

Example STEM-Biology IDEA Grant Personal Statement

Please describe how you became interested in this topic and any activities that you believe have prepared you to undertake this project. You should also discuss how your project relates to your graduate school, professional school, or career goals.

PERSONAL STATEMENT (500 word limit)

My interest in neurological research stems from the fact that I come from a family with a history of mental illness: my father has ADHD and bipolar disorder while my brother has microcephaly. My desire to learn what causes the abnormal psychological conditions within my own family drove me to study science and influenced my decision to become involved with research. I desire to impact neurological research and treatment through the course of my career and ultimately aim to better the lives of individuals with mental disorders. Because of this desire, I was intrigued when the KO mice appeared to express ADHD-type symptoms and am excited to be performing research that could later aid people diagnosed with ADHD.

By completing a directed independent study course in Dr. Fadool's laboratory before beginning this project, I was able to gain experiences that have proven to be invaluable in enacting my current research. When I first began researching with Dr. Fadool, I phenotyped WT and KO mice subjected to alterations in diet. I used a Knosys olfactometer to test odor discrimination and thresholds of mice and also retrieved, weighed, and ran the mice through three stages of operant conditioning. I monitored mouse body weights, managed water deprivation schedules, and fed the mice modified diets on the weekends. I also generated graphs of the data and helped create and present a poster representing our work at a local competition. My familiarity with weighing and handling mice, setting up and monitoring experimental apparatuses, performing behavioral screens, and analyzing and presenting data directly parallels the independent work I am now performing and has greatly expedited my researching process thus far.

I later assisted Dr. Fadool with mouse husbandry and observed and aided in pairing mice for breeding, separating mothers and pups, and labeling cages with breeding updates. By learning how to maintain and breed mice, I was able to more closely assist Dr. Fadool as we bred and raised the mice I will use for my behavioral experiments. Additionally, I was involved with performing glucose injections and taking fasting plasma glucose levels using tail biopsy, thus giving me experience in administering solutions via syringe. Overall, my initial experiences with behavioral experiments, preparing and presenting research, mouse maintenance, and injections have been highly influential in preparing me to perform anxiety and hyperactive tests, administer methylphenidate treatments, and present my data upon completion of my research.

After completing my undergraduate education, I will obtain a Ph.D. in neuroscience and will then further develop my writing, oral, and grant submitting skills through a postdoctoral fellowship or a teaching position. My ultimate goal is either to work in neuropharmacology industry and research neural drugs and their physiological responses, or to conduct research and teach biology courses in a university setting. By evaluating methylphenidate drug treatments and examining the effects of psychological disorders on behavior, I am gaining direct experience in the field I plan on pursuing and am thus excited to perform research on potential ADHD model mice.

EXAMPLE PERSONAL STATEMENT (500 word limit)

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