

# Plum Island Study Opens Career Doors

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**Dr. Carla Huston**



New York's Plum Island is home to animal disease research laboratories and facilities to train veterinarians to recognize and control foreign animal disease, such as avian influenza.

**By Bonnie Coblentz**

Several veterinary students at Mississippi State University have taken advantage of opportunities to learn about foreign animal diseases that could threaten the nation's domestic animals.

Two MSU College of Veterinary Medicine students learned and worked at the U.S. Department of Agriculture's Plum Island Animal Disease Center in New York in 2006. A third student is headed to the island this year. Over the years, several others have visited this highly secure facility.

The Plum Island Animal Disease Center is operated through the U.S. Department of Homeland Security. It is responsible for research and diagnosis to protect animal industries and exports against catastrophic economic losses caused by the accidental or deliberate introduction into the country of foreign animal diseases.

Dr. Carla Huston, assistant professor of epidemiology at MSU's veterinary college, is the advisor for the Smith-Kilborne Foreign Animal Disease Program, a USDA Animal and Plant Health Inspection Service program.

“Plum Island is one of only two laboratories in the United States that handles foreign animal diseases. The Plum Island laboratory mainly handles diseases of livestock, and the National Veterinary Services lab in Iowa handles poultry foreign animal diseases,” Huston said. “At Plum Island, researchers have live strains of certain foreign infectious diseases, and they infect live animals with these diseases for training and research.”

Through the Smith-Kilborne program, USDA invites each veterinary college in the country to nominate one student each year to visit the isolated facility. The goal is to acquaint veterinary students with foreign animal diseases that could threaten the nation's domestic animal population.

Micheala Beasley is a class of 2008 CVM student. She visited Plum Island and Cornell University's College of Veterinary Medicine last summer through the Smith-Kilborne program.



MSU CVM student Rivka Shoulson has spent three weeks in an externship at Plum Island.

Micheala Beasley, second from right, participated in training at Plum Island and Cornell University during the summer of 2006.



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"I enjoyed the depth of the course on the foreign animal diseases," Beasley said. "In veterinary school, we learned about the diseases and their clinical signs, but the course took us to the level of identifying and controlling diseases in different outbreak scenarios. It allowed us to have a more active role in the disease surveillance process."

The nine-day program trains students to recognize foreign animal diseases and take an active role in their control. Beasley said among the diseases she studied at Plum Island and in lectures at Cornell were avian influenza, foot-and-mouth disease and bovine spongiform encephalitis, also known as mad cow disease.

Beasley spent two days in the island's biocontainment facility actually looking at foreign animal diseases.

"There was foot-and-mouth disease in cattle, sheep and pigs; African horse sickness; and avian influenza and exotic Newcastle disease in chickens," Beasley said. "We observed the animals two days in a row to see how quickly the disease progressed in the different species."

Beasley said the experience helped her to see the job opportunities available once she completes her doctorate of veterinary medicine.

"It really influenced me toward government work and surveillance for these diseases and helping to control them," Beasley said.

Huston said students chosen for the program are typically those interested in pathology, production medicine or a public health-related field.

"There is a strong need for veterinarians with an interest in public health and public practice," Huston said. "This program

raises awareness of these diseases, and training students to work in settings with foreign animal diseases will help them meet the critical needs nationally. The majority of our private practice veterinarians are not trained in foreign animal disease diagnostics, so this opportunity is invaluable to our students and our state."

While some of MSU's CVM students take advantage of the Smith-Kilborne opportunity, others opt for a more in-depth experience.

Rivka Shoulson is a CVM student from New York who spent three weeks in an externship at Plum Island earlier in her program at MSU.

"I got to rotate through all the diagnostic laboratories at Plum Island. My mornings consisted of doing necropsies on some of the animals infected with various foreign animal diseases, so I got to see the effects of these diseases on the animals," Shoulson said.

She also did sampling to monitor the animals during the diseases' progress, and assisted with testing and the diagnostic process when an animal disease sample arrived at the facility.

Shoulson wants to specialize in the diseases that transfer between animals and humans. After her May graduation with a doctorate of veterinary medicine, she will do a residency in laboratory animal medicine at Columbia University while earning a master's of public health degree from that university.

Huston said that study at Plum Island is an impressive accomplishment to have on a resume.

"We encourage students to think outside the box, and the careers that this type of experience can lead to are the future of veterinary medicine," Huston said.