahn, B.**, Weinstock, L., Wood, L. "Temporal Control of Microglia Activation with Exogenous Inflammatory Factors in Alzheimer's Diseased Mice", oral, Georgia Tech Research Symposium (2021)
- Bitarafan, S., Ramesha, S., Xiao, H., **Ahn, B.**, Rangaraju, S., Wood, L. "Systemic inflammation elicits distinct brain immune signaling dynamics in female and male mice with AD pathology", poster, Alzheimer's Association International Conference (2021)

AWARDS, SKILLS, INTERESTS

- Keynote Speaker/Rapper, Georgia Tech Undergraduate Convocation; 800,000+ views (2019)
- John H Riddley Research Award, top Junior biology student selected by Georgia Tech faculty (2021)
- Languages: Spanish (proficient), Python, Java, MATLAB, ImageJ, R, Linux
- "Our Beloved Community" Award, outstanding Resident Assistant selected by Georgia Tech Housing (2020, 2021)