



**EDGEWOOD**

CHEMICAL BIOLOGICAL CENTER

A US Army RDECOM Laboratory



## BioDefense Team

The Edgewood Chemical Biological Center's (ECBC) **BioDefense Team** conducts basic and applied research in areas of virology, microbiology, molecular biology, enzymology, immunology, and biochemical engineering with a focus on the detection and destruction of chemical and biological warfare agents and other potential threat materials.



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## BioDefense Team - Capabilities



The BioDefense Team spans over 20 laboratories including a 2000 square foot BioSafety Level 3 (BSL-3) high containment laboratory and a chemical agent surety lab.

Scientific team capable of employing polymerase chain reaction (RAPID, JBAIDS, ABI 7900), immunoassay (BioVeris M1-M, Luminex, Fluorescent microscopy), fatty acid analysis, flow cytometry, and RAMAN spectroscopy.

Dedicated virology suites, decontamination R&D laboratories, hybridoma production labs and anaerobic bacteriology facilities.

Growth and purification of biological agents to include pilot-scale fermentation up to 75 liters.



## BioDefense Team - *Representative Research Areas*



- Development and validation of detection systems under high containment conditions
- Development of eco-friendly enzymes for chemical and biological agent destruction
- Evaluation of vaporous hydrogen peroxide and other biological decontamination methodologies
- Testing chemical and biological agents within water distribution systems
- Preparation and evaluation of biological agents and simulants
- Development and evaluation of antibodies

The BioSciences Division is composed of three teams— the BioDefense Team, the Molecular Engineering Team, and the Biosensors Team, making ECBC a one-stop-shop for development, packaging, and validation of new chemical/biological defense technologies.



## **BioDefense Team**

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