

**Testimony By
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June 15, 2010
To the
House Homeland Security and Governmental Affairs
Subcommittee
On
Emerging Threats, Cybersecurity, and Science and Technology**

Introduction:

Madame Chairman it is both a privilege and honor to appear before you and your colleagues to discuss this issue of great importance to America's national security. I have dedicated most of my professional life to address the issue of biological warfare and bioterrorism because of my deep conviction that the successful use of biological weapons can radically and forever change our nation and our way of life. I note that Senators Graham and Talent made the risk from biological weapons their central theme of their 2008 report "World at Risk" and their 2010 report card. I too share their concern about the risk of complacency and false assumptions that currently affect our preparations for the consequences of this threat.

I would like to applaud you and your colleagues for holding this hearing and congratulate you and in particular Representatives Pascrell and King and their staffs for their newly drafted bill: HR 5498. As I will highlight in a few moments it represents a welcome addition to the other important pieces of legislation Congress has introduced and passed to address this serious problem.

Historical Context to the Threat

I would like to start by briefly underscoring the central tenets that shape my words and indeed shaped my actions over the last two decades. Biological warfare and bioterrorism have largely remained a current hypothetical threat. We were fortunate in 2001 that the likely perpetrator of the anthrax letter attacks only intended to scare and not kill scores of Americans. We likely won't be that lucky next time. There are some who wrongly equate those attacks with the kind of threat we may confront in the future. This kind of wishful thinking is not only wrong but dangerous. Further, the notion that is now a frequent comment made by some equating natural threats like pandemics and emerging diseases to bioterrorism, noting that Mother Nature is a pretty good terrorist, is similarly wrong and also dangerous. Assuming that bioterrorism is equal or some kind of lesser included case of natural events like pandemics is irresponsible and demonstrates the lack of understanding of the nature of the threat.

Mother Nature is not a thinking enemy as Clausewitz noted in his seminal work on military strategy. Mother Nature is not trying to create pathogens in a 3-5 micron particle size aerosol that is optimum to infect and deliberately kill men, women and children in a given city or geographic area for a political cause. Mother Nature does not deliberately create pathogens that circumvent our defenses such as antibiotics. She does so incidentally not because she chooses to but because we choose to use antibiotics in a way that makes it more likely. Mother Nature does not care about political boundaries. Terrorists and adversaries of the U.S. would use biological weapons as part of a deliberate plan to exploit our vulnerabilities and attack innocents to destroy our country and way of life.

I don't make these comments based on personal opinion but on the basis of knowing the facts of what the United States demonstrated in the 1950's and 1960's. During the course of the U.S. offensive program that ended in 1969, actual field tests such as *Red Cloud Shady Grove* and many others using live agents demonstrated the equivalent lethality of biological weapons to our most potent nuclear weapons---hydrogen bombs.

President Nixon and his advisors understood that biological weapons were strategic weapons that worked too well. Their greatest value was not on the battlefield but in cities as weapons of terror that could kill civilian populations potentially directly or starving them by attacking animal and agricultural targets. Counting on the America's nuclear superiority in a bipolar world, Nixon chose to renounce these weapons unilaterally and supported a global ban prohibiting the development and use of the entire class of weapons. The historical context to this decision was the U.S. and the rest of the world stood at the cusp of the biotechnology revolution.

America's moral high road leadership did much to galvanize responsible nations to choose against biological weapons. We now know that the Soviet Union used the veil of biological arms control to pursue the most extensive and advanced biological weapons program known to man. They succeeded in ways that boggle the mind and tear at the heart: weaponizing highly virulent strains of small pox at the time when the world was seeking to eradicate that scourge; creating strains of anthrax and plague that were resistant to multiple types of antibiotics; and seeking to create new pathogenic agents whose effects would confound medical diagnostics and have now treatments. The whereabouts of these weapons and more importantly the information and the people who made them is still in doubt. The recently published Pulitzer Prize winning book "The Dead Hand" by David Hoffman offers

glimpses into the Soviet's biological plans and programs and is an authoritative account of their deception and duplicity.

This is a history that many have forgotten. More recently during my tenure as Special Assistant to the President and Senior Director for Biodefense Policy for President Bush, analyses we sponsored revisited some of these lessons forgotten and provided a current context to the risk. A single attack by a terrorist organization or a group of disaffected individuals could threaten the lives of several hundred thousand and have a direct cost over 1.5 trillion dollars. When critics argue we can't afford in today's economic hard times to prepare fully, I suggest that we cannot afford not to. I urge you Madam Chairman and your colleagues to revisit the lessons learned and regrettably forgotten from our former program to fully understand the great challenge that we are confronted with.

Comments on HR 5498

The bill that is the subject of today's hearing is a welcome and helpful significant step forward. It is comprehensive and highlights a number of areas where more progress is needed urgently.

I would like to comment on certain aspects of the bill that deserve special mention.

