From tuberculosis to leishmaniasis, the 12th annual Howard Hughes Medical Institute (HHMI) Research Symposium on March 3 boasted nearly 30 undergraduate research projects. Undergraduate researchers exhibited colorful posters in the Colonnade of the Bioscience Research Building, enthusiastically presenting about subjects as varied as cadaveric legs to oyster shells.

The HHMI grant helps fund undergraduate students conducting independent research projects under the mentorship of faculty members. Students receive stipends to do their research, funds for research supplies, and the opportunity to present their results at professional conferences across the country. Each year, HHMI fellows present the fruits of their research via a poster presentation. Faculty members, campus dignitaries, and aspiring researchers wind around presenters, pausing occasionally to inquire about the research and the research process.

“Students from the freshman seminar class called Catalyst are finding out about the breadth of opportunities available on campus and getting to talk to students who are actually doing undergraduate research,” said Dr. Kaci Thompson, associate director of the HHMI Program. “[These presenters] are role models for [freshmen].” Both Thompson and HHMI fellows were happy to dole out advice to freshmen looking to get into research.

#1: Find a Lab

There are lots of opportunities, both on and off-campus, but students have to take initiative and go looking for them. Thompson offered the HHMI office as a good starting point. “My office has a lot of resources that can help students,” she said. “There’s a lot available on the web; there’s a lot on the CMNS undergrad news and other campus newsletters that fill students in on programs and financial opportunities.” Finding a lab can be the most difficult part of the process. Most inquiries end in rejection, but the key is persistence. “I probably contacted dozens and dozens of people, and I only heard back from [neurophysiology professor] Dr. [Daphne] Soares and one other place,” said Adina Schwartz, a junior physiology and neurobiology major researching cavefish in Soares’s Neuroethology Lab. “Space is limited, but definitely keep persevering because there will definitely be an option if you keep trying.”

#2: Design a Project

Most HHMI researchers, like Schwartz, were given projects by their faculty supervisors. Others created their own research questions and then sought out labs interested in pursuing the project. Junior general biology major Crystal Wang, a member of Gemstone Team Antidote, was inspired first on a study abroad trip to Peru and then at an NIH lab. In Peru, she learned about a plant active against HIV; at the NIH, she learned about HIV/HCV co-infection. “I decided to see what would happen if we tested this chemical extract of this little-known plant on actual cell culture systems. I found the right people to make it work and now we’re doing it,” Wang said.