DEPARTMENT OF DEFENSE
NATIONAL DEFENSE UNIVERSITY
WASHINGTON, D.C. 20319-5066

19 February 2009

REPLY TO
ATTENTION OF: CSWMD

Dr. D. A. Henderson
Distinguished Scholar
The Center for Biosecurity at UPMC
The Pier IV Building
621 E. Pratt St., Suite 210
Baltimore, MD 21202

Dear Dr. Henderson:

Thank you for agreeing to serve as a panelist at the National Defense University (NDU) Center for the Study of Weapons of Mass Destruction's ninth annual symposium, *Are We Prepared? Four WMD Crises That Could Transform U.S. Security.* This classified symposium will be held on May 6-7, 2009, at NDU, Fort Lesley J. McNair, Washington, DC.

As indicated in the enclosed draft agenda, your panel, which will consider a biological terror campaign scenario and what it can tell us about U.S. preparedness to prevent and respond to biological threats, is scheduled for 1015-1200, Thursday, May 7. This scenario is one of four that the Center developed to structure its own assessment of, and advice regarding, U.S. preparedness to counter major WMD threats. Dr. Seth Carus (caruss@ndu.edu, 202-685-2242) of the Center, who will serve as panel chair, will describe the biological terror campaign scenario and summarize the Center's views on U.S. preparedness for biological threats. He will share this information with you well in advance of the symposium. We have tentatively titled your presentation "Public Health Response to a Biological Terrorism Campaign: Strengths, Weaknesses, and the Way Ahead" and hope that you will share your perspectives on the public health response to a biological terror campaign. Dr. Vahid Majidi has agreed to address the law enforcement response to such a threat, and Dr. Lawrence Kerr will provide his perspective on the role of intelligence in countering biological threats. Each panelist is asked to provide 15-20 minutes of remarks to ensure sufficient time for audience questions. The symposium will be conducted on a non-attribution basis and at the Secret level.

To facilitate administrative arrangements associated with your participation, please do the following by **17 April**: 1) complete and email or fax the enclosed **Speaker Response Form** to villenah@ndu.edu or (202) 685-2264; 2) email a **single paragraph, narrative biography** of you to villenah@ndu.edu, and 3) have your **security clearance** submitted to the NDU Security Office (submission instructions are enclosed). **Additionally**, if you will use a **PowerPoint presentation**, it would help us avoid any potential technical issues if your presentation could be emailed in advance to villenah@ndu.edu (if unclassified) or john.caves@conus.army.smil.mil (if classified), as well as brought with you to the symposium on a compact disc (CD). (USB drives may not be used in NDU computers.) We will send you an email reminder in early April.

Directions to NDU are enclosed. Vehicles visiting Fort McNair generally are searched. The gate guard also will request a valid driver's license or other government-issued ID for personnel entering the base. This and other information about the symposium will be available in early March at www.ndu.edu/WMDCenter/, under "Annual Symposium."

I very much look forward to your participation in this important event for the U.S. community focused on countering WMD threats. Should you have any questions, please contact Dr. Carus or our speaker coordinator, Heather Villena (villenah@ndu.edu, 202-685-2246).

Sincerely,

Dr. John F. Reichart
Director, Center for the Study of
Weapons of Mass Destruction

Enclosures:
1. Draft Agenda
2. Speaker Response Form
3. Security Clearance Submission Instructions
4. Directions to NDU

Subject: **Our Panel in NDU/CSWMD's Upcoming Annual Symposium**
From: "Carus, Seth"
Date Thursday, April 16, 2009 3:57 PM
To: dahzero@aol.com, Larry Kerr , vahid.majidi@ic.fbi.gov

Dr. Henderson, Dr. Kerr, Dr. Majidi:

Thank you for agreeing to participate on the panel, Crisis #3-A Biological Terror Campaign: Are We Prepared?, at the upcoming symposium of National Defense University's Center for the Study of Weapons of Mass Destruction. It is my privilege to chair this panel, which currently is scheduled for 1015- <<Symposium Agenda 03 Apr 09.doc>> 1200 on Thursday, 7 May, as indicated in the attached agenda.

This year's symposium is structured around four WMD crisis scenarios: the collapse of the nonproliferation regime, a failed WMD-armed state, a biological terror campaign, and a nuclear detonation in a U.S. city. It will consider the nation's preparedness to prevent and, if necessary, respond to these scenarios and other WMD challenges. The Center developed these four scenarios to organize its own advice to the Administration on meeting the WMD challenges confronting the nation (a publishable version of which currently is undergoing security review).

