

NPHL Bioterrorism Preparedness Laboratory Update

by Tony Sambol

The national effort to become prepared for activities related to bioterrorism should be familiar to everyone working in microbiology laboratories. Many articles, meetings, and seminars have addressed this topic in the past, and will continue to do so in the future. Personnel at the NPHL are working to develop the statewide Laboratory Response Network (LRN) that includes training, planning and preparation for the rapid detection and identification of any biothreat organism that might be encountered. As part of this preparation, a “laboratory self-assessment” was conducted at the Bioterrorism Preparedness Laboratory (BPL) and submitted to the Director of the LRN. Based on this “laboratory selfassessment”, the BPL was recently granted a status upgrade to a LRN Level C Laboratory for all biothreat agents except *Clostridium botulinum* toxin testing. This status change was made after new training was obtained and after the addition of equipment and improvement of safety features for the laboratory.

Last October, personnel from the NPHL attended a week-long laboratory training session conducted at the Georgia Public Health Laboratory. This “hands-on” laboratory training was conducted by members of the Centers for Disease Control and Prevention (CDC), the Association of Public Health Laboratories (APHL), and the National Laboratory Training Network (NLTN). Training focused on procedures used at the LRN Level B/C laboratories for identification of *Bacillus anthracis*, *Yersinia pestis*, *Francisella tularensis*, and *Brucella* spp.

To expand on the traditional

culturing and testing methods used for identification of biothreat agents, personnel at the NPHL have also received training in molecular diagnostic assays developed by the CDC for the LRN Level C Laboratories. Part of the training involved participation in a CDC sponsored multi-site validation study for *Y. pestis* using “real-time” PCR methodology. As they are developed by the CDC, the BPL will participate in additional multi-site validation molecular studies for the identification of other biothreat agents. The significance of the B/C designation means the NPHL will be receiving new assays and will be implementing them into testing protocols when requested. In addition to preparing the NPHL to evaluate agents of bioterrorism, the availability of reagents and protocols to test special pathogens will strengthen the capabilities of the NPHL to aid laboratories throughout the state to handle those pathogens that can cause naturally occurring infections. One of the most important issues for laboratories throughout the state is to emphasize the collection of either fluids or tissues for diagnostic purposes. Too often physicians collect specimens on swabs even when fluids, such as abscess pus is available. Continued education is needed to make Sure that optimal specimens are collected and processed.