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For more information, visit *pls.llnl.gov/bbtd* and *pls.llnl.gov/careers* or contact Deputy Division Leader Kris Kulp (*bbtdrecruiting@llnl.gov*).

BBTD

Biosciences and Biotechnology Division

Protecting the nation by countering current and future biological and environmental threats

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Lawrence Livermore National Laboratory

WELCOME to Lawrence Livermore National Laboratory (LLNL), located among the vineyards and rolling hills east of San Francisco. With expertise that spans world-class basic science to premier advanced technologies, we solve problems at the frontiers of science while meeting national security challenges. As an equal opportunity employer, we are committed to workforce diversity, and we offer a robust and competitive benefits package. To find your next opportunity, visit c*areers.llnl.gov*.

GREAT WORK IN THE FOLLOWING FIELDS

Biosecurity
Detection, characterization, and mitigation

Intelligence
Analysis, policy and operational support

Counterterrorism
Preventing and mitigating catastrophe

Defense
Precision effects, situational awareness

Science
Science, technology, and engineering

Energy
Energy and environmental security

Nonproliferation
Technical solutions to evolving challenges

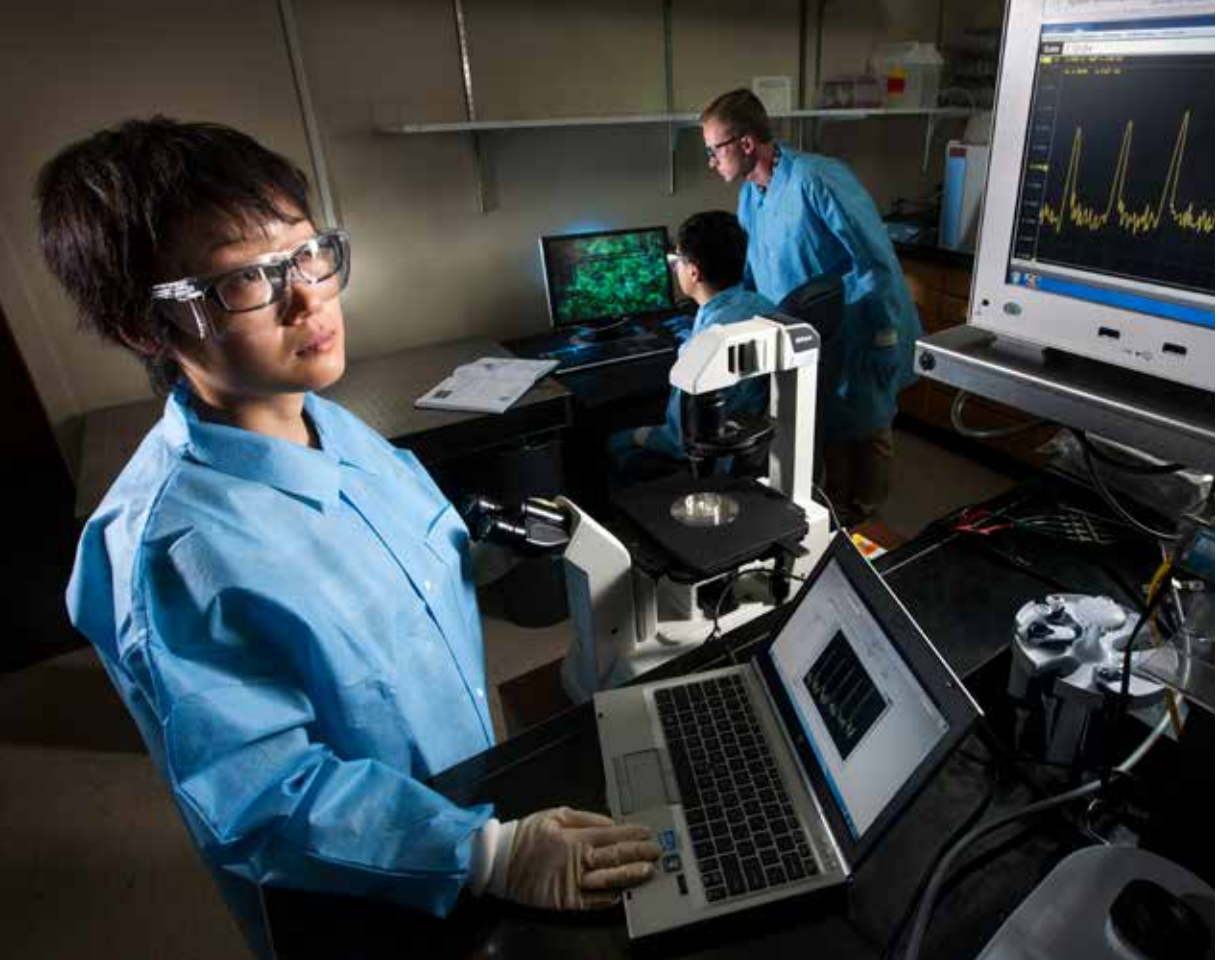
Weapons
Stewards of the nuclear deterrent

