

 Official website of the Department of Homeland Security



U.S. Department of  
Homeland Security

## Science and Technology

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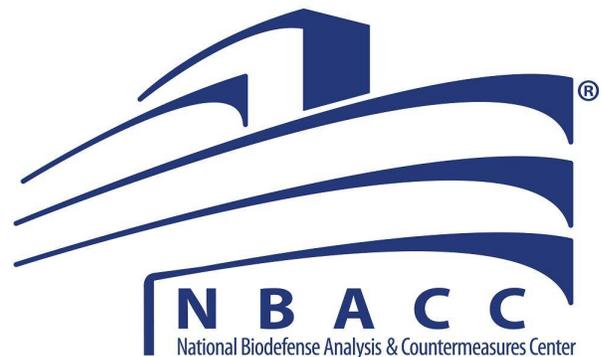
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# National Biodefense Analysis and Countermeasures Center

*Location: Fort Detrick, MD*

The [National Biodefense Analysis and Countermeasures Center](#) ([/publication/national-biodefense-analysis-and-countermeasures-center-nbacc](#))

(NBACC) is a one-of-a-kind facility dedicated to defending the nation against biological threats. Its work supports intelligence assessments, preparedness planning, response, emerging threat characterization and bioforensic analyses. It is the first national laboratory created by DHS and the capabilities within the facility did not exist prior to the Amerithrax attacks of 2001.



Since its inception, NBACC and its staff of more than 150 dedicated employees have filled critical shortfalls in our scientific knowledge of biological agents needed to defend the public from acts of terrorism.

For information regarding NBACC's research efforts on COVID-19 read the [DHS Initiating Crucial Research to Mitigate COVID-19 news release](#) ([/science-and-technology/news/2020/03/25/news-release-dhs-initiating-crucial-research-mitigate-covid-19](#)).

## World Class Facilities for Biodefense

NBACC's 160,000 square-foot facility and 51,927 square feet of lab space includes two centers: the National Bioforensic Analysis Center (NBFAC), which conducts technical analyses in support of federal law enforcement investigations, and the National Biological Threat Characterization Center, which conducts experiments and studies to better understand biological vulnerabilities and hazards. Together these centers offer a national resource for understanding the risks posed by the malicious use of biological agents and the operational capability to support the investigation, prosecution and prevention of biocrimes and bioterrorism.



Biodefense homeland security missions require special attention to safety, security, and regulatory requirements, and NBACC is committed to maintaining a culture of safety. Its fully accredited, state-of-the-art lab facilities are at the biosafety levels (BSL) 2, 3, and 4, providing the highest standards of safety and experimental capability available. Its BSL-4 accreditation allows NBACC to perform R&D on pathogens for which no vaccine or treatment exists and makes it one of seven such facilities in the United States.

## S&T Published Research

[Airborne SARS-CoV-2 is Rapidly Inactivated by Simulated Sunlight Article \(/redirect?url=https%3A%2F%2Facademic.oup.com%2Fjid%2Fadvance-](#)

[article%2Fdoi%2F10.1093%2Finfdis%2Fjiaa334%2F5856149\)](#) (Journal of Infectious Diseases)

[Increasing Temperature and Relative Humidity Accelerates Inactivation of SARS-CoV-2 on Surfaces \(/redirect?url=https%3A%2F%2Fmsphere.asm.org%2Fcontent%2F5%2F4%2Fe00441-20\)](#) (American Society For Microbiology)

[Simulated Sunlight Rapidly Inactivates SARS-CoV-2 on Surfaces \(/redirect?url=https%3A%2F%2Facademic.oup.com%2Fjid%2Fadvance-](#)

[article%2Fdoi%2F10.1093%2Finfdis%2Fjiaa274%2F5841129%3Fsearchresult%3D1\)](#) (Journal of Infectious Diseases)

## Providing Efficiencies through Partnerships

NBACC is a partner in the National Interagency Confederation for Biological Research at Fort Detrick. This consortium includes the Centers for Disease Control and Prevention, Food and Drug Administration; National Cancer Institute; National Institute of Allergy and Infectious Diseases Integrated Research Facility; Naval Medical Research Center Biological Defense Research Directorate; U.S. Army Installation Management Command; U.S. Army Medical Research and Materiel Command; U.S. Army Medical Research Institute of Infectious Diseases; and U.S. Department of Agriculture Foreign Disease-Weed Science Research Unit. As an

interagency partner, NBACC coordinates a range of scientific, technical, operational, and infrastructure-related activities that enhance scientific collaboration and productivity.

In addition, NBACC established a “Work for Others” program that makes the NBACC national security biocontainment capabilities more broadly available to federal agencies.

## Addressing Emergent Threats

NBACC collaborates with the Department of Defense and National Institutes of Health to plan and conduct research to address gaps and needs in biodefense. For example, NBACC worked with other federal agencies to provide characterization and analysis of potentially dangerous pathogens that could pose a threat to the Homeland Security Enterprise.

NBACC also coordinates with other national laboratories to enhance research capabilities, share lessons learned, and provide training more efficiently.

For information regarding NBACC's research efforts, read [DHS Initiating Crucial Research to Mitigate COVID-19](https://www.dhs.gov/science-and-technology/news/2020/03/25/news-release-dhs-initiating-crucial-research-mitigate-covid-19) ([/science-and-technology/news/2020/03/25/news-release-dhs-initiating-crucial-research-mitigate-covid-19](https://www.dhs.gov/science-and-technology/news/2020/03/25/news-release-dhs-initiating-crucial-research-mitigate-covid-19)). [press release](https://www.dhs.gov/science-and-technology/news/2020/03/25/news-release-dhs-initiating-crucial-research-mitigate-covid-19).

## Did You Know?

The NBFAC component of NBACC provides the FBI with bioforensic testing and analysis on suspected biothreat samples, including analyses of ricin envelopes mailed to public officials. NBACC has supported more than 100 federal law enforcement cases.

As a national resource, NBACC offers a 24/7 biodefense capability with the means and infrastructure to conduct sensitive experiments that address operational needs and fundamental knowledge gaps in biodefense.

## Fact Sheet

- [National Biodefense Analysis and Countermeasures Center \(NBACC\) Fact Sheet](https://www.dhs.gov/science-and-technology/publication/st-nbacc-fact-sheet) ([/publication/st-nbacc-fact-sheet](https://www.dhs.gov/science-and-technology/publication/st-nbacc-fact-sheet)).

Contact us at: [SandTNatLabs@hq.dhs.gov](mailto:SandTNatLabs@hq.dhs.gov)

(<mailto:SandTNatLabs@hq.dhs.gov?subject=NBACC%20-%20Web%20Inquiry>)

## Related Resources

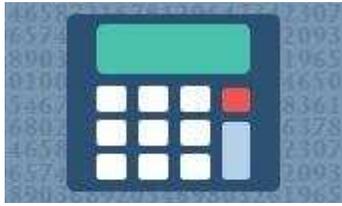
Probabilistic Analysis for National Threats Hazards and Risks (PANTHR)

Centers for Disease Control and Prevention

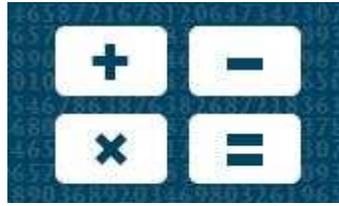
NBACC/BNBI Website

U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID)

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COVID-19 Virus Airborne Calculator



COVID-19 Virus Stability Calculator



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