Our panel will use the biological terror campaign scenario as its point of reference. Following my introductions of each of you, drawing on the biographical material that you have been asked to provide to Heather Villena, I will lead off the substantive discussion with a summary of the Center's scenario in this area as well as our findings and recommendations regarding the various U.S. preparedness issues that flow from it. As it may be useful to your own preparation, I also have attached the relevant portion of the Center's forthcoming publication which I will be summarizing in my own presentation. Since it has not yet been cleared for publication and still subject to change, please do not further disseminate this attachment.

In preparing your panel remarks, you should not feel constrained by the specific scenario or associated findings and recommendations that I will summarize. You are welcome to react to some or all of what I will summarize, but you also are welcome to address other aspects of the biological terror campaign challenge within the scope of your panel topic. I recap below your respective topics and suggest some aspects of it that you might consider addressing in your remarks:

* Dr. Kerr is invited to address the problems the intelligence community faces in coming to grips with the threat of biological weapons. What are the challenges that the intelligence community faces in providing accurate, timely intelligence on biological threats? To what extent can policymakers count on strategic or tactical warning of an attack? How well is the intelligence community addressing deficiencies highlighted in the 2005 WMD Commission?

* Dr. Henderson is invited to address the public health response to a biological terrorism campaign. How well prepared are we for it? How might the response unfold in the event of a campaign? What are the challenges that we face in further improving readiness?

* Dr. Majidi is invited to address the law enforcement response to a biological terrorism campaign. What are the FBI and other law enforcement agencies doing to prepare for such a possibility? How would the FBI coordinate plans and capabilities with other interagency players and organizations at the state and local level? How prepared are we today? What more do we need to do?

With regard to panel format, each of you will be invited to deliver your remarks, in the order listed above, after I have concluded my opening presentation. Please limit your remarks to 15-20 minutes to ensure adequate time for audience questions (I will do the same). I will ask the audience to hold their questions until after all of us have finished delivering our presentations. I will moderate the question-and-answer period and conclude the panel by the scheduled time.

The symposium will be conducted at the SECRET level. The audience will be composed of approximately 300 U.S. nationals from across the U.S. combating WMD community. There will be no press coverage. As with all NDU events, the symposium will be conducted on a non-attribution basis.

Because of unexpectedly heavy demand, we are holding our symposium in the auditorium of Abraham Lincoln Hall. Lincoln Hall is NDU's newest building, and is located near the visitor's entrance to Fort McNair. We will be seated at a raised, panel table at the front of the auditorium. You may deliver your remarks from the panel table or from a podium next to it (there will be microphones at both); questions will be taken from the panel table. If you will use slides, you may prefer to deliver your presentation from the podium as you will have to look behind you from the panel table to see the slides. Please email your slides in advance, if possible, to villenah@ndu.edu (if unclassified), or to john.caves@conus.army.smil.mil (if classified, via SIPRNET). Otherwise, bring them with you on a CD (USB drives no longer may be used in NDU computers).

As with the other panels and their scenarios, we have a standalone speaker to address the broader challenge represented by our scenario immediately prior to our panel. Dr. Richard Danzig is performing this function for our panel.

I hope that this information is helpful to you. Please contact me (contact information below) or if you have any questions about our panel or contact Heather Villena on general symposium matters (villenah@ndu.edu or 202-685-2246). I very much look forward to your participation.

How prepared are we
Strengths
Weaknesses
Why prepared

Anthrax – the public health response

D.A.Henderson, M.D., M.P.H.
Professor of Medicine and Public Health, U. of Pittsburgh
Center for Biosecurity

National Defense University Study of WMD
May 7, 2009

Priorities

The biological agents pose a unique, major threat
- Available in nature, from labs, and from biologics suppliers
  - Anthrax organisms are in soils everywhere, including U.S.
  - Spores are highly stable; quantities needed are small
- Anthrax is readily grown in a small laboratory
  - Some skill needed but instructions are available on internet
  - Difficult to obtain intelligence about possible threats
- Growing number of sophisticated labs and scientists

Many possible bioagents: two of highest concern
- Smallpox
- Anthrax

How well prepared are we for an anthrax attack?

