Summer 7-8-2015

Pre-Med Student Researching Environmental Contaminants in Alligators

University Communications Illinois Wesleyan University
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July 8, 2015

Brendan Finnell '16 catches and releases wild alligators as a marine biomedicine and environmental sciences intern at the Medical University of South Carolina.

BLOOMINGTON, Ill.—Illinois Wesleyan University pre-medicine student Brendan Finnell ’16 (Springfield, Ill.) is spending the summer determining the levels of an environmental contaminant – perfluorinated compounds (PFCs) – in American alligator populations.

Finnell is a marine biomedicine and environmental sciences intern at the Medical University of South Carolina in Charleston. Finnell said the paid position seemed tailor-made for his interests: medicine, marine biology and biochemistry.

His lab work includes extracting PFCs from alligator plasma samples. He uses liquid chromatography-mass spectrometry to quantify the levels and then analyzes the data.

“PFCs have been shown to disrupt endocrine signaling and are a health concern to many animals, especially humans,” said Finnell. PFCs are a large group of manufactured compounds that are widely used to make everyday products more resistant to stains, grease and water. They break down very slowly in the environment and are often characterized as persistent.

“PFCs are fairly popular in environmental research right now but no one had done a study in American alligator populations before, so it’s a novel project,” Finnell said. He hopes his work will be included in a scientific publication.

Finnell has also participated in fieldwork catching and releasing wild alligators. “This is sort of extracurricular – the blood samples collected [from these animals] will not be used for my project, but they will be used down the road by another researcher,” said Finnell. He assists with tagging, measuring, taking blood samples and releasing the animals.

He said his greatest takeaway so far is his growing appreciation for the demands of scientific research. “The graduate students I work with often put in 12-hour days and come in on the weekends,” he said. “Scientists may work for months or years developing a *method* before collecting desired data is even possible. It is tough work. However, research often benefits us more than we realize, especially medical research.”

Finnell plans to become a physician and said he believes his intensive research experience differentiates him from other medical school applicants. “Conducting research on alligators is a great way to stand out,” he said. More than 80 percent of Illinois Wesleyan pre-medicine students are admitted to medical school on the first try, compared to 45 percent nationally for all majors.

At Illinois Wesleyan Finnell is a member of Global Brigades providing medical care and other assistance in Honduras, Beta Beta Beta biological honor society, Titan Orientation Leader, and recipient of a Jennings Scholarship for non-music majors. He is also a teaching assistant for the General Biology course.