IMPROVED MEDICAL COUNTERMEASURES AGAINST CHEMICAL THREATS

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Resilient People. Healthy Communities. A Nation Prepared.
The Chemical Threat

- Chemical weapons have been used in war and terrorism for >100 years
- Diverse Threats, Few Drugs
  - SNS Stocks MCMs only for OP Nerve Agents
  - Recent use of chlorine and sulfur mustard in Middle East
- PHEMCE Chem IPT Top Priorities
  - Pulmonary Threat Agents (Chlorine)
  - Vesicants
  - Cyanide
  - Nerve Agents
Chem Program Successes

- Decontamination guidance: **PRISM**
  - Broad-spectrum MCM for all chemical threats
  - Disrobe and Dry Decon Removes 99% of Contamination

- Acute nerve agent intoxication: Midazolam
  - Improved anticonvulsant for inclusion in CHEMPACK
  - Adult and pediatric-dose autoinjectors in 2018
  - *New Indication for status epilepticus*

- Vesicant cutaneous injury: Silverlon® wound dressing
  - Already stocked in SNS Burn-Blast Kit
  - *Cleared burn and wound dressing*
Civilian Chemical MCMs
Facts of Life

First, the bad news:
- Chemical Injury Happens Fast!
- Civilians don’t get pretreatments
- It might take awhile for help to arrive

Next, the better news:
- Optimized Ladder Pipe Decontamination can remove >99% of chemical contamination.
  - Just removing contaminated clothing eliminates 90%!
- Chemical-induced pathologies share many characteristics with more common clinical conditions

Now, the insight:
- Treat the injury, not the agent!

We are pursuing commercially available products to treat injuries/pathologies that may be caused by exposure to Chem agents
Near Term Focus Areas

- **Pulmonary Injury from Chlorine and Vesicants**
  - Commercial Indications: Pulmonary Edema, Inflammation, Fibrosis, COPD

- **Drugs for Refractory Nerve Agent Seizures**
  - Commercial Indications: Refractory seizure, status epilepticus, epilepsy

- **Cyanide Treatments- Improved Ease of Use**
We Are Pursuing Chemical Threat Indications for Common Drugs

- Midazolam for Nerve Agent Exposure

- Silverlon® Wound Dressing for Sulfur Mustard Burns

- Alteplase® for Sulfur Mustard Inhalation

- Your Drug Here....
Questions?

- [www.medicalcountermeasures.gov](http://www.medicalcountermeasures.gov)
  - Portal to BARDA
  - View BAA priorities
  - Register and Request a Meeting

- Contact Us
  
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