



The Nation's Center of Excellence  
for Medical Chemical Defense

3100 Ricketts Point Rd, Aberdeen Proving Ground, Maryland 21010

# The United States Army Medical Research Institute of Chemical Defense (MRICD)

## - A Brief Overview -

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Commander



Web: <http://usamricd.apgea.army.mil>

Facebook: [www.facebook.com/USAMRICD](http://www.facebook.com/USAMRICD)

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# Mission and Vision

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## Mission

Provide a strong medical defense against chemical warfare agents, toxins, and toxic industrial chemicals via research, training/education, and consultation.

## Vision

Maintain and strengthen MRICD's leadership as the Nation's Center of Excellence for Medical Chemical Defense via innovative and comprehensive solutions to protect Warfighters and Civilians



# Recapitalization | 2014

- Facts:
  - \$280M
  - 526,000 sq. ft. total  
(75% ↑)
  - 50,000 sq. ft. animal  
holding (43% ↑)
  - 24 acres
  - 395 person capacity





# Research

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# Products in Advanced Development

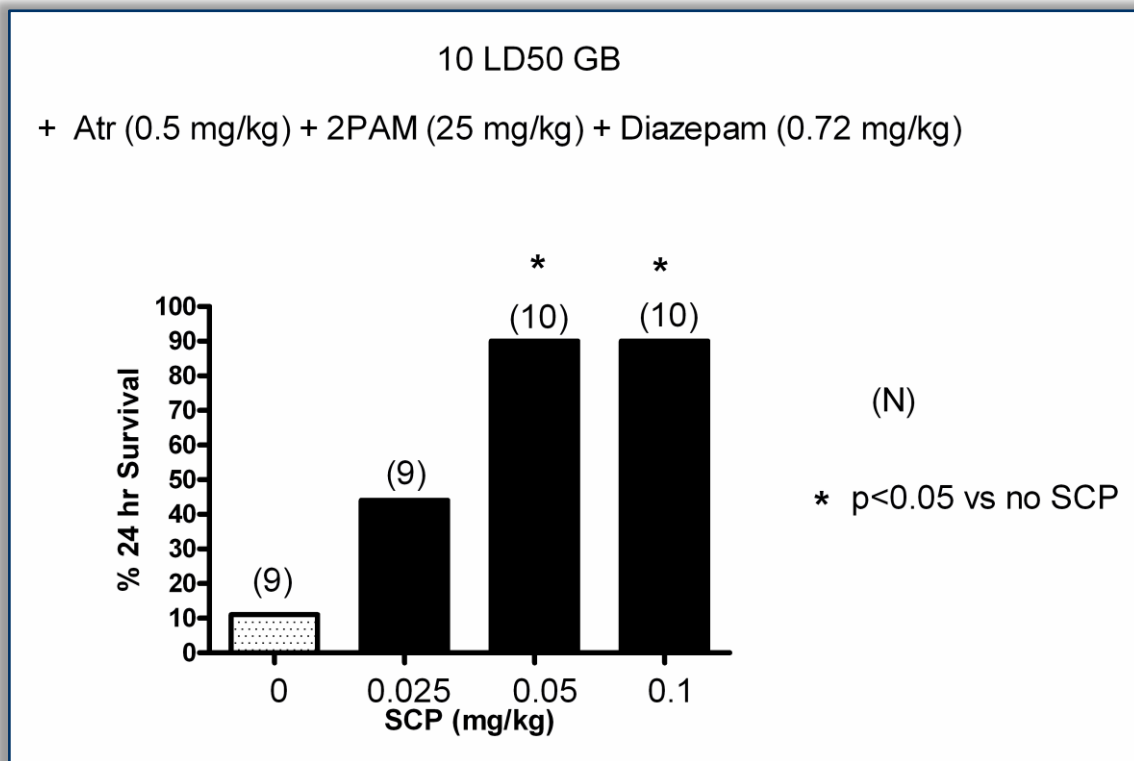
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- Advanced Anticonvulsant System (AAS)
  - Midazolam – stops seizures, prevents brain damage
- Bioscavenger (BSCAV) [pre- and post event]
  - Transgenic Goat Milk Derived
  - Human Plasma Derived
- Improved Nerve Agent Treatment System (INATS)
  - MMB4 (AChE reactivator)
  - Licensure Expansion of Pyridostigmine Bromide beyond Soman
- Soman Nerve Agent Pretreatment, Pyridostigmine (SNAPP)
  - Post-Marketing Studies

