DEFENSE THREAT REDUCTION AGENCY

NDIA 2024 CBRN Defense Conference and Exhibition

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Deter. Prevent. Prevail.

Detection & Diagnostics - Mission & Vision

MISSION

Develop and transition Chem/Bio detection and diagnostic technologies that enable the Total Force to better understand and respond to the threat.

VISION

Total Force equipped with the detection and diagnostic capability to understand the threat in order to fight and win in CB contested environments.

Biological Detection Thrust Areas

Emerging and Enhanced Biosensing

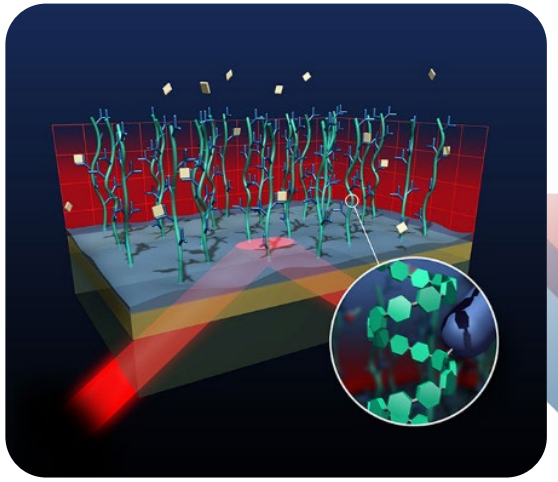
Rapid development of sensors, technologies, and capabilities to detect and address both known and emerging biological threats the Warfighter may encounter in the battlespace.

Operational Biological Sensing

Continue to develop fieldable technologies capable of collecting and detecting biological aerosols in the battlespace.

Unconventional Biological Detection Modalities

Develop disruptive technologies to detect and identify emerging biological threats by exploring novel modalities for collection, detection and identification and developing microsensing capabilities that push the limits of Size, Weight, Power and Cost (SWaP-C).



Biological Detection Technology Pipeline

BIOLOGICAL DETECTION

Integrated Early Warning and CBRN Layered Defense to Safeguard the Warfighter from the Biological Threat

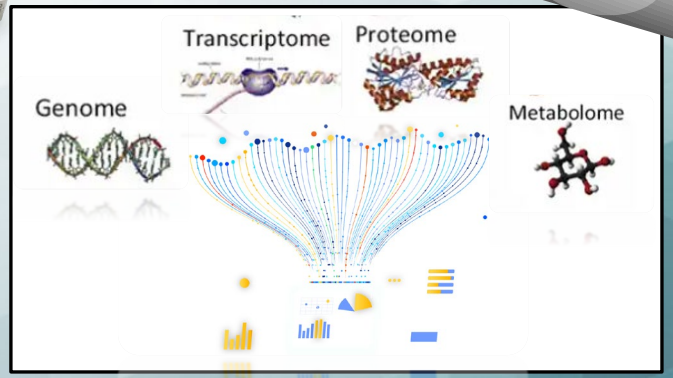
Biosensors for platforms

Integrate novel design concepts

Microsensors for Reconnaissance

FY23 FY24 FY25 FY26 FY27 FY28

Generate assays in the field



Workflows for data collection, aggregation and analysis

Detection of unknown threats

Past, Present & Future of Biological Detection:

- Detection of the traditional biological threat
- Addressing the emerging and enhanced threat
- Threat agnostic capabilities for early warning

Chemical Detection Thrust Areas

Modernized and Enhanced Chemical Sensing

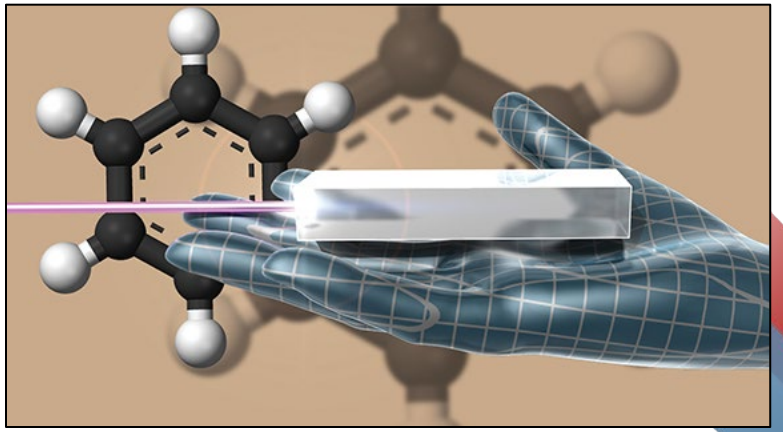
Modernizing chemical detection by providing the warfighter with closer to lab-quality detection further forward in the fight while simultaneously reducing warfighter burden with portable, low SWaP-C detectors that will protect and enhance operations on the battlefield for the Joint Force.

Operational Chemical Sensing

Develop chemical threat sensing payloads on deployable systems for chemical reconnaissance and address the need for agile perimeter defense for fixed site and maneuver operations to enable Integrated Early Warning and Integrated Layered Defense.

Unconventional Chemical Detection Modalities

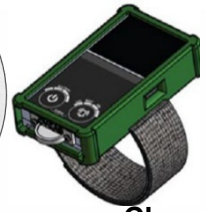
Staying ahead of the threat by developing novel sensor technologies to address the most difficult challenges in chemical detection by investing in disruptive technologies.



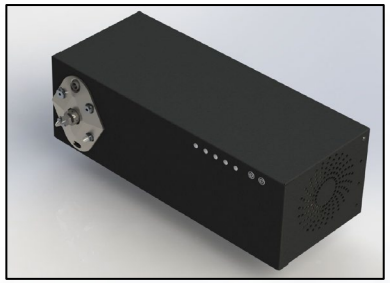
Chemical Detection Technology Pipeline

CHEMICAL DETECTION

Integrated Early Warning and CBRN Layered Defense to Safeguard the Warfighter from the Chemical Threat

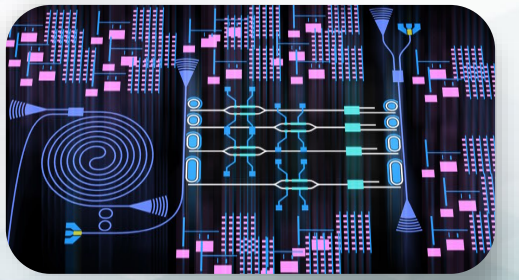


Man-worn Chemical Vapor Detectors



Detection of unknown threats

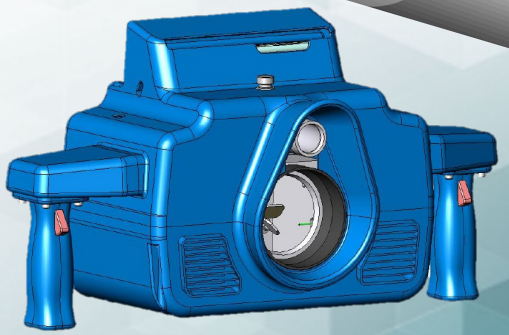
Deployable Microsensors



Photonics for low SWaP high-fidelity sensing

FY23 FY24 FY25 FY26 FY27 FY28

Non-contact detection of NTAs and PBAs



Trace Detection and Decontamination Assurance

General Forces Chemical Indicators

Past, Present & Future of Chemical Detection:

- Detection of the traditional chemical threat
- Addressing the emerging threat
- Agent-agnostic capabilities