Title II: Homeland Security Matters Subtitle A: Prevention and Deterrence: Enhanced Biosecurity Measures

First, the Bill addresses the need to update and streamline the measures used to ensure that work with dangerous pathogens is both safe and secure. I know firsthand the challenges that exist trying to find the right kind of balance to permit important, no vital work with high risk pathogens to ensure with have the necessary

antibiotics, vaccines and antidotes while ensure the risk of malicious diversion. I note that your language requires the Secretaries of Health and Human Services and Agriculture to work with the Secretary of Homeland Security using negotiated rule making.

The premise of this provision I think is the right one which is that the list of agents of concern should be for the biological or toxin agents of greatest risk. The current list of Select Agents is too long and not reflective of the agents that represent the greatest risk and potential impact. I think it is also essential and noted in your Bill language that representatives from the academic, private and public communities should have a seat at the table to ensure that the standards and practices set have been discussed and agreed to by the entities that will have to abide and implement such rules. In the end, I anticipate that the right balance of responsibility for safety and security and reasonableness will prevail.

I also note and strongly endorse that creation of High Containment Biological Security Grants. Up to this point, the costs of enhanced security have come at the expense of conducting the vital scientific work at these research institutions. Providing grants to offset the current and likely increases in security required is essential to the success of the entire effort.

Finally, I note that your Senate colleagues, Senators Lieberman and Collins have written similar provisions in their Bill Senate 1649. While there are differences between these two pieces of legislation, the opportunity to create a realistic and less onerous mechanism to oversee high risk pathogens is a great one.

Subtitle B: Preparedness: Detection of Biological Attack

There is an important provision contained in your bill that I wholeheartedly endorse and wish to expound on.

The provision devoted to “Detection of Biological Attacks” is vitally important to fully implement. Unless we have more rapid environmental detection of biological attacks, we will not likely be able to mount an effective response to a large scale bioterrorism attack. BioWatch as originally created was viewed as the best we could do seven years ago. The system has performed admirably to date and has had the added benefit of compelling the public health and emergency response communities to address the opportunity that environmental detection offers by verifying the release of a biological agent before anyone becomes clinically ill.

As good as the system is now; it is too slow to mount the kind of response that will be necessary should an attack happen. Accelerating the development and deployment of automated biological detection in conjunction with advanced point of care diagnostics for the agents of greatest concern should be one of the highest priorities. I note with great confidence the role of the Under Secretary of DHS in both environmental detection and rapid biological threat detection and identification and her ability to successfully achieve these tasks.

Subtitle F: Recovery: Recovery and Restoration form a Biological Attack or Incident Guidance.

I strongly endorse the provision contained in this section of the Bill. One of the major unknowns that we confront from the risks of a biological attack is the residual threat. While there are anecdotal experiences that indicate that there may be significant residual hazards from indoor and outdoor releases.

There is a great need to better understand and validate these potential risks. Furthermore, there is a need to promote the development of capabilities to address the possible consequences. I applaud your language that enlists the involvement of EPA and

OSHA to reconcile before an event the standards that constitute safe and effective for the response community and general public.

Title III: Public Health Matters National Pre-event Vaccination and Antimicrobial Distribution Policy Review

A prepared response workforce is our best hedge against uncertainty. One of the best ways to ensure that our responders will do their jobs effectively and safely is for them and their families to be afforded the highest level of protection. In light of that approach pre-event vaccination and distribution of antibiotics not only makes sense but is essential.

What is deeply disturbing about our current approach we have vaccines such as FDA Approved anthrax vaccine that is expiring on shelves in the Strategic National Stockpile when it could be offered voluntarily to first responders in areas where the risk of a biological attack is evaluated higher than others. Expired vaccines are useless to everyone, but a vaccinated first responder is priceless to everyone.

Furthermore, looking at the opportunity to ensure that the families of first responders are take care of opens the possibility of developing FDA approved MEDKITS that can be pre-positioned at homes or places of work that ensure that first responders are not worried about taking care of their families. This has been shown to be invaluable in the case of postal workers in Minneapolis who have volunteered to be part of the US Postal program. Antibiotics are prescribed for both the volunteer postal worker and his or her family. In case of a biological attack, the responder can go do his or her duty without worrying about their families.

There is one last subject I would like to mention subject to your bill and that is to emphasize the importance of situational

awareness as it relates to the evolution of a biological attack. As we experienced most recently with the H1N1 pandemic and even during the ongoing crisis in the Gulf with oil spill, situational awareness--knowing what is going on with a high degree of confidence--is essential. There have been several attempts to address this critical enabling element in our biodefense strategy. Again and again we have come up short. I note that your Bill highlights that important function and I endorse the goal and the importance of it.

In closing, I want again to congratulate and endorse the work of this Committee and the responsible Members and staff. This Bill will go a long way to advance the status of preparedness of this Country for a threat that is unthinkable but likely. I very much appreciate the opportunity to appear before you and look forward to your questions.