

U.S. Biodefense Plans Worry Nonproliferation Advocates

- [Arms Control Today](#)

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The U.S. government's efforts to combat bioterrorism are sparking concerns over the dangers enhanced biodefense programs might pose to the nonproliferation regime. New biodefense plans drawn up in the wake of the September 11, 2001, terrorist attacks call for more than a sixfold boost in biodefense funding, with a sizeable portion of the funds going toward the construction of new biosafety level (BSL) 3 and 4 facilities, those capable of handling the most dangerous pathogens.

According to the U.S. National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health (NIH), there are plans to fund the construction of one or two new National Biocontainment Laboratories with BSL-4 containment capabilities and four to eight Regional Biocontainment Laboratories with BSL-3 containment capabilities, utilizing a portion of the roughly \$1.5 billion budgeted to the NIH for biodefense research in fiscal year 2003. NIAID is evaluating proposals for these new laboratories and plans to announce the grant recipients in September 2003.

Proponents for the new laboratories contend that the increased research capabilities and capacity will help accelerate biodefense research. Opponents argue that the new biodefense laboratories might unintentionally worsen the threat to the United States. One concern is that, although the Biological Weapons Convention (BWC) permits such research even as it outlaws offensive biological weapons, it is hard for outsiders to judge whether a country is in fact adhering to the BWC's restrictions. Opponents fret that, by coming close to this line, the United States risks undermining its attempts to limit or control other countries' research with materials that could be useful for biological weapons.

The Good and the Bad

Pathogens are categorized into one of four BSL classifications based on the dangers they pose and the availability of treatments or vaccines. Most pathogens that are considered bioterror threats, such as Ebola and smallpox, are categorized as BSL-3 or BSL-4 organisms, meaning they can only safely be worked on in a laboratory with at least the same BSL rating. BSL-3 and BSL-4 facilities are specialized to allow scientists to conduct research on organisms within proper containment fields.

The U.S. government contends that new laboratories are needed to conduct additional research on dangerous pathogens. An NIH official claims that, of the existing five U.S. BSL-4 laboratories that are operational or near operational, only the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia, and the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) at Fort Detrick, Maryland, are capable of dealing with extensive experiments on highly dangerous agents.

Proponents say the new facilities would improve the development of treatments or vaccines before an attack occurs as well as the response to a biological attack. The process of developing and gaining approval for treatments and vaccines requires extensive laboratory research and testing that usually takes years. In the event of a biological attack, however, this process would be further burdened by the urgency for a therapy, given that the agent used might have a high morbidity and mortality rate and spread rapidly, affecting many people. Therefore, the NIAID, the agency in charge of defending the United States from emerging diseases, including bioterror agents, sees expanding

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not only its number of research grants but also the number of high-containment biological laboratories as a way of both accelerating the current research on potential pathogens and better preparing the country for responding to an emerging disease or biological attack.

Another benefit of expanding the number of BSL-4 laboratories is to help equalize the responses to a threat regardless of where in the United States one occurs. The CDC and USAMRIID are both located on the East Coast, creating a situation where response times to outbreaks on the eastern United States are faster than to outbreaks in the western United States. In choosing the recipients of funds for new laboratories, the NIAID might also consider the locations of the proposals, trying to locate new facilities in regions that currently lack the capabilities in order to create a more equal distribution of major biological laboratories nationwide.

Yet, there are several issues that opponents to this plan cite as reasons to maintain the current number of BSL-3 and BSL-4 laboratories—already the most capable national network of high-containment biological research facilities in the world—rather than build more. In general, they view an increase in the number of laboratories and the number of trained scientists as an increase in potential leaks of material and expertise. Additionally, a terrorist attack at a BSL-3 or BSL-4 research center aimed at breaching the airtight safety precautions could cause the release of dangerous biological agents into the surrounding communities. Opponents claim that increasing the number of laboratories also increases the number of targets for such attacks.

Lack of Transparency

Arms control experts are particularly concerned with the issues of transparency and precedence. NIAID has been tight-lipped regarding details on what research the new facilities will pursue, requiring that the grant proposals remain confidential. The institute has also indicated that it will limit information on what biological agents are researched at the various facilities. The argument is that secrecy is essential; otherwise, terrorists could search for chinks in the U.S. biodefense armor and exploit them.

Other countries, however, might view this secrecy with distrust, wondering whether the expansion in biodefense research is masking covert biological weapons programs. For example, the U.S. government has acknowledged that its BSL-3 and BSL-4 laboratories might develop more virulent and robust strains of pathogens for the purpose of developing defenses against weapons officials fear terrorists might employ.

They also worry that the secrecy of the program might establish a dangerous precedent. In the future, if an adversary dramatically increases its biodefense research program without transparency, the United States might question its intentions. Yet, that country would be able to point to the U.S. expansion of its biodefense program as a precedent, leaving the United States with little basis or diplomatic leverage for criticizing the country's efforts.

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