

# Final Reflections on Brain and Behavior at Michigan Math and Science Scholars

Lauren Fakhoury | GFF 2020

Thanks to Garwin Family Foundation, I was able to attend Brain and Behavior at Michigan Math and Science Scholars. The course focused on behavioral neuroscience, so I got to spend four weeks learning about everything from the history of neuroscience to sex differences in the brain. Class was challenging, fascinating, and a lot of fun.

Because of COVID-19, our three-hour classes were held over Zoom. While I would've liked to attend in person, I did not feel that the Zoom class put us at much of a disadvantage; we were able to do things, such as attend a virtual neuroscience conference, over Zoom that would have been impossible had we been on campus. Interacting with fellow classmates was more difficult over Zoom, but being split into small groups via breakout rooms encouraged us to get to know one another.

Almost every day, we began class with a lecture, throughout which we split into breakout rooms to participate in group activities and discussions. On the days that did not include a lecture, we watched and discussed *A Beautiful Mind*, created and presented data blitzes, and debated whether Santiago Ramón y Cajal or Camillo Golgi was more deserving of the 1906 Nobel Prize in Physiology or Medicine, amongst other activities.

One of my favorite parts of the program was the data blitz presentation I worked on with a group of classmates. Each four-person group was tasked with making three slides to address a specific facet of a neuropsychiatric disorder. My group chose to look at gender differences in dopamine receptors as they relate to ADHD, specifically the gender gap in its diagnosis. After reading a paper on the topic, we found that in males, dopamine receptors are overproduced in the striatum and nucleus accumbens prior to puberty, and that the excess receptors are then sharply eliminated before the male reaches adulthood. The researchers who wrote the paper hypothesized that this overabundance of dopamine receptors contributes to the hyperactivity stereotypical of ADHD, which is likely to catch attention and lead to diagnosis. In females, however, dopamine receptors are eliminated only minimally, likely reducing their odds of exhibiting hyperactivity and thus being diagnosed.

Brain and Behavior challenged me to apply my mind in new ways. I got to explore neuroscience, psychology, and their intersection from perspectives I had never considered and network with people of similar interests while doing so. Class was fast-paced and full of content, and my classmates and instructors were always helpful and supportive. Our activities and projects were fun and unique, and collaborating with my fellow students introduced me to new ideas and ways of thinking.

Attending Brain and Behavior was an amazing experience that furthered my appreciation for neuroscience. I learned about the brain and its workings, met and connected with new people, and broadened my image of science as a whole—and I had fun! I really enjoyed class; the topics we covered were fascinating, the instructors made class entertaining, and the people were awesome to connect with. I am so grateful to Garwin Family Foundation for providing me with this opportunity!