



Chem Bio Defense Transformation

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BioDefense for the 21st Century: *Pillars*

➤ Prevention and Protection

- Proactive Prevention
- Critical Infrastructure Protection

➤ Threat Awareness

- Biological Warfare Related Intelligence
- Assessments
- Anticipation of Future Threats

➤ Surveillance and Detection

- Attack Warning
- Attribution

➤ Response and Recovery

- Response Planning
- Mass Casualty
- Risk Communication
- Medical Countermeasures
- Decontamination

CBD: Current Status

- **Underfunded for Years**
- **Tired Infrastructure**
- **Difficult to Maintain Intellectual Property**
- **Industrial Base Problems**
- **Slow Movement From Tech Base to Production**
- **Inability to Aggressively Adopt New Biotech Capabilities**

CBD: Proposed

- **Improve Industrial Base (Bio/NTAs)**
- **Consider Intellectual Property Needs**
- **Transition Many Existing Capabilities to Production for Warfighters**
- **Incorporate New Science And Technological Approaches:**
 - **Develop NTA countermeasures and detection**
 - **Biotech Base for Rapid Detection/Analysis of Genetically Engineered Bio Threat Agents**
 - **Move In-House Development Bias To Best Of Breed Nationally and Internationally**
 - **Move Radiation Therapies out of Tech Base**

CBD: Where the Program Needs to Go

- **Integration Of Detection Systems And Medical Diagnostics**
- **Broader Intervention Through Immune System Manipulation**
- **Computational Biology For Detection Analysis And Drug Development**
- **Accelerating Product Transition**
 - **Process And Clinical Development**
- **Transformational Management Of The Programs**
 - **Rapid Development And Insertion Of New Technologies**
 - **Program Re-direction**
 - **Darpa-like Authority At DTRA (JSTO-CBD)**
 - **Authority To Rapidly Cancel S&T Projects And To Incorporate Rapidly Emerging Technologies**
- **Interagency/International Cooperation To Leverage S&T**
- **Expand Competitive Basis For S&T**
 - **Industry, Academia, Interagency**
- **Address Institute Of Medicine Recommendations**

CBD: Program Direction

- **Accelerating Medical Countermeasures**
 - **Near Term Transformational Management**
 - **Interagency Cooperation**
 - **DoD-DHHS Interagency Medical Countermeasures Development**
 - **Plus Up DoD Tech Base**
 - **Leverage Bioshield For Advanced Development**
 - **Build Competition**
 - **Mid Term Transformational Science**
 - **Genomics, Proteomics, Vaccinomics, Metabolics, Immune Products, Prioritize Accelerated Technologies**
 - **Technology Insertion**

CBD: DoD Strengths Vice Other Agencies

- **DoD Has The Demonstrated Capacity For...**
 - **Solid Tech Base – Key To DHHS Development**
 - **Fielding Systems**
 - **Experimentation With Threat Agents**
 - **Established Infrastructure (Personnel And Laboratories)**
 - **Crisis And Operational Response**

Product Life Cycle Focus

DOD

DHHS

**Industry,
Academia**

*Product
Discovery*

DOD

Product Transition

Civilian and Military

Process Development

Clinical Development

GLP

GMP

Phase 1 Safety trials

DHHS

BioShield

Phase 2/3 Clinical Development

Production by Industry

Acquisition

Industry's Role

- **Bring Us Innovations!**
- **Where the Opportunities Are:**
 - **Nanotech**
 - **Micro/Nano fluidics**
 - **Wet Chemistry to Dry Methods**
 - **Statistical Process**
 - **Modeling & Simulation of Biological Processes**
 - **Systems Integration**

Congressional Activity

- **Need Your Help – Often Unable to Tell if Language is Intended for a Specific Constituent!**
- **Single Focal Point: CBD-My Office!**
 - Includes DTRA/JPEO
 - Includes Activities managed by Services in CBD
 - Provides Us the Opportunity to Manage Better-Build Better Science
- **We Don't Lobby – But Can Advocate!**



Questions?

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