

Zachary M. McKenzie

EDUCATION

Harvard Medical School

Boston, MA: July 2017-Expected May 2025

MD/PhD Candidate Pathways Program; BBS PhD program

Williams College

Williamstown, MA: Sept. 2010-June 2014

B.A. in Chemistry and Highest Honors in Biology; Neuroscience and Biochemistry & Molecular Biology concentrations; pre-medical studies; magna cum laude

- Phi Beta Kappa; Sigma Xi; William C Grant Award Jr., Award in Biology; Dean's List; Class of 1960s Scholar in Biology, Chemistry, Biochemistry & Molecular Biology, and in Neuroscience

RELEVANT EXPERIENCES

Dana-Farber Cancer Institute

Boston, MA

Research Technician for Doctor Cigall Kadoch

April 2015-Present

- Protein analysis utilizing immunoprecipitations, density sedimentation, and urea denaturation
- Molecular cloning for the introduction of variations of subunits of the BAF complex
- ChIP-seq, RNA-seq, and ATAC-seq protocols
- Lentiviral and retroviral cell culture
- Purchasing of reagents for the lab

Williams College Biology Department

Williamstown, MA

Neuroscience Research Assistant to Assistant Professor Tim Lebestky Jan 2012-June 2014 (including Summers 2012 & 2013)

- Set-up genetic crosses by collecting appropriately genotyped males and virgin female *D. melanogaster*
- Ran circadian monitors to look at phenotypes of various dopamine receptor mutants
- Aided in design, assembly, and debugging of a fly stampede assay, which uses phototaxis to measure responses of flies to visual stimuli
- Helped to redesign parts of Puff-o-mat assay for measuring arousal in fruit flies
- Worked on serotonin transporter gene flies
- Beginning Summer 2013 began Honors Thesis on DopR mutants and driving a functional, but truncated DopR using the GAL4/UAS system in *D. melanogaster*

Peer Tutoring Program

Williamstown, MA

Co-Coordinator & Tutor

Sept. 2012-Present

- Train new peer tutors in ethics and tutoring techniques
- Manage the tutoring log system, training new tutors in using the system, and sending email reminders to tutors who fail to fill out the log
- Peer Tutor in Cellular Biology, Organism-level biology, Genetics, Neuroscience; Introductory Concepts of Chemistry and Introductory Concepts of Chemistry: Advanced Section, Introductory and Intermediate Organic Chemistry, Biochemistry I: Structure and Function of Molecules, Single and Multivariable Calculus, Introductory Statistics, Linear Algebra, Electricity and Magnetism, and Chemistry of Cooking

Quest Ephs Student Group

Williamstown, MA

Co-President (Sept. 2012-Sept. 2013)

Sept. 2010-May 2014

- Quest Ephs is the Williams Chapter of QuestBridge, an organization that helps low-income students apply for college. Our group had weekly meetings where low-income students could come together and share their frustrations and/or just have a community experience
- I was a mentor within the program for one year, which included meeting with an underclassman to help with adjusting to college