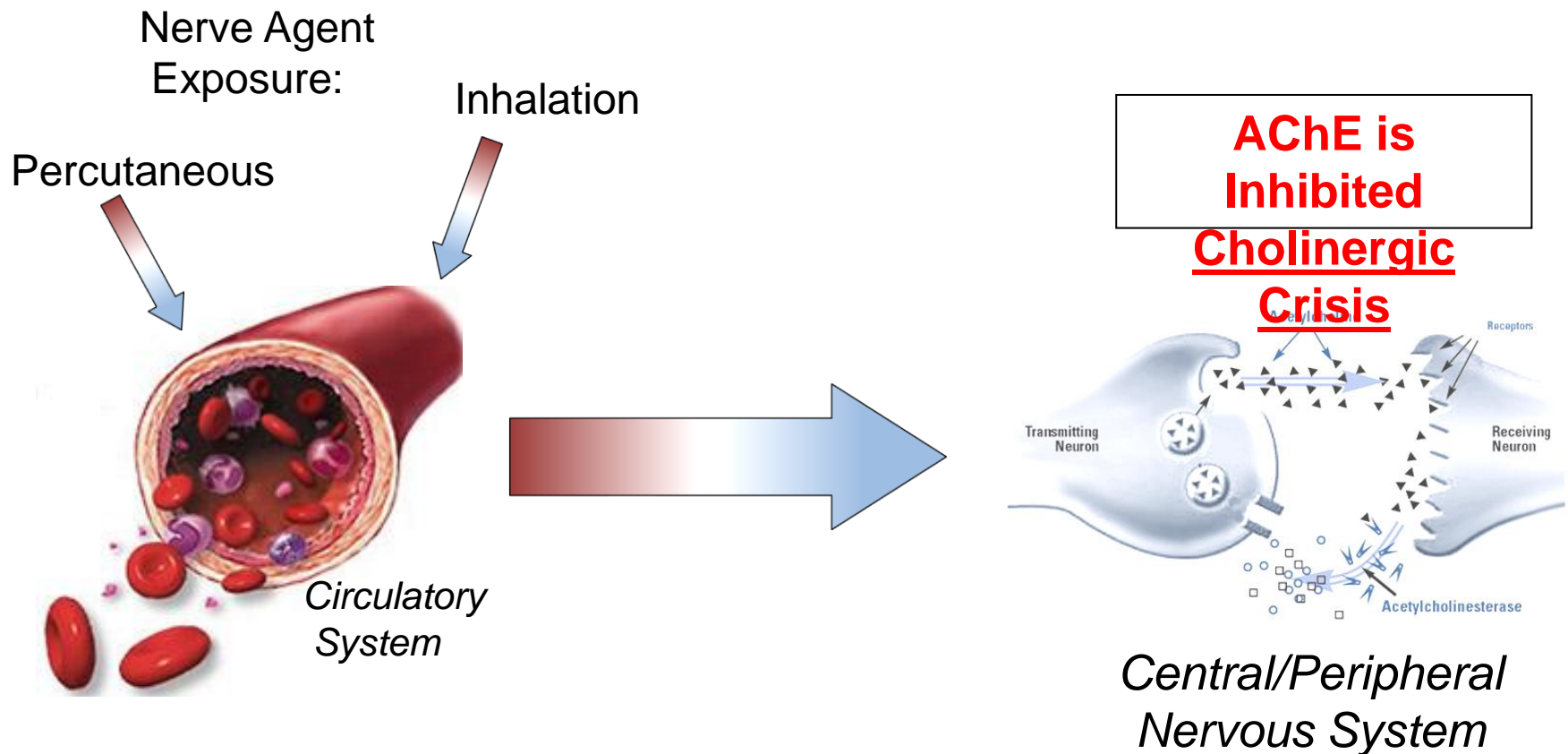


# Scopolamine

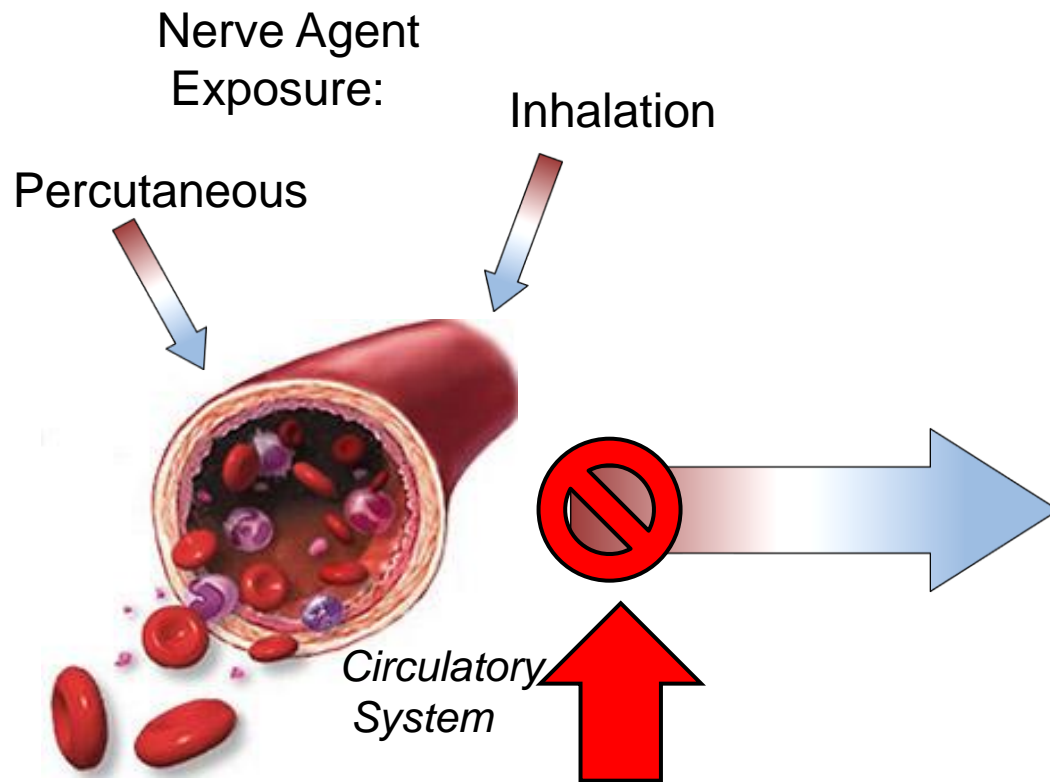
- Under investigation as an adjunct to medical countermeasures for nerve agent intoxication
- Stronger anticholinergic effects and more rapid CNS action than atropine
- FDA approved, used clinically for decades
- Scheduled for Milestone A transition in FY14