LLNL's **BIOSCIENCES AND BIOTECHNOLOGY DIVISION (BBTD)** lies at the intersection of biological, physical, and engineering sciences. We apply an understanding of fundamental biology to predict and counter emerging biological and chemical threats and to solve problems in health and environmental security.

Our multidisciplinary staff focus on integrating experimental and computational tools to understand complex cellular systems, testing and expanding our understanding of cellular mechanisms, and using our knowledge to provide solutions for countering current and emerging threats.

OUR PERSONNEL ARE GROUPED ACCORDING TO SHARED INTERESTS AND EXPERTISE:

- Systems and Synthetic Biology
- Biosecurity and Bioforensics
- Bionanomaterials
- Genomics
- Biochemical and Biophysical Systems
- Human Health Sciences
- Microbiology/Immunology
- Environmental Biology

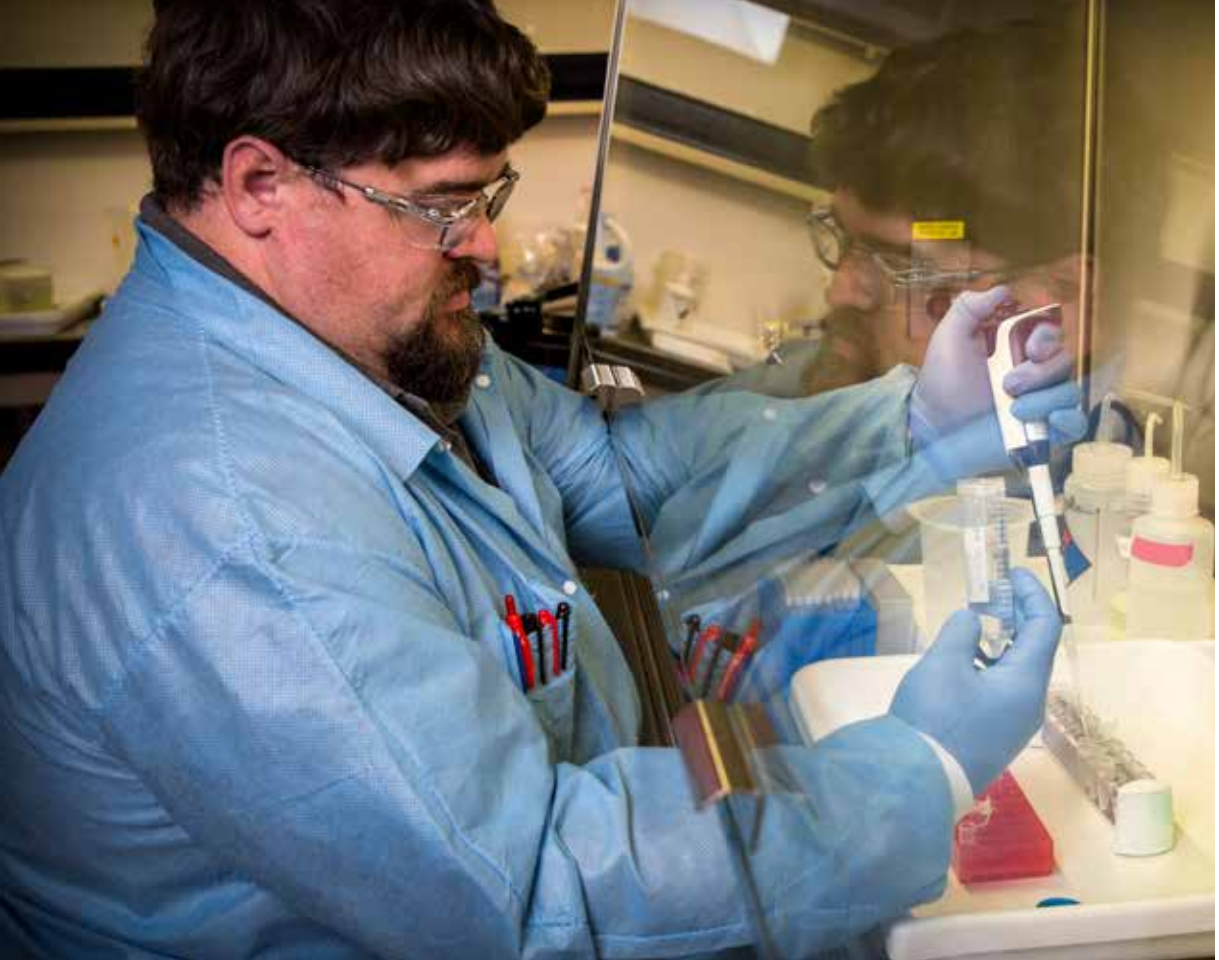


WE'RE ALWAYS LOOKING FOR TALENTED YOUNG SCIENTISTS,

especially in growth areas like computational biology, synthetic biology, neurobiology, and cellular biology. We're known for research in genomics, bioanalytics, microbiology, infectious diseases, nanotechnology, and radiation biology.

At BBTD, you'll work with experts across our diverse portfolio and have access to state-of-the-art facilities and innovative technologies.

The **Systems and Synthetic Biology** group designs microbes and microbial communities for clean energy and improved safeguards for the environment and human health. We use systems biology approaches to gain a predictive understanding of complex biological systems and uncover foundational design rules that govern system behavior.



The **Biosecurity and Bioforensics** group leverages informatics and analytical tools to protect the warfighter against biological threats. We also collaborate with the Laboratory's Forensic Science Center on the detection of trace biologics—DNA, RNA, and protein—and provide technical assessments of emerging technologies.

The **Bionanomaterials** group applies nanoscience and nanotechnology to national security interests. Our research includes developing detection methods for biological agents, bioanalytical and molecular imaging for nanoscale characterization, carbon nanotube fabrics, and nanolipoprotein technology.

