

New Officer Strengthens Biosafety in Rhode Island with a Touch of Humor

by Rinki Goswami, MS, specialist, Biosafety and Biosecurity

Responding to concerns over laboratory safety, the Centers for Disease Control and Prevention provided \$21 million over three years (2015-2018) to 62 jurisdictions to create and strengthen biosafety and biosecurity programs. As funding has been released, biosafety officers (BSOs) are being hired to implement the new programs. Rhode Island, one of the first states to hire a BSO, selected Anthony Troiano, PhD.

Troiano has an extensive background in microbiology. He received his bachelor's from the University of New Hampshire where he studied experimental evolution of bacterial biofilm, and performed his doctoral work in the Department of Molecular Biology and Biophysics at the University of Connecticut Health Center.

His interest in public health was established before his passion for biosafety. "It was working with spore-forming bacteria that introduced me to the biosafety field," observed Troiano. "As my graduate lab had done some work with anthrax, I began to reevaluate career tracks in public health. It became very clear to me that young professionals were needed in the biosafety community to steward the field into the future."

Before Troiano assumed his position, Rhode Island divided responsibility for laboratory biosafety and biosecurity among several departments. While consolidating responsibility was essential to improving laboratory performance, the transition to a centralized system has not been easy for community stakeholders accustomed to the former system.

Communication has proven key to smoothing the transition. Troiano has launched a weekly "Biosafety Bulletin" covering topics from lab-acquired infections to biosafety cabinet protocols, with comics and humor to promote readership and discourage immediate clicking of the "delete" button.

But BSOs cannot do it alone. New technologies and novel pathogens, paired with gain-of-function mutations, dual use research and breaches in information security, equal continued risk for laboratories. Troiano stresses the importance of collaborative environments to stay ahead of threats (see Sidebar).

Many new scientists are not aware of the importance or impact of biosafety and biosecurity, but recent events as well as the onboarding of professionals such as Troiano are opening up entirely new career paths. He advises others pursuing a career in biosafety to continue to educate yourself—whether it's through literature, listservs or peers. He adds, and "a light sense of humor goes a long way when you "speak softly and carry a big stick" (President Theodore Roosevelt)." •



Rhode Island's newly-hired Biosafety Officer, Dr. Anthony Troiano, oversees laboratory safety across the entire public health laboratory, including BSL-3 spaces

The Providence of Ebola Preparedness

When you think of Rhode Island—the smallest state in the US—what comes to mind? Narragansett beer? Providence College basketball? The Breakers mansion in Newport? How about the largest populations of Liberians per capita of any other state in the country, with upwards 15,000 Liberian residents?

"The city of Providence holds one of the three largest Liberian communities in the United States, which placed the Department of Health on high alert during the 2014 Ebola outbreak," observed Troiano. "Given its demographics, Rhode Island could have very well been 'ground zero' for the outbreak, had the state not intensified its preparation efforts to handle potential Ebola patients."

The Ebola epidemic also highlighted that clinical laboratories have to feel comfortable dealing with dangerous agents in order to be successful in their roles as sentinel laboratories. Taking this lesson to heart, Troiano has worked with sentinel clinical laboratories to perform risk assessments. This outreach work has strengthened relationships between the clinical and public health laboratories and rebuilt confidence within the laboratory system.

"We are currently conducting a risk assessment for Ebola within our BSL-3 suite in order to properly handle, test and secure this infectious agent in the event of another outbreak," he said.