
*Mycobacterium bovis* is endemic in Michigan’s whitetailed deer and has been circulating since 1994. The strain circulating in deer has remained genotypically consistent and was recently detected in two humans. We summarize the investigation of these cases and confirm that recreational exposure to deer is a risk for infection in humans. Visit the following link for more information:

www.cdc.gov/EID/content/14/4/657.htm

Conference Report on Public Health and Clinical Guidelines for Anthrax

On March 13-14, 2006, a meeting on anthrax was held at Emory University in Atlanta, Georgia, sponsored by the Centers for Disease Control and Prevention (CDC) in collaboration with the Southeastern Center for Emerging Biologic Threats. The meeting’s agenda included discussion of postexposure prophylaxis (PEP), screening and evaluation, and treatment of the various manifestations of human anthrax. The goal was to convene subject matter experts for a review of research developments and clinical experiences with anthrax prophylaxis and treatment and to make consensus recommendations for updating guidelines for PEP, treatment, and clinical evaluation of patients with anthrax. A 2001 conference on guidelines for anthrax has previously been summarized in this journal. This article summarizes the meeting’s presentations and discussion. Consensus recommendations are summarized in the Table. Updated CDC guidelines for treatment and prophylaxis of anthrax will be published in detail in other CDC publications and are available on CDC’s web site at www.bt.cdc.gov/agent/anthrax/index.asp.

www.cdc.gov/eid/content/14/4/e1.htm

Special Features
John H. Keene
Global Biohazard Technologies, Inc., Midlothian, Virginia

Do you have a biosafety question and you’re not sure who to ask? Send your questions to the “Ask the Experts” column and I’ll get them answered for you. Drawing from my own experience or that of other experts in the field, we’ll try to compile a thorough and comprehensive answer to your question. Please e-mail your questions to jkeene@biohaztec.com or Co-Editor Barbara Johnson at barbara_johnson@verizon.net or Co-Editor Karen B. Byers at karen_byers@dfci.harvard.edu.

**Serum—To Store or Not to Store?**

**Should we bank serum samples from all personnel assigned to our BSL-3 laboratory?**

The fifth edition of the CDC/NIH’s *Biosafety in Bimedical and Microbiological Laboratories* (Biosafety Level 3, Special Practices Section B-3) states that “Each institution must establish policies and procedures describing the collection and storage of serum samples from at-risk personnel.” This does not require the collection and storage of serum samples, but rather requires that the institution/facility establish policies and procedures regarding the collection and storage. Are we splitting hairs here?

NO, these guidelines do not require a serum bank, but essentially require a review of the need to bank serum—something we all have heard before, a risk assessment.

**What things should be considered when determining whether to set up a serum bank? What benefit will the banking of serum provide and to whom?**

It is assumed that personnel would be able to prove that banked serum specimens would provide information on exposure status and could be used to confirm that an infection had resulted from an agent with which they were working. On the other hand, the institution might also benefit from the possibility of demonstrating that the employee already had antibody to the agent prior to working in the facility.

The fact is that most of the organisms we work with in BSL-3 laboratories are present in the general community and personnel could be exposed outside of work. Proof of laboratory-acquired infection would depend on demonstrating that the organisms in the patient and the laboratory are the same. This can be done without looking at a pre-work serum sample. In addition, if the employee already had antibody, then they have been exposed
in the past and might not become infected in spite of potential exposure.

The testing of serum samples from a serum bank along with the concurrent testing of blood from personnel who have worked on a particular project may be useful to provide epidemiological data on laboratory-acquired infections. However, this data does not provide insight into the actual exposure scenarios, as it is available only "after the fact" and is therefore not helpful in recognizing potential causes of exposure.

**Will the banking of serum provide guidance to prevent or minimize potential exposures?**

While banking of serum could be used in follow-up epidemiological investigations, it would not be useful in minimizing or preventing potential exposures. Laboratory-acquired infections will occur whether or not the serum is banked.

**How will the confidentiality and security of the samples and of the testing of the serum be maintained?**

Personnel are entitled to confidentiality with regard to the records associated with their serum sample. Serum banks should be kept under strict security with only approved personnel having access to the samples. Specific requirements for the testing of the samples must be delineated and any testing must be performed only after these requirements are met. Documentation of all banking and testing of the samples must be kept and reviewed on a regular basis.

**Where will the samples be stored and how long will they be retained?**

Freezers and the room(s) in which they are kept must be secure and accessible only to authorized personnel. Determination of the number of freezers and the amount of space allocated to the serum bank may be difficult depending on the size of the project and the number of employees affected. Freezers in which the samples are stored will have to be alarmed and attached to emergency power. Appropriate emergency response to power failures and other freezer losses need to be developed.

As long as personnel are working on the project and they continue to be at risk, the samples must be retained. If the organism causes a disease which may have a prolonged incubation period (e.g., Tuberculosis, HIV) or a potentially silent infection (e.g., Hepatitis B), the potentially exposed individual might not show any symptoms during the time he or she is working on the project, but may develop symptoms later in life. Therefore, the serum samples may have to be retained for the life of the employee. In such instances, consideration must be given to the need to retain large numbers of frozen serum vials for a considerable period of time.

**How long will the testing records be maintained?**

Any records associated with the testing of serum samples would have to be retained in accordance with the OSHA requirements in 29 CFR 1910:1020.

**What will the cost be?**

The cost of freezers, space, alarms and emergency response must be added to the costs of record keeping, blood drawing, and other personnel and expendable materials over the life of the project and beyond. These costs will depend on the size and length of the project or projects involved. The cost of maintaining a serum bank can be considerable.

**Is it worthwhile?**

Doing the risk assessment will provide an insight as to whether or not banking serum is appropriate for a given project. If banking serum, in some way, provides increased protection for personnel or employer, then it is worthwhile. If not, then perhaps there are better ways to spend the time and money. Our goal should be to prevent or minimize potential exposures and our resources should be concentrated on those activities that best address that goal. Perhaps with increased medical surveillance, more and improved safety training and increased enforcement of safety protocols and procedures, we could better serve not only the personnel at risk, but also improve the research effort.

**References**


**Fund Donations**

ABSA thanks the many of you have generously contributed to the Richard C. Knudsen Memorial Fund. The proceed from this fund will be used to establish an award to honor Rich’s memory. Those wishing to make donations to this fund should make their checks payable to the American Biological Safety Association. Please add a notation to the memo line that the check is to be used for the Richard C. Knudsen Memorial Fund. Checks should be mailed to ABSA, 1200 Allanson Road, Mundelein, Illinois 60060-3808.