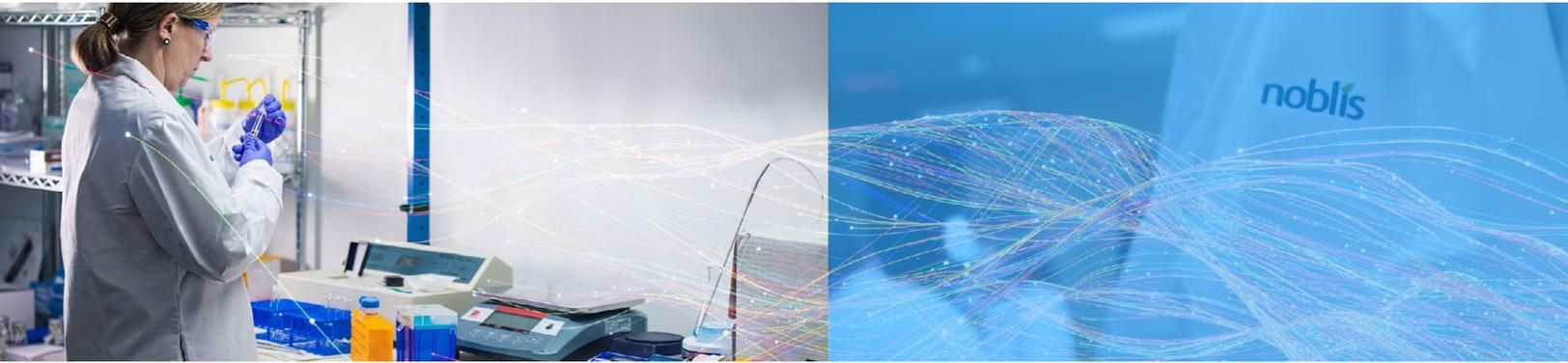


Push the Boundaries of Innovation in Noblis Labs

Noblis' Applied Sciences and CBRNE labs take our clients' missions to the next level



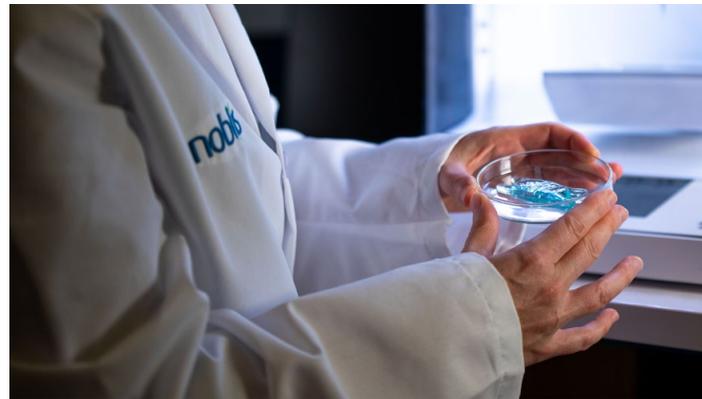
Our experts explore complex problems to create practical, forward-thinking, sustainable solutions. Our scientists apply technologies like 3D bioprinting, high-performance computing and DNA sequencing and analysis to enable breakthroughs that we can showcase and share on a secure technology cloud. New ideas are born in these collaborative spaces through sophisticated analysis, modeling and prototyping.

ADVANCING THE STATE OF THE ART

Innovation is the key to our work at Noblis, whether we're working on client-funded problems, advancing science and technology through our internally funded Noblis Sponsored Research (NSR) program or improving the shared services that support our staff.

The NSR program is a vital and essential part of corporate life at Noblis. Our research is the forward-thinking seed that generates sustainable solutions with enduring impacts.

Noblis invites other organizations to join in our collaboration and, with us, innovate to solve the complex problems facing our nation. To request a demonstration of our groundbreaking projects, contact answers@noblis.org.



RESPONDING TO THE COVID-19 PANDEMIC

As part of Noblis' response to the pandemic, we designed primers and probes for RT-PCR assay detection of SARS-CoV-2. We assessed the potential impact of SARS-CoV-2 mutations on the performance of the assays, generating actionable insights about signature erosion. We collaborated on bioinformatics analyses such as genome assembly, variant analysis and phylogenomics to help understand how the virus mutates and spreads. And we developed a rapid prototype dashboard for internal analysis of the resulting data. Learn more at noblis.org/covid-19.

Three Noblis Labs Advancing Our Clients' Missions



Our fully equipped **Biosafety Level 2 laboratory** provides a full suite of research capabilities in:

- Microbiology
- Molecular biology
- 3D-tissue printing
- DNA sequencing platforms
- Bacterial and mammalian tissue culturing
- Synthetic biology and polymerase chain reaction (PCR)
- Reverse transcriptase PCR (RT-PCR)

Our diverse research projects include prototype synthetic tissue models of the gut microbiome, data encryption and storage using DNA as the storage medium and application and recovery of synthetic DNA on various surfaces for tagging and tracking purposes. Our experts are currently developing primers and probes for PCR assay detection of the Monkeypox Virus.

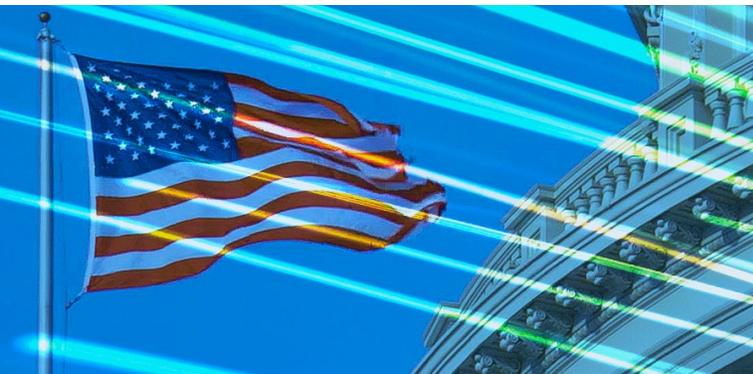


In our **Chemical, Biological, Radiological, Nuclear and Explosives (CBRNE) Innovation Hub**, our experts focus on DNA sequencing, bioinformatics, 3D-printable sensors and biosafety and security training. Currently, we are honing a portable DNA sequencing and analysis platform for responding to time-critical outbreaks. Learn more at noblis.org/portable-dna-sequencing. We continue to refine our genome engineering detection platform, which detects a broad range of engineering signatures and assigns a probability of human manipulation.

We are developing novel 3D-printed biological and chemical threat agent sensors that can be deployed on autonomous rovers. Together with our machine learning and artificial intelligence experts, we are building a unique virtual reality training experience for biosafety and biosecurity that encourages critical thinking in a controlled, immersive environment.



Scientists in our **Forensic Innovation Hub** are characterizing hair proteomes by liquid chromatography tandem mass spectrometry and developing proteomics algorithms for sequence analysis. We are also using next-generation sequencing to explore human, animal and microbiome variation.



ABOUT NOBLIS

For more than 25 years, Noblis has been an innovator within the federal government, committed to enriching lives and making our nation safer while investing in the missions of tomorrow. As a nonprofit, Noblis works for the public good, providing independent and objective science, technology and engineering solutions. Together with our subsidiaries, we work with a wide range of government clients in the defense, homeland security, intelligence, law enforcement and federal civil sectors.

Contact Us

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