

# Christina Choi

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## EDUCATION

<b>Massachusetts Institute of Technology (MIT)</b> , Cambridge, MA	2025-2029
- <b>Relevant Coursework:</b> Multivariable Calculus, Classical Mechanics, Introduction to Solid-State Chemistry, Introduction to Python	
<b>Homeschool</b> , Tbilisi, Georgia; Fairbanks, AK, Cambridge, MA	2021-2025
- <b>Johns Hopkins Center for Talented Youth:</b> Multivariable Calculus, Linear Algebra; <b>Relevant AP Courses:</b> Biology (5), Chemistry (5), Physics C: Mechanics (5) & Electromagnetism (4), Calculus BC (5), Statistics (5)	

## RESEARCH EXPERIENCE

<b>Tanzi Lab, Dept. of Neurology, Mass General Hospital (MGH)</b> , Boston, MA	Summer 2024
- Used western blotting and immunohistochemistry to identify inflammatory markers in mice brains overexpressing amyloid-beta, investigating the role of the gut-brain axis in Alzheimer's disease	
<b>Wald Lab, Althinoula A. Martinos Center for Biomedical Imaging, MGH</b> , Boston, MA	2023-2024
- Reproduced mammalian peripheral nerves through simulation software NEURON	
- Compiled data on the effect of electrical stimuli duration on threshold potential	
<b>Alm Lab, Dept. of Biological Engineering, MIT</b>	Summer 2023
- Used microbial genome-wide association studies (mGWAS) to link bacterial genotypes to phenotypes	
<b>Women's Technology Program in Mechanical Engineering, MIT</b>	Summer 2024
- Designed software application "NoctoWatch" to counter dementia wandering	
- Explored 3D printing with Onshape; Built a circuit board, Rube Goldberg machine, and rolling ball sculpture	
<b>Biotech in Action: Virtual Fall Program, Biogen and Lemelson-MIT</b>	Fall 2022
- Developed microglia bioengineering model; Proposed vocal recognition software for patients with Lewy body dementia	
<b>Biological Research: Synthetic Biology, Boston Leadership Institute</b> , Boston, MA	Summer 2022
- Performed DNA extraction and learned PCR, gel electrophoresis, and CRISPR laboratory techniques	

## WORK/VOLUNTEER EXPERIENCE

<b>Neville Place, Assisted Living and Compass Memory Support</b> , Cambridge, MA	2022-2025
- Led group activities, including physical exercise and memory/word games, for residents living with Alzheimer's; Met one-on-one with more advanced patients	
<b>Walk to End Alzheimer's, Alzheimer's Assoc. of Greater Boston</b> , Boston, MA	Fall 2022, 2023
- Organized a team of fellow homeschooled students and raised over \$10,000 in support of dementia research	
<b>The Rivendell Academy Homeschool</b> , Tbilisi, Georgia; Cambridge, MA	2020-2023
- Algebra 1 tutor and test proctor	

## EXTRACURRICULARS AND SKILLS

**Activities:** MIT Pre-Medical Society, MIT Cross Products (A Cappella), MIT Asian Baptist Student Koinonia, Taekwondo, Piano

### Skills:

- **Biology:** Immunohistochemistry, Western Blotting, BCA assaying, Microtome sectioning, Cell culture, DNA extraction, PCR, Gel electrophoresis, CRISPR
- **Computer:** Python, Onshape Computer-Aided-Design, LoggerPro
- **Mechanical:** Soldering, Band saw, Drill bit, Sanding wheel