

October 23, 2001

TO: Environmental microbiology laboratories in Oregon
FROM: Michael Skeels, PhD, MPH
Director, Oregon State Public Health Laboratory
RE: Bioterrorism threats

As you know, recent events have put us all on high alert for anthrax and other agents of bioterrorism. The public health system, as well as law enforcement and emergency response agencies, are receiving hundreds of calls from concerned citizens. Many threat assessments have been performed for packages, envelopes, and powders. A few of these have warranted testing of environmental material in our laboratory. So far, we have not found *Bacillus anthracis* or any other pathogen in any of these samples.

We have received numerous questions about the efficacy and validity of testing human and environmental samples for anthrax, especially nasal swabs. The CDC has been quite clear in saying that laboratory testing for *B. anthracis* is appropriate only in four situations:

1. Clinical evaluation of a person with signs and symptoms of anthrax. These examinations and cultures would generally be done in a hospital or other large medical laboratory, with suspicious cultures referred to the Oregon State Public Health Laboratory (OSPHL) for confirmation. A federal CLIA certificate at the appropriate level of complexity is required for any diagnostic work on human samples.
2. Firm evidence of *B. anthracis* having been released into the environment. Environmental cultures and nasal swabs of at-risk people are indicated. Nasal swab cultures are not appropriate except as part of an epidemiological investigation following a proven exposure.
3. Suspicious powder, letter, package, or other material where a threat assessment indicates that lab testing should be done. (Note: In Oregon, the FBI and local law enforcement and hazardous materials teams have worked together to establish clear threat assessment protocols. Local government agencies can activate the Oregon Emergency Response System (OERS) if a credible threat is identified. Submission of environmental samples of this type to the OSPHL requires approval through OERS or the FBI.)
4. Following cleanup to assure decontamination has been effective. Environmental samples can be taken for *B. anthracis*.

Some environmental laboratories have expressed an interest in accepting and processing environmental samples for *B. anthracis*, and have asked whether the OSPHL will provide confirmatory identification of suspicious isolates cultured

from these samples. There is no state or federal law or regulation which prohibits environmental laboratories from performing cultures for *B. anthracis*. However, we encourage you to follow the CDC recommendations and avoid environmental cultures for *B. anthracis* in situations which do not represent a credible threat to human health. There are two reasons for this recommendation: 1) *B. anthracis* can be found incidentally in the environment and in the absence of effective exposure is not a threat to human health, 2) environmental samples will yield many species of the genus *Bacillus* which may be easily confused with *B. anthracis* (i.e., false positives). However, if you choose to perform environmental cultures for *B. anthracis*, the OSPHL will provide confirmatory testing of suspicious isolates upon request, provided they meet criteria set forth in our screening protocols. We can provide you with these protocols to rule out and refer *B. anthracis*, as we have already provided for clinical laboratories. If you decide to perform environmental cultures for *B. anthracis*, please inform us so that we can make sure that you have the necessary information for culture and referral.

However, please also note that environmental samples containing highly concentrated B. anthracis spores are quite hazardous and should be handled in a certified and properly maintained Class II Type B (or higher) biological safety cabinet. Do not open envelopes, packages or other containers containing suspected spore suspensions or powders on the open laboratory bench. In doing so, you risk infection of your staff and extensive contamination of your entire laboratory.

If your laboratory finds presumptive evidence of *B. anthracis* or any other suspected bioterrorism agent in an environmental sample, notify the OSPHL immediately at 503.229.5882 or 503.731.4030 after hours. ***Please do not report your preliminary findings directly to the public or the news media.*** Should you find *B. anthracis* in an environmental sample, this will trigger an epidemiologic (and possibly law enforcement) investigation to look for possible human exposures. You may be asked to provide information about the source of the sample and the submitter.

There are several websites which offer up-to-date information on anthrax. A good place to start is our own bioterrorism website, at <http://www.ohd.hr.state.or.us/acd/bioterr/home.htm> or the CDC bioterrorism website, <http://www.bt.cdc.gov>. We have also enclosed a copy of the interim guidelines for management of possible anthrax exposure. If you have questions or need additional information, please feel free to contact us.