Jack R. Waters

MD/PhD Student, University of Pittsburgh-Carnegie Mellon University MSTP
waters.jack@medstudent.pitt.edu | 412-576-9145

Education

University of Pittsburgh Medical Scientist Training Program — Pittsburgh, PA
MD - University of Pittsburgh, School of Medicine — 2022-Present
PhD - Carnegie Mellon University, Program in Systems Neuroscience — 2024-Present
Co-advisors: Shushruth Shushruth, Matthew Smith

Brown University — Providence, RI
Bachelors of Science with Honors - Cognitive Neuroscience — Class of 2021

New York University — New York, NY
Tisch School of the Arts, Cinema Studies — 2017-2018

Experience

Graduate Research — Pittsburgh, PA
Shushruth Lab, Carnegie Mellon University — 2023-Present

- Investigated abstract decision-making and time perception in humans and rhesus macaques

Research Technician/Visiting Scientist — New York, NY
Yasmine El-Shamayleh Vision Lab, Columbia University — 2021-2022

- Produced viral vectors for use in optogenetics and performed visual neuroscience experiments in rhesus macaques

Undergraduate Researcher — Providence, RI
Laboratory for Cognitive and Perceptual Learning, Brown University — 2019-2021

- Assisted in fMRI, MRS, and EEG research on human visual plasticity under the guidance of Prof. Takeo Watanabe

Undergraduate Researcher — Pittsburgh PA
Amankulor Lab, UPMC Hillman Cancer Center — 2019

- Studied immune evasion and immunotherapeutic approaches to IDH mutant glioma using in vivo mouse models

Co-Founder — Pittsburgh, PA
ORTube — 2016-Present

- Designed the ORTube, a device for treating cholera in developing nations, and incorporated as a non-profit in 2019. Associated Grants:
  - *Wharton Innovation Fund Validation Phase Award*
  - *Wharton Innovation Fund Innovation Phase Award*
  - *College Alumni Society Undergraduate Research Grant*
  - *Gelfman International Summer Fund*
  - *College House Research Fellowship*

Publications and Presentations

Abstraction of Visual Decision-Making — 2023
J.R. Waters, S. Shushruth, M. Smith — Poster, University of Pittsburgh

Visual Perceptual Learning of Natural Stimuli — 2021
J.R. Waters, T. Watanabe — Poster, Brown University

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Reduction of the glutamate concentration in the ventromedial prefrontal cortex during human sleep — 2021
T. Yamada, M. Tamaki, T. Barnes-Diana, S. Khan, J. Waters, T. Watanabe, Y. Sasaki — Abstract, Society for Neuroscience

Service

Student Interest Group in Neurology — Pittsburgh, PA
Coordinator — 2022-Present

- Recruited medical students to the field of neurology through organizing events with faculty and resident support

Street Medicine at Pitt — Pittsburgh, PA
Volunteer — 2023-Present

- Provided clinical care and resource allocation to homeless and unhoused populations in downtown Pittsburgh

Pediatrics Clerkship Student Advisory Group — Pittsburgh, PA
2024-Present
Student Advisory Group Member

- Participated in improvement of the University of Pittsburgh's core medical clerkship in pediatrics

Student Interviewer — Pittsburgh, PA
University of Pittsburgh MSTP — 2022-Present

- Interviewed applicants for admission to the medical school and MD/PhD program

Volunteer — Mukono District, Uganda
Omni Med — 2018

- Traveled to Uganda to conduct preliminary trials for use of the ORTube while volunteering at rural medical centers and guiding health education efforts

Honors

Pitt Med Professional Accolade (2022)
- Received peer accolade for commitment to neuroscience and supporting education in neurology among classmates

Honors Thesis - Visual Perceptual Learning of Natural Stimuli (2020-2021)
- Proposed development of complex natural stimuli to be used in studies of visual perceptual learning

National Sigma Xi Honors Society (2021)
- Nominated for membership of honorary scientific society for initial research achievement and having demonstrated an aptitude for research

Magna Cum Laude (2021)
- Given to the upper fifth of Brown's graduating class

Keynote Speaker - Design to Make a Difference (2019)
- Spoke to Pittsburgh students and educators about the importance of engineering education and philanthropy as a representative for ORTube

Second Place - Covestro Pittsburgh Regional Science and Engineering Fair (2017)
- Awarded second place for early prototypes of the ORTube in Western Pennsylvanian science competition