

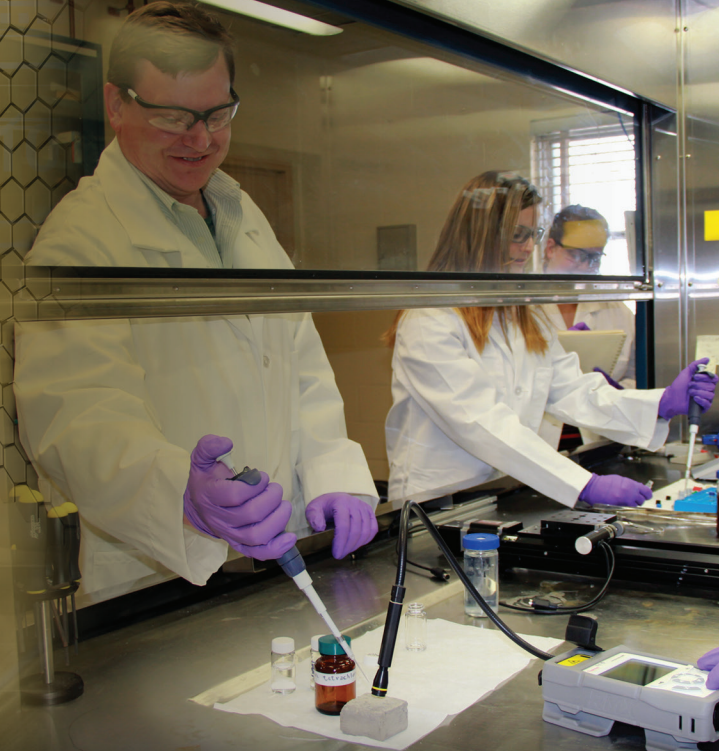


Edgewood Chemical Biological Center
RESEARCH & TECHNOLOGY



At the ECBC Research and Technology Directorate, we are committed to providing the nation with dedicated research and development services that enhance its chemical and biological defense capabilities across the spectrum of enduring and emerging threats. We couple research science with applied technology to deliver the capabilities that save lives. From research of new technologies, threats, and solutions, to full lifecycle development and evaluation of new products, R&T offers a veteran team dedicated to solving the unique problems of the U.S. and the World.

The Edgewood Chemical Biological Center (ECBC) is the U.S. Army's principal research and development center for chemical and biological defense technology, engineering and field operations. ECBC has achieved major technological advances for the warfighter and for our national defense, with a long and distinguished history of providing the Armed Forces with quality systems and outstanding customer service. ECBC is a U.S. Army Research, Development and Engineering Command laboratory located at the Edgewood Area of Aberdeen Proving Ground, Maryland.



EDGEWOOD CHEMICAL BIOLOGICAL CENTER



RESEARCH & TECHNOLOGY



ECBC R&T: CHEMICAL AND BIOLOGICAL RESEARCH FOR THE FUTURE

The R&T Directorate is a forward leaning organization with its focus on the future of chemical and biological defense. R&T's strategy paves the Directorate's path forward by outlining a plan and action steps that positions the Directorate for future success based on future needs and maintaining strong partnerships with other organizations. The strategy helps the Directorate:

- Revitalize our research portfolio with future focus
- Propose and manage programs—not just individual projects
- Influence policy decision process and national strategy implementation
- Develop staff and skill sets for future success

As the premier resource for chemical and biological solutions, ECBC R&T is ready to unite and inform the national defense community by solving the nation's toughest chemical and biological defense problems.

To further discuss services we can provide, we invite you to contact our leadership team at (410) 436-3250, or visit us on our website at <http://www.ecbc.army.mil/RT>.

RESEARCH AND TECHNOLOGY DIRECTORATE

Edgewood Chemical Biological Center
 RDCB-DR
 Building E3150
 5183 Blackhawk Road
 Aberdeen Proving Ground-Edgewood Area, Maryland 21010

MISSION

To provide integrated, full-spectrum science and technology solutions to chemical and biological threats to U.S. Forces and the Nation.