The **Genomics** group develops innovative bioassays to rapidly detect infectious agents and other pathogens to support public health, food safety, and drug safety. We apply expertise in genomics, bioinformatics, virology, and molecular biology to characterize pathogens and identify novel biomarkers and mechanisms for diseases.

The **Biochemical and Biophysical Systems** group develops computational tools to describe and predict biological systems and to design and develop safe and effective therapeutics. Our objective is to gain a predictive understanding of protein-mediated activities that are critical to cells and their interactions in living systems.

The **Human Health Sciences** group researches the mechanisms and effects of chemicals and drugs in humans, how gene expression is regulated, and bone metabolism and fracture repair. We also focus on damage caused by radiation exposure, new technology for biosurveillance of disease outbreaks, and medical countermeasures.

The **Microbiology/Immunology** group conducts research with a focus on viruses and bacteria. Among our projects are studies of host immune responses during infection, vaccine and therapeutic development, viral evolution and cross-species transmission, and pathogen characterization and survival in the environment.

The **Environmental Biology** group develops and deploys capabilities to sample, detect, and respond to biological threats. Our research involves detecting pathogens in complex samples and understanding decontamination processes. Our assays are the foundation for deploying a mobile biological laboratory for detecting pathogens in the environment.

The **National Resource for Biomedical Accelerator Mass Spectrometry (BioAMS)** makes AMS available to researchers who need to accurately measure very low levels of radioisotopes. We work to enhance AMS for analysis of radioisotopes in biomedical tracer studies through development of new methods and instrumentation.

Learn more at *bioams.llnl.gov.*

You'll find a highly collaborative environment at BBTD.

Our postdoctoral program enables you to make significant contributions in basic and applied research, with a premium on scientific innovation and publication.

Many of our former postdocs become full-time LLNL employees.

Learn more at *postdocs.llnl.gov*.