

Achok Alier

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EDUCATION

Boston University Chobanian & Avedisian School of Medicine

Master of Science in Medical Sciences

May 2025

Boston, MA

Relevant Coursework: Biostatistics, Designing Clinical Research Studies, Management of Clinical Trials, Business of Science

The University of Tennessee at Chattanooga

Bachelor of Science in Biology

May 2023

Chattanooga, TN

Relevant Coursework: Creative Writing, Scientific writing

RESEARCH EXPERIENCE

Graduate Research - Neuroanatomy and Biology

Aug 2024 - May 2025

Boston University Chobanian & Avedisian School of Medicine

Boston, MA

- Performed histochemical staining to investigate compartmental organization in non-human primate tissue.
- Analyzed complex staining patterns and spatial distributions.

Research Fellow – Neuroscience and Biomarker Analysis

May 2022 - Aug 2022

University of Cadiz – Summer Fellows Program

Cadiz, Spain

- Conducted secondary research and statistical analysis of circulating biomarkers (serum NfL) in neurological diseases.
- Interpreted patient blood sample results and integrated imaging data (CT, MRI) to assess tissue damage.

Research Assistant – Mathematical Biology and Data Modeling

Aug 2021 - May 2023

Applied Knot Theory Group, University of Tennessee at Chattanooga

Chattanooga, TN

- Modeled complex protein structures (SARS-CoV-2 spike) using advanced computational methods.
- Employed Python for 3D visualization and simulation of protein conformations.

PRESENTATIONS & PUBLICATIONS

Alier, A., et al. (2025, May 15). High-resolution segmentation of the cavum septum pellucidum in young adult human brains. *Frontiers in Neuroanatomy*, **19**. <https://doi.org/10.3389/fnana.2025.1566762>

Alier, A., Rushmore, R.J. *High-resolution segmentation of the cavum septum pellucidum in young adult human brains.* Chobanian & Avedisian School of Medicine – Graduate Medical Sciences Research Symposium. **April, 2025.**

Alier, A., Rosa, J. *Serum Neurofilament Light Chain Biomarker in Neurological Diseases* – University of Tennessee at Chattanooga Spring Research and Arts Conference, **2022**

Alier, A., Panagiotou, E. *A Topological Study of SARS-CoV-2 Spike Proteins* – University of Tennessee at Chattanooga ReSEARCH Dialogues, **2021–2023**

EMPLOYMENT

Course Mentor (Teaching Assistant) – Medicine

April 2025 – Present

Kaplan University Partners – Remote

- Delivered asynchronous academic support to precollege students in STEM courses via Canvas LMS.
- Provided guidance on course content and final projects; tracked engagement and outcomes.

Course Builder

July 2024 - May 2025

Boston University Virtual – Remote

- Developed and maintained course content using LMS tools and Adobe Dreamweaver.
- Edited HTML/CSS layouts and incorporated student feedback to optimize digital learning tools.

Undergraduate Research Assistant

August 2022 - May 2023

UTC SimCenter

Chattanooga, TN

- Contributed to interdisciplinary research on machine learning approaches in computational engineering.

Patient Care Technician

December 2020 - August 2023

Erlanger Hospital - Cardiac Intensive Care Unit

Chattanooga, TN

- Supported patients post-surgery with physical, nutritional, and emotional care in a high-acuity ICU environment.
- Assisted clinical staff with procedures, patient monitoring, and documentation to maintain care.

LEADERSHIP & COMMUNITY ENGAGEMENT

Volunteer Mentor – Big Sister

May, 2024 – Present

Big Brothers Big Sisters of Eastern Massachusetts

Boston, MA

- Provide one-on-one mentorship to a high-school student through weekly on-site visits focused on social, emotional, and academic support.
- Support personal growth and confidence by offering consistent encouragement, guidance, and a positive role model within the school environment.

Event Coordinator

January 2022 - May 2023

African Student Association (ASA)

Chattanooga, TN

- Organized cultural events such as fashion shows, trivia nights, and karaoke to promote African heritage and community building on campus.
- Collaborated with student leaders to increase member engagement and foster cultural pride.

Vice President of Programming & DEI

December 2021 - December 2022

Sigma Kappa - Theta Phi

Chattanooga, TN

- Designed and evaluated chapter-wide programs aligned with member needs and budgets.

SPECIALIZED SKILLS

- Proficient in Microsoft Office Suite (Word, Excel, PowerPoint)
- Intermediate in data analysis and scientific computing: Python, SPSS, Anaconda
- Familiar with LMS platforms (e.g., Canvas), Adobe Dreamweaver, and basic HTML/CSS
- Strong written communication skills with experience in scientific writing, research reporting, and publication preparation (2nd author, *Frontiers in Neuroanatomy*)
- Regulatory/IRB protocol drafting for clinical studies; GCP guidelines
- Experience preparing scientific presentations and presenting data to healthcare providers or research audiences

AWARDS & HONORS

- Research & Creative Engagement Grant, 2022
- Hope Scholarship, 2019-2023
- Academic Service Scholarship, 2019-2023