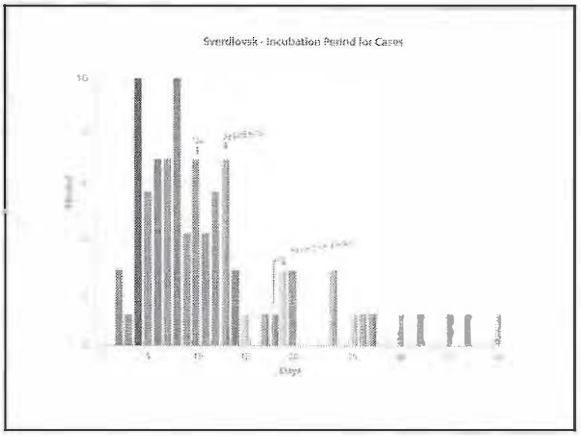
- Prepared for what?
  - Aerosol dissemination over a major city–hundreds of thousands dead
  - Multiple small attacks -- tens or hundreds dead
- How should we calibrate the threat
  - Numbers of deaths?
  - Potential terror and civil disruption?
- What did we learn from the 2001 attack
  - Country-wide terror with 11 cases of inhalation anthrax
  - Only small quantities of the organism were required
  - Anthrax can be easily dispersed
- Note: if hundreds of thousands are exposed, we cannot reasonably be prepared to provide even modest clinical care

Physical resources available

- Biowatch Detection System –
  - Still in development-demonstration stage
  - Provides limited coverage in 30 cities
- Strategic National Stockpile
  - Antibiotics – to treat 60 million people for 60 days
    - Ciprofloxacin and doxycycline
  - Vaccine – 18 million doses of 50 year-old vaccine
  - Anthrax immunoglobulin – small quantities
  - Respirators – perhaps 5,000
- Modelers --unquantifiable number

What we know and guess about anthrax

- Human anthrax comes in three flavors
  - Cutaneous – easily treated
  - Gastrointestinal – only if eating an infected animal raw
  - Inhalation—little human experience
    - One large epidemic ~ 350 cases – USSR,1979
    - In U.S. fewer than 35 cases in past 100 years
      - Goat hair tanning mills; makers of bongo drums
      - 2001 attacks – 11 cases
    - Case-fatality rate – about 35 to 40% (*not 80% or more*)
    - Incubation period – 2 to 40 days (50% after day 9)
    - Most cases among people with lung disease
      Youngest case is age 24
      Is there a minimum threshold to infect?



Response strategy

- Detection
  - Emergency rooms of hospitals and supporting lab network
- Emergency distribution of antibiotics
  - Modelers –"must begin AB within 48 hours after exposure" and finish in 2 days to protect 90% – otherwise "one is hosed" (New models based on reanalysis of pre-1956 monkey data)
  - Review with senior modeler (using his data)
    If 3.5 days to begin AB distribution and 3 days to reach 90%, 30% of population is protected
  - Does the modeler's epidemic fit the Sverdlovsk experience? 50% of cases occurred 8+ days after exposure

Conclusion: assumptions and models need a mature review that includes clinicians and public health practitioners

Antibiotic acceptance and distribution

- Acceptability
  Every 15 days, 25% of recipients stop AB because of gastrointestinal side effects
- Plan for distribution of antibiotics
  Postal workers -- N95 masks, disposable clothing and armed escort without N95 masks
  One 10-day preventive dose per household
  Points of distribution – for those missed, for large households, for resupply, for out-of-city travelers
  Thousands required and very large contingents of clinic personnel and security staff

Environmental clean-up

- What is the risk of secondary aerosols *sufficient to cause human infection?*
  - Still no conclusion 7 years after 2001 anthrax attack
  - Evidence?
    - Sverdlovsk
    - Amerithrax building
    - Senate, post office buildings
- Advice to communities
  - Stay inside, perhaps use duct tape – for how long?
  - Evacuate city – estimated that city could still be revived as late as 6 months after being deserted
- How does one rid a major building of anthrax spores?

How prepared are we to respond?

- Priorities--2002:
  - The antibiotic strategy is an unsatisfactory, interim band-aid
  - The need --a vaccine that could be provided to the entire population – a recombinant product
  - Anthrax (and smallpox) vaccines -- top priorities for preparedness
- Anthrax vaccine progress – 2009: close to nil
  - Cumbersome interagency decision process
  - Restrictive contracting regulations and policies
  - A toxic fleet of lobbyists
  - Splintered leadership

Conclusion

- Anthrax -- one of the most serious and likely WMD threats to civil integrity. In 7 years, little progress except:
  - A much improved diagnostic network
  - Better educated and more aware clinicians
  - Better elaborated treatment methods
- Needs
  - A contemporary safe and effective vaccine
  - Consensus on the risk of environmental contamination and what specifically is to be done about it
  - Clearly defined leadership in the executive and Congress to develop and guide an effective research, development, and response program