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The Secretive Fight Against Bioterror

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The government is building a highly classified facility to research biological weapons, but its closed-door approach has raised concerns.

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On the grounds of a military base an hour's drive from the capital, the Bush administration is building a massive biodefense laboratory unlike any seen since biological weapons were banned 34 years ago.

The heart of the lab is a cluster of sealed chambers built to contain the world's deadliest bacteria and viruses. There, scientists will spend their days simulating the unthinkable: bioterrorism attacks in the form of lethal anthrax spores rendered as wispy powders that can drift for miles on a summer breeze, or common viruses turned into deadly superbugs that ordinary drugs and vaccines cannot stop.

The work at this new lab, at Fort Detrick, Md., could someday save thousands of lives -- or, some fear, create new risks and place the United States in violation of international treaties. In either case, much of what transpires at the National Biodefense Analysis and Countermeasures Center (NBACC) may never be publicly known, because the Bush administration intends to operate the facility largely in secret.

In an unusual arrangement, the building itself will be classified as highly restricted space, from the reception desk to the lab benches to the cages where animals are kept. Few federal facilities, including nuclear labs, operate with such stealth. It is this opacity that some arms-control experts say has become a defining characteristic of U.S. biodefense policy as carried out by the Department of Homeland Security, NBACC's creator.

Since the department's founding in the aftermath of the Sept. 11 attacks, its officials have dramatically expanded the government's ability to conduct realistic tests of the pathogens and tactics that might be used in a bioterrorism attack. Some of the research falls within what many arms-control experts say is a legal gray zone, skirting the edges of an international treaty outlawing the production of even small amounts of biological weapons.

The administration dismisses these concerns, however, insisting that the work of NBACC is purely defensive and thus fully legal. It has rejected calls for oversight by independent observers outside the department's network of government scientists and contractors. And it defends the secrecy as necessary to protect Americans.

"Where the research exposes vulnerability, I've got to protect that, for the public's interest," said Bernard Courtney, NBACC's scientific director. "We don't need to be showing perpetrators the holes in our defense."

Tara O'Toole, founder of the Center for Biosecurity at the University of Pittsburgh Medical Center and an adviser to the Defense Department on bioterrorism, said the secrecy fits a larger pattern and could have consequences. "The philosophy and practice behind NBACC looks like much of the rest of the administration's philosophy and practice: 'Our intent is good, so we can do whatever we want,'" O'Toole said. "This approach will only lead to trouble."

Although they acknowledge the need to shield the results of some sensitive projects from public view, critics of NBACC fear that excessive secrecy could actually increase the risk of bioterrorism. That would happen, they say, if the lab fosters ill-designed experiments conducted without proper scrutiny or if its work fuels suspicions that could lead

other countries to pursue secret biological research.

The few public documents that describe NBACC's research mission have done little to quiet those fears. A computer slide show prepared by the center's directors in 2004 offers a to-do list that suggests the lab will be making and testing small amounts of weaponized microbes and, perhaps, genetically engineered viruses and bacteria. It also calls for "red team" exercises that simulate attacks by hostile groups.

NBACC's close ties to the U.S. intelligence community have also caused concern among the agency's critics. The CIA has assigned advisers to the lab, including at least one member of the "Z-Division," an elite group jointly operated with Lawrence Livermore National Laboratory that specializes in analyzing and duplicating weapons systems of potential adversaries, officials familiar with the program confirm.

Bioweapons experts say the nature of the research envisioned for NBACC demands an unusually high degree of transparency to reassure Americans and the rest of the world of the U.S. government's intentions.

"If we saw others doing this kind of research, we would view it as an infringement of the bioweapons treaty," said Milton Leitenberg, a senior research scholar and weapons expert at the University of Maryland's School of Public Policy. "You can't go around the world yelling about Iranian and North Korean programs -- about which we know very little -- when we've got all this going on."

Creating the Weapons of Terrorism

Created without public fanfare a few months after the 2001 anthrax attacks, NBACC is intended to be the chief U.S. biological research institution engaged in something called "science-based threat assessment." It seeks to quantitatively answer one of the most difficult questions in biodefense: What's the worst that can happen?

