Molly McQuillan graduated from Bard in 2017. We reached out to Molly with some questions.

Hi Molly! Where do you work now? What is your position called?

I work at MBL, or the Marine Biological Laboratory, in Woods Hole, Massachusetts. I'm a research assistant in Dr. Jennifer Morgan's lab. Dr. Morgan is a neurobiologist; she works in spinal cord injury and regeneration, and also studies how synaptic function is affected by neurodegenerative diseases, like Parkinson's Disease.

Can you say a few words about your research?

Our lab has two major projects going on right now, one looking at how synaptic transmission is restored after spinal cord injury, and the other, which is the project I'm working on, is looking at mechanisms of synaptic defects using a Parkinson's Disease model. Our main animal model is the sea lamprey, which is not very nice-looking, but it has amazing regenerative capacity as well as giant axons which allow for easier imaging and sectioning.

What does your typical day look like? What do you do at work?

It varies, depending on my experiment schedule. There are basic lab maintenance tasks that need to get done every week**,** such as making stock solutions for experiments and purchasing lab supplies. In terms of my own experiments, I'm mainly doing bench work which can include doing dissections, staining tissue with antibodies, or running gels for biochemistry experiments, or I'm at my computer doing image analysis. Surprisingly, analyzing data can take much longer than the actual experiment! Most of my bench work takes about 1-2 weeks, with each day planned out by the protocol, sometimes even down to the minute, while the analysis and computer work can take about a month or two, but I'm able to plan it out for myself.

When you started, was it a big difference, compared to your work at Bard?

Yes and no. The general lab settings and expectations were fairly similar, but I think the biggest difference was having more time to devote to experiments and science in general. Back at Bard, the time I had to give to experiments was almost always scheduled around other course work and events, or I would even run to the lab during a lecture break. It's been a nice change to be able to devote full days to science.

Was it hard to find this position? How did you go about it?

Funny enough, during my last semester**,** in Animal Physiology class, I found myself picking papers for class presentations that used marine animal models. I became extremely fascinated with marine biology because of this, and joked with some friends that in my next life, I might even become a marine biologist. They actually encouraged me to find out if I could somehow combine marine biology with my current interest in neuroscience. I looked into it, and I discovered MBL. I wasn't even sure what MBL was at first, since I saw on their website that they were offering a lot of courses, but I dug deeper, saw that

they are actually a pretty well-known research facility, and eventually found an opening for the position in Jen's lab.

What do you like the most about your work at MBL?

Since I've started here, I've had the chance to learn so many new techniques and I've really enjoyed being able to figure out which methods I prefer and what I'm good at. I've also had the chance to contribute to a paper for the lab that's now starting to transition into a new study for possible future publication. I'll be presenting the preliminary results at the Annual Society for Neuroscience conference this year, which I'm really excited about! Aside from lab science though, the MBL is quite unique by itself. Woods Hole is a small community on Vineyard Sound and Buzzards Bay on Cape Cod, so it is something of a summer resort area. But MBL offers many courses in multiple fields of biology throughout the year, so there's always a stream of visiting scientists and students from all over the country and the world here. It's been a great opportunity to meet many different people who share similar scientific interests.

What are your plans for the future?

Right now I'm in the process of applying to PhD programs in Biomedical Science or Neuroscience this fall for next year. I'm still in the thick of applications, so my longer term plans aren't as concrete at the moment.