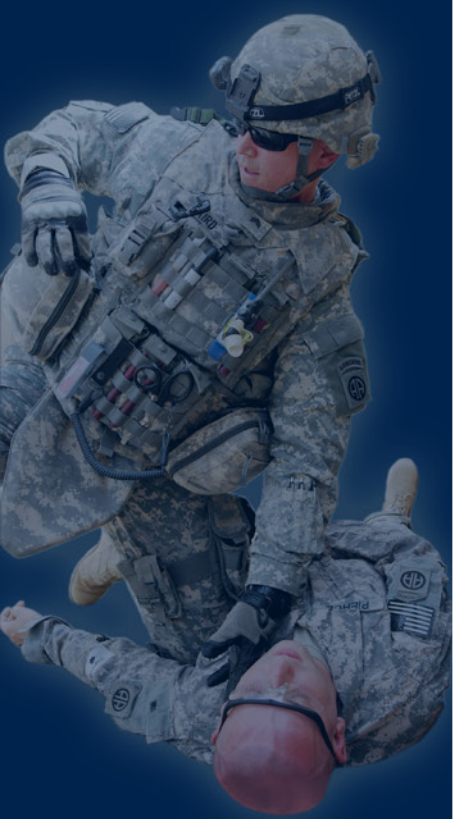
USAMRMC
STRATEGIC COMMUNICATION PLAN

U.S. ARMY MEDICAL RESEARCH AND MATERIEL COMMAND



USAMRMC Public Affairs Office
504 Scott Street
Fort Detrick, MD 21702
301.619.7549
https://mrmc.amedd.army.mil

U.S. Army Medical Research Institute of Chemical Defense (USAMRICD)

Mission: The U.S. Army Medical Research Institute of Chemical Defense provides a strong medical defense against chemical warfare agents and toxins.

Background

USAMRICD is the lead DoD laboratory for the development of medical countermeasures against chemical warfare agents (CWAs). CWAs are extremely toxic, relatively inexpensive, and some are easily produced, making them a feasible weapon of choice for terrorist organizations and rogue states that are not signatories to the 1993 Chemical Weapons Convention. USAMRICD conducts research and training that mitigates and attempts to eliminate these chemical agent threats.

The brain is a major target for the toxic effects of nerve agents (NAs). Inhibition of the enzyme acetylcholinesterase (AChE) in the brain results in seizures and contributes to the incapacitating behavioral, cognitive, and lethal effects of these agents. USAMRICD has a comprehensive neuroprotection research program to evaluate medical countermeasures to protect and/or restore AChE activity, thereby preventing brain damage and possible long-term effects of exposure. Other research programs include:

- Neurological Therapeutics – The objective is to identify, evaluate, and transition to drug development new products for treating NA intoxication.
- Cutaneous/Ocular Therapeutics and Permeation – The objective is to eliminate or mitigate the toxic manifestations of sulfur mustard (HD) and other CWA exposures to the skin and eyes of military and civilian populations at risk.
- Agents of Biological Origin – The objective is to develop medical countermeasures that eliminate or mitigate the toxic manifestations of botulinum neurotoxin in military and civilian populations at risk.
- Medical Diagnostics and Forensics – The objective is to develop, validate, and implement definitive analytical methods to verify human exposure to NAs and HD using relevant biomarkers.
- Respiratory Toxicity and Therapeutics – The objective is to develop and test in vivo and in vitro animal inhalation, percutaneous, and cardio-exposure models and to evaluate protective and therapeutic compounds by assessing the scope of immediate and/or temporal mechanistic events associated with exposure/treatment.
- Molecular and Cellular Therapeutics – The objective is to design a catalytic scavenger based on a human protein platform so as to develop a drug that can protect against repeated exposures to an NA threat while reducing the need for repeated administration of the drug (enhanced user acceptance).

USAMRICD's Collaborative Research Facility (CRF) is a 6,800 square foot facility with capability to carry out studies using controlled chemical threat agents with different animals and numerous in vitro models. Academic, industry, and government labs have used the CRF in collaboration with USAMRICD for testing a variety of articles for chemical agent defense. The primary intent of the CRF is to provide non-USAMRICD

scientists a way to collaborate on medical chemical defense projects. To use the CRF, collaborative proposals are submitted through the Collaborative Research Program portal (https://usamricd.apgea.army.mil/apps/crp).