VISION

To be the premier national resource for chemical and biological defense



OUR AREAS OF EXPERTISE

The R&T Directorate is comprised of six divisions. Each division is organized into branches ensuring that each project is developed by highly specialized teams of experts in their respective fields.

Biosciences

- BioDefense | BioChemistry | BioSensors | BioTechnology
- **Capabilities:** Conduct research for the development of next generation sensor hardware, bioremediation of chemical and biological-related materials, biological warfare field detection assays, microbial testing up to biosafety level 3 agents, bioinformatics, protein engineering, genomic sequencing, bioforensic analysis and bioprocess manufacturing.

Chemical Biological Detection

- Laser Spectroscopy | Passive Spectroscopy | Point Detection | Technology Evaluation
- **Capabilities:** Determine fundamental signatures and properties. Develop state-of-the-art detection techniques and technologies. Optimize detection algorithms and systems. Conduct formal Technology Readiness Level assessments.

Chemical Biological Protection and Decontamination

- CBR Filtration | Decontamination Sciences | Respiratory Protection
- **Capabilities:** Execute fundamental and applied studies to enhance filtration, decontamination, and respiratory protection technologies. Develop and evaluate the efficacy of novel solutions and materials for protection.

Chemical Sciences

- Agent Chemistry | Chemical Analysis & Physical Properties | Forensic Analysis
- **Capabilities:** Conduct chemical agent synthesis and characterization, physical property and spectral analysis, methods development, environmental fate studies, forensics, attribution and agent science support to the defense, intelligence, law enforcement and compliance communities.

Physics and Computational Sciences

- Aerosol Sciences | Chemical Biological Systems Integration | Modeling, Simulation & Analysis | NBC Battlefield Management
- **Capabilities:** Conduct integration of CBRN information with existing and emerging battlefield automation systems; provide modeling, simulation and analysis products to address specific CBRN customer needs.

Toxicology and Obscurants

- Analytical Toxicology | Environmental Toxicology | Operational Toxicology | Smoke & Target Defeat | Veterinary Services
- **Capabilities:** Develop toxicology and chemical biological threat databases for operational requirements and for worker safety standards. Conduct new obscurant materials research and chemically based anti-materiel technologies.

WHO WE ARE

- The nation's premier research and development laboratory for chemical and biological defense, operating within the Edgewood Chemical Biological Center in Edgewood, MD.
- We have nearly 100 years of experience in combatting chemical and biological threats both at home and abroad.
- We provide the most experienced staff in the world to develop new and innovative solutions to the Nation's unique chemical and biological defense problems.
- We are home to more than 400 researchers and scientists, including more than 100 Ph.D. staff, committed to the mission of providing our customers with the highest quality research and technology.
- We played a key role in the U.S. Army being named to Thomson Reuters Top 100 Global Innovators for 2012, with two of our own scientists named as part of the "Top 20 Inventors for the U.S. Army 2009-2011" by Thomson Reuters.

WHAT WE DO

- We provide full-spectrum research and development for innovative technological solutions to emerging and enduring threats with the goal of protecting the Warfighter and our nation.
 - We conduct groundbreaking research in the chemical and biological defense fields.
 - We deliver complete lifecycle development, testing, and evaluation of new technologies.
 - We provide state-of-the-art analysis and modeling of potential threats.
- We are a trusted consultant for the development of new technologies, threat detection and analysis, and agent synthesis and development.

OUR FACILITIES AND CAPABILITIES

With more than 500,000 square feet of laboratory space, ECBC R&T is one of the world's largest and most advanced chemical and biological defense research centers.

Our space houses some of the most sophisticated and innovative laboratories in the world. A few of our these facilities include:

- Proteomics Core Facility
- Genomics Laboratory
- Instrument Surety Assessment Suite (ISAS) Laboratory
- ISO/IEC 17025 Accreditation
- AAALAC Accredited Toxicology Laboratory
- OPCW Designated Laboratory

R&T Surety Resources

- 133 chemical agent reliability program personnel
- 85 chemical agent laboratories/rooms
- 260 chemical agent hoods
- 59 biological agent reliability program personnel
- 31 biological agent laboratories/rooms
- 50 biological agent hoods

