



BIOSECURITY RESEARCH INSTITUTE

The Biosecurity Research Institute is a key facility that helps make Kansas State University a center of global expertise for biodefense.

This unique biocontainment research and training facility is designed and constructed for Biosafety Level-3, or BSL-3, and Biosafety Level-3 Agriculture, or BSL-3Ag, work. The BRI provides K-State scientists and their collaborators with a safe and secure location to study the high-consequence pathogens that pose threats to agriculture, the food supply and human health.

With interdisciplinary biosecurity research programs, agrosecurity initiatives and the development of collaborative research with the U.S. Department of Agriculture and the Department of Homeland Security, the BRI is training staff and conducting research on high-priority pathogens destined to be studied at the National Bio and Agro-defense Facility, or NBAF, that is currently under construction adjacent to the BRI.



bri.k-state.edu
1041 Pat Roberts Hall
Kansas State University
Manhattan, KS 66506
785.532.1333

Biosecurity Research Institute

KANSAS STATE
UNIVERSITY

Training and Education

The BRI is an international resource for biosafety and biocontainment training. More than 225 researchers have been trained to work safely in BSL-3 laboratories, including many international scientists. The BRI is



prepared to provide necessary training and experience for the future workforce at NBAF and biotech companies in the expanding Animal Health Corridor.

Together with federal agencies such as the Department of Homeland Security, the National Institutes of Health National Biosafety and Biocontainment Training Program and the U.S. Department of Agriculture, the BRI develops synergistic, collaborative training and graduate education programs.

Features that support state-of-the-art training include:

- Integrated classroom-laboratory training suite with simulated BSL-3 lab space for hands-on, interactive learning
- Lecture hall with high-definition video and audio capture
- Cameras, audio and digital connectivity with research laboratories

Research

Researchers at the BRI include K