USAMRICD's Chemical Casualty Care Division (CCCD) is the lead agency for the DoD and the Department of Homeland Security postgraduate education and training in chemical casualty care for U.S. and international civilians and responders from government and non-government agencies. The education and training courses from CCCD arose from the need to treat and manage chemical agent and biological agent casualties and to address the practical challenges of hospital preparedness and respond to the full spectrum of chemical, biological, radiological, nuclear, and explosive (CBRNE) agents. A 2001 report from the U.S. Government Accounting Office cited CCCD's Field Management of Chemical and Biological Casualties course and the Management of Chemical and Biological Casualties (MCBC) course as the gold standard for the military and civilians. CCCD consults with the executive branch of the U.S. Government, Homeland Security, Centers for Disease Control and Prevention (CDC), National Institutes of Health (NIH), and state and local authorities in all phases (prevention, preparation, response, recovery, and mitigation) of disaster response relating to mass chemical casualties in both the military and civilian sectors.

Key Themes & Messages

- USAMRICD is the DoD's lead laboratory for research into the mechanisms of action of CWAs and toxins and for the development of medical countermeasures to these threats.
- USAMRICD is the only medical research lab to maintain a unique facility for the storage, use, and distribution of chemical surety material (CWA).
- USAMRICD trains and educates medical personnel in the medical management of chemical casualties.
- USAMRICD provides subject matter expertise in developing defense and national policy in proper crisis management.
- USAMRICD provides a facility for extramural labs to collaborate with USAMRICD in developing products for chemical agent defense.

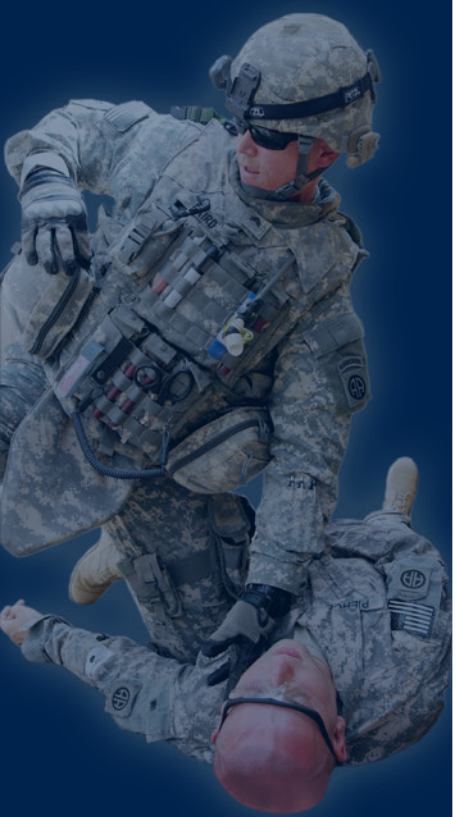
Q & A

Q: How does your subcommand impact return-to-duty rates or Force Health Protection and Readiness goals?

A: USAMRICD specializes in creating countermeasures for chemical and biological weapons that are in use. Countermeasures are developed with the intent to assist the Warfighter in quick mitigation in the event of a CBRNE exposure. However, the purpose of USAMRICD's training mission is to fully prepare health care professionals to recognize and treat chemical and biological exposure, potentially increasing return-to-duty rates.

Q: Does USAMRICD partner with any civilian hospitals or laboratories in its research?

A: USAMRICD's CCCD training courses address the practical challenges of hospital preparedness and response to the full spectrum of CBRNE agents. Training is attended by civilian clinicians (physicians, physician assistants, nurses, emergency medical technicians, dentists, veterinarians, and psychologists) and non-clinicians (hospital planners and public officials) from civilian hospitals.



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Q: Do military personnel or civilians participate as subjects in the research?

A: No, military and civilian personnel are not used as subjects in USAMRICD's research. Case studies from accidental exposure on military or civilian personnel would be used for lessons-learned purposes. The research is conducted on small rodents, rabbits, pigs, and nonhuman primates.

Q: How do civilian medicine and military medicine benefit from one another in this research area?

A: Terrorism is a growing threat. Not only does research of countermeasures assist the Warfighter, but it also aids in helping to protect the civilian population from exposure of chemical and biological agents.

- Neuroprotection (seizures) – In performing research for neuroprotection countermeasures, USAMRICD first analyzes drugs that have been formulated and approved for nervous system disorders such as Parkinson's disease, Alzheimer's disease, and epilepsy.
- NIH's Countermeasures Against Chemical Threats (CounterACT) Grants – The Institute is the DoD's premier lab for the development of medical products against the effects of toxic chemicals. The NIH CounterACT program addresses the critical need for improved antidotes for civilian populations vulnerable to chemical agent poisoning by a terrorist attack.

Q: What role, if any, do other government agencies (U.S. Food and Drug Administration, Environmental Protection Agency, etc.) play in USAMRICD's research?

A: USAMRICD receives requests for consultation from the Federal Bureau of Investigation, National Defense University, Biomedical Advanced Research and Development Authority, CDC, NIH, Defense Advanced Research Projects Agency, Chemical Biological Medical Systems, Defense Threat Reduction Agency (DTRA), and other fellow Department of Army and DoD labs (the Joint Program Executive Office, Public Health Command, Edgewood Chemical Biological Center, Walter Reed Army Institute of Research, and the Uniformed Services University of the Health Sciences).

Q: Are there any controversial issues involving USAMRICD's area of research (animal research, environmental impact, stem cell research, etc.)?

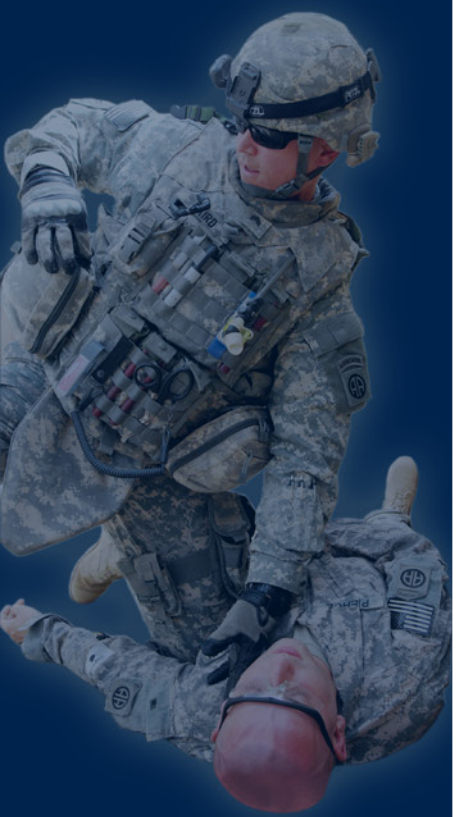
A: One controversial issue that USAMRICD is currently addressing is the use of nonhuman primates in the MCBC course lab exercise, in which the students administer to the animals a medication that simulates the cholinergic crisis caused in humans by NA exposure and then provide treatment that leads to recovery.

Q: Who funds USAMRICD's research program?

A: Currently, DTRA funds a large portion of USAMRICD's programs. USAMRICD also acquires funding from NIH for the CounterACT Research Center of Excellence grant, which is worth $14.4 million over 5 years.

Q: What's on the horizon for this subcommand?

A: USAMRICD does not see a major shift in its mission. The laboratory is being replaced by a new, state-of-the-art $320 million facility that will open in 2013 and will be fully occupied by 2014. USAMRICD is preparing to increase its intellectual capital and retain the existing vivarium to increase the capacity of its CRF.



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Q: Do USAMRICD and its partners abide by animal use guidelines in their research?

A: Yes. All experimental protocols involving the use of animals are approved by the Institute's Animal Care and Use Committee, and all procedures are conducted in accordance with the principles stated in the *Guide for the Care and Use of Laboratory Animals* (National Research Council, 1996), and the Animal Welfare Act of 1966 (P.L. 89-544), as amended. USAMRICD is an Association for Assessment and Accreditation of Laboratory Animal Care International-accredited facility.

Q: Does USAMRICD's research involve the use of stem cells?

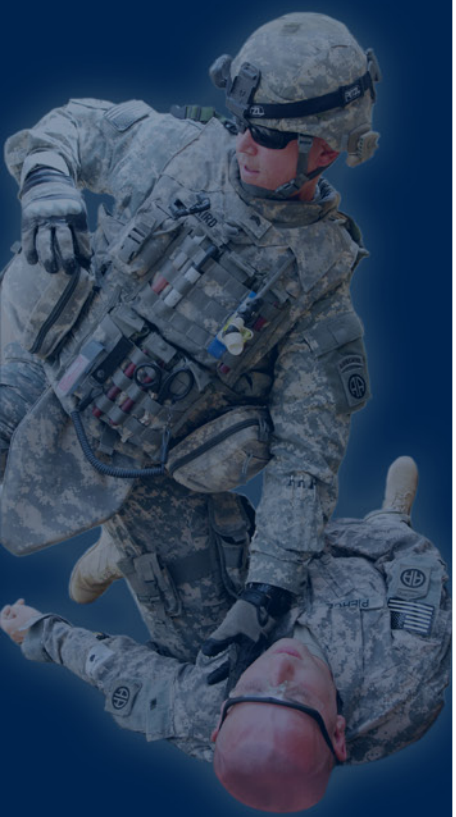
A: Yes, but not of human origin.

Q: Is USAMRICD's research publicly available?

A: Yes, researchers at USAMRICD publish their findings in peer-reviewed scientific journals.

Q: Where does USAMRICD receive its funding?

A: DTRA – approximately $31 million; NIH – approximately $10 million.



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