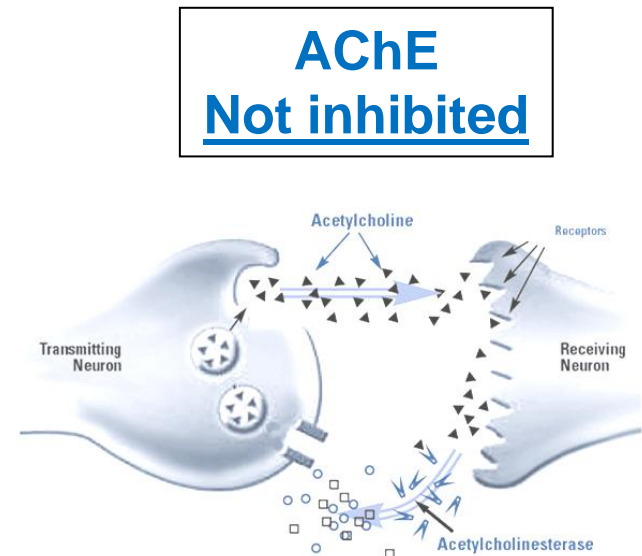
# Mechanism of OP Nerve Agent Toxicity



# Bioscavenger Preserves AChE



**With Bioscavenger  
(pre- or post-exposure)**

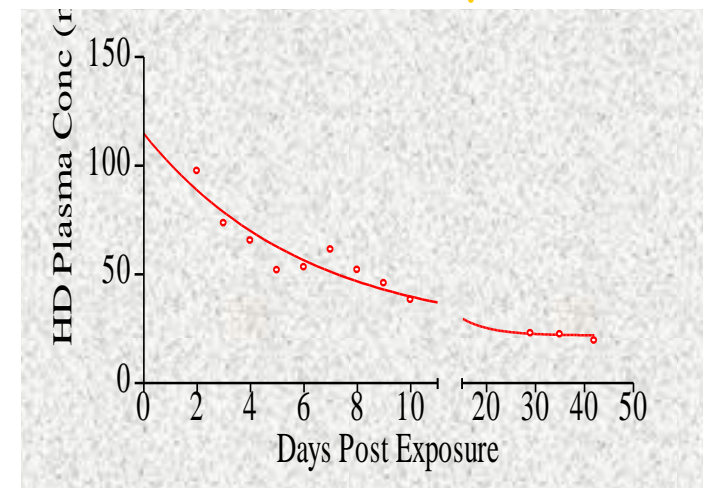


*Central/Peripheral  
Nervous System*



# Consultation – NA and SM exposure

- COCOM reachback
- Use of solid phase microextraction (SPME) fibers in field kits
- SM Adducts detected by MS
- NA fluoride regeneration detected by MS
- CDC confirms results



# Medical Chemical Defense for the Nation

## Federal Interagency Collaboration



**Complementary programs contributing to the  
Nation's defense against chemical threats**

# COLLABORATION



UNIFORMED SERVICES UNIVERSITY  
of the Health Sciences



U.S. Army Research, Development and Engineering Command

EDGEWOOD CHEMICAL BIOLOGICAL CENTER

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United States Army  
Medical Research Institute  
of Infectious Diseases



**Wright-Patterson**  
Air Force Base



National Institute of  
Neurological Disorders and Stroke

National Institutes of Health

Reducing the burden of neurological disease...



STONY BROOK UNIVERSITY



National Institute of Allergy and Infectious Diseases

Leading research to understand, treat, and prevent infectious, immunologic, and allergic diseases.



Lawrence Livermore  
National Laboratory



ISRAEL  
INSTITUTE FOR BIOLOGICAL RESEARCH  
המכון למחקר ביולוגי בישראל



UNIVERSITY OF DEFENCE

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Defence Research and  
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מכון ויצמן למדע  
WEIZMANN INSTITUTE OF SCIENCE



Bundeswehr Institute of  
Pharmacology and Toxicology



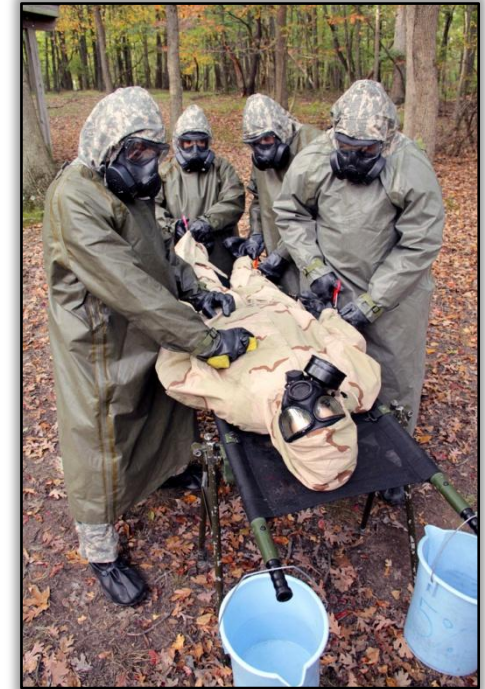
**dstl**

**MRICD**



# Training and Education

- MCBC - Medical Management of Chemical and Biological Casualties
- FCBC - Field Management of Chemical and Biological Casualties
- HM-CBRNE - Hospital Management of Chemical, Biological, Radiological, Nuclear, and Explosive Incidents
- Off Site Courses
- Webinars



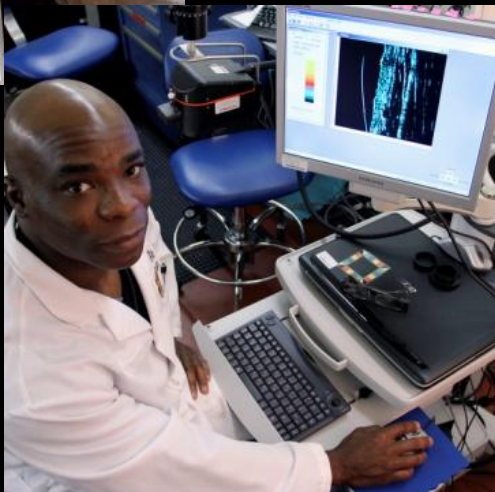


## The Nation's Center of Excellence for Medical Chemical Defense

**RESEARCH**

**TRAINING &  
EDUCATION**

**CONSULTATION**







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# COMMUNICATION

# CONTINUITY

# TEAMWORK



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