To truly answer that question, there is little choice, current and former NBACC officials say: Researchers have to make real biological weapons.

"De facto, we are going to make biowarfare pathogens at NBACC in order to study them," said Penrose "Parney" Albright, former Homeland Security assistant secretary for science and technology.

Other government agencies, such as the Centers for Disease Control and Prevention, study disease threats such as smallpox to discover cures. By contrast, NBACC (pronounced EN-back) attempts to get inside the head of a bioterrorist. It considers the wide array of potential weapons available. It looks for the holes in society's defenses where an attacker might achieve the maximum harm. It explores the risks posed by emerging technologies, such as new DNA synthesizing techniques that allow the creation of genetically altered or man-made viruses. And it tries in some cases to test the weapon or delivery device that terrorists might use.

Research at NBACC is already underway, in lab space that has been outsourced or borrowed from the Army's sprawling biodefense campus at Fort Detrick in Frederick. It was at this compound that the U.S. government researched and produced offensive biological weapons from the 1940s until President Richard M. Nixon halted research in 1969. The Army continues to conduct research on pathogens there.

In June, construction began on a \$128 million, 160,000-square-foot facility inside the same heavily guarded compound. Space inside the eight-story, glass-and-brick structure will be divided between NBACC's two major divisions: a forensic testing center tasked with using modern sleuthing techniques to identify the possible culprits in future biological attacks; and the Biothreat Characterization Center, or BTCC, which seeks to predict what such attacks will look like.

It is the BTCC's wing that will host the airtight, ultra-secure containment labs where the most controversial research will be done. Homeland Security officials won't talk about specific projects planned or underway. But the 2004 computer slide show -- posted briefly on a Homeland Security Web site before its discovery by agency critics prompted an abrupt removal -- offers insight into NBACC's priorities.

The presentation by NBACC's then-deputy director, Lt. Col. George Korch, listed 16 research priorities for the new lab. Among them:

"Characterize classical, emerging and genetically engineered pathogens for their BTA [biological threat agent] potential.

"Assess the nature of nontraditional, novel and nonendemic induction of disease from potential BTA.

"Expand aerosol-challenge testing capacity for non-human primates.

"Apply Red Team operational scenarios and capabilities."

Courtney, the NBACC science director, acknowledged that his work would include simulating real biological threats -- but not just any threats.

"If I hear a noise on the back porch, will I turn on the light to decide whether there's something there, or go on my merry way?" Courtney asked. "But I'm only going to do [research] if I have credible information that shows it truly is a threat. It's not going to be dreamed up out of the mind of a novelist."

Administration officials note that there is a tradition for this kind of biological risk assessment, one that extends at least to the Clinton administration. In the late 1990s, for example, a clandestine project run by the Defense Department re-created a genetically modified, drug-resistant strain of the anthrax bacteria believed to have been made by Soviet bioweaponeers. Such research helped the government anticipate and prepare for emerging threats, according to officials familiar with the anthrax study.

Some arms-control experts see the comparison as troubling. They argued, then and now, that the work was a possible breach of a U.S.-negotiated international law.

Legal and Other Pitfalls

The Bush administration argues that its biodefense research complies with the Biological and Toxin Weapons Convention, the 1972 treaty outlawing the manufacture of biological weapons, because U.S. motives are pure.

"All the programs we do are defensive in nature," said Maureen McCarthy, Homeland Security's director of research and development, who oversees NBACC. "Our job is to ensure that the civilian population of the country is protected, and that we know what the threats are."

Current and former administration officials say that compliance with the treaty hinges on intent, and that making small amounts of biowarfare pathogens for study is permitted under a broad interpretation of the treaty. Some also argue that the need for a strong biodefense in an age of genetic engineering trumps concerns over what they see as legal hair-splitting.

"How can I go to the people of this country and say, 'I can't do this important research because some arms-control advocate told me I can't?'" asked Albright, the former Homeland Security assistant secretary.

But some experts in international law believe that certain experiments envisioned for the lab could violate the treaty's ban on developing, stockpiling, acquiring or retaining microbes "of types and in quantities that have no justification" for peaceful purposes.

"The main problem with the 'defensive intent' test is that it does not reflect what the treaty actually says," said David Fidler, an Indiana University School of Law professor and expert on the bioweapons convention. The treaty, largely a U.S. creation, does not make a distinction between defensive and offensive activities, Fidler said.

More practically, arms experts say, future U.S. governments may find it harder to object if other countries test genetically engineered pathogens and novel delivery systems, invoking the same need for biodefense.

Already, they say, there is evidence abroad of what some are calling a "global biodefense boom." In the past five years, numerous governments, including some in the developing world -- India, China and Cuba among them -- have begun building high-security labs for studying the most lethal bacteria and viruses.

"These labs have become a status symbol, a prestige item," said Alan Pearson, a biologist at the Center for Arms Control and Non-Proliferation. "A big question is: Will these labs have transparency?"

Secrecy May Have a Price

When it opens in two years, the NBACC lab will house an impressive collection of deadly germs and teams of scientists in full-body "spacesuits" to work with them. It will also have large aerosol-test chambers where animals will be exposed to deadly microbes. But the lab's most controversial feature may be its secrecy.

Homeland Security officials disclosed plans to contractors and other government agencies to classify the entire lab as a Sensitive Compartmented Information Facility, or SCIF.

In common practice, a SCIF (pronounced "skiff") is a secure room where highly sensitive information is stored and discussed. Access to SCIFs is severely limited, and all of the activity and conversation inside is presumed to be restricted from public disclosure. There are SCIFs in the U.S. Capitol, where members of Congress are briefed on military secrets. In U.S. nuclear labs, computers that store weapons data are housed inside SCIFs.

Homeland Security officials plan to operate all 160,000 square feet of NBACC as a SCIF. Because of the building's physical security features -- intended to prevent the accidental release of dangerous pathogens -- it was logical to operate it as a SCIF, McCarthy said.

"We need to protect information at a level that is appropriate," McCarthy added, saying she expects much of the lab's less-sensitive work to be made public eventually.

But some biodefense experts, including some from past administrations, viewed the decision as a mistake.

"To overlay NBACC with a default level of high secrecy seems like overkill," said Gerald L. Epstein, a former science adviser to the White House's National Security Council and now a senior fellow with the Center for Strategic and International Studies. While accepting that some secrecy is needed, he said the NBACC plan "sends a message that is not at all helpful."

NBACC officials also have resisted calls for the kind of broad, independent oversight that many experts say is necessary to assure other countries and the American public about their research.

Homeland Security spokesmen insist that NBACC's work will be carefully monitored, but on the department's terms.

"We have our own processes to scrutinize our research, and it includes compliance to the bioweapons convention guidelines as well as scientific oversight," said Courtney, the NBACC scientific director.

In addition to the department's internal review boards, the agency will bring in small groups of "three or four scientists" on an ad-hoc basis to review certain kinds of potentially controversial experiments, Courtney said. The review panels will be "independent," Courtney said, but he noted that only scientists with government security clearances will be allowed to participate.

Some experts have called for unusual forms of oversight, including panels of well-respected, internationally known scientists and observers from overseas. While allowing that the results of some experiments should be kept confidential, O'Toole, of the Center for Biosecurity, argues that virtually everything else at NBACC should be publicly accountable if the United States is to be a credible leader in preventing the proliferation of bioweapons.

"We're going to have to lean over backward," O'Toole said. "We have no leverage among other nation-states if we say, 'We can do whatever we want, but you can't. We want to see your biodefense program, but you can't see ours.' "

In recent weeks, NBACC's first officially completed project has drawn criticism, not because of its methods or procedures, but because heavy classification has limited its usefulness.

The project was an ambitious attempt to assess and rank the threats posed by dozens of different pathogens and delivery systems, drawing on hundreds of studies and extensive computer modeling. When delivered to the White House in January, it was the most extensive survey of its kind, and one that could guide the federal government in making decisions about biodefense spending.

Six months later, no one outside a small group of officials and advisers with top security clearances has seen the results.

"Something this important shouldn't be secret," said Thomas V. Inglesby, an expert at the Center for Biosecurity who serves on a government advisory board that was briefed on the results. "How can we make policy decisions about matters of this scale if we're operating in the dark?"

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