Undergraduate gained laboratory experience with viruses

By Jordan Stidham

During his time with the U.S. Department of Agriculture Agricultural Research Services Research Participation Program, Jason Hatfield had the opportunity to develop his skill set and contribute to projects related to viral diseases in poultry.

Through education and laboratory experience, Jason Hatfield learned that not all viruses are bad. In fact, some viruses can help prevent diseases, such as viruses used in the production of vaccines. Realizations like this piqued Hatfield's interest in microbiology and biochemistry, and more specifically, zoonotic diseases.

A native of Georgia, Hatfield attended Berry College in Mount Berry, Georgia. In 2017, he obtained a bachelor's degree in animal science and biochemistry. He delayed going to graduate school in part because of a physical condition. "I suffered a major concussion in the last semester of my senior year in college. I couldn't talk clearly for close to a month, and it prevented me from interviewing or applying to several graduate school programs."

Hatfield chose a different path and served as an intern with the Southeast Poultry Research Laboratory (SEPRL) in Athens, Georgia. While there, he found out about the U.S. Department of Agriculture (USDA) Agricultural Research Services (ARS) Research Participation Program. The USDA ARS Research Participation Program provides opportunities for students, postgraduates, established scientists and faculty to participate in programs, projects and activities at ARS-designated facilities to help ARS solve agricultural problems of high national priority.

"This program allowed me to recover [from the concussion] while earning a living and gaining valuable job experience while I started to prepare, once again, to go back to school," said Hatfield.

For his appointment, Hatfield was assigned to Southeast Poultry Research Laboratory (SEPRL) under the mentoring of research microbiologist Darrell Kapczynski, Ph.D. The laboratory is dedicated to finding and providing solutions to exotic, emerging and endemic poultry viral diseases. The research is valuable in setting national poultry food safety standards which help protect consumers.

Hatfield gained experience in laboratory operations. A typical day on the job began by monitoring cultured cells. “I enjoyed learning new lab techniques. I assisted with conducting experiments, and I gathered and analyzed data. I also learned a lot of valuable lessons on biosecurity and how to conduct research in a lab safely,” he said. “The experience was very valuable and something that can’t always be taught in a classroom,” said Hatfield.

This program provided him with the opportunity to work in a fully functional research lab. Hatfield’s advice to anyone interested in or curious about participating in this program is this, “If you have any hesitation for jumping into graduate school for whatever the reason, this program is a great way to prepare your skill set in the laboratory while preparing you for graduate school.”

Hatfield plans to pursue a doctoral degree and hopes to continue research in a laboratory. Outside of the lab, Hatfield can be found playing Ultimate Frisbee, working as an amateur blacksmith or helping coach the swim team at one of the local high schools. He also regularly volunteers his time as a judge at college and high school speech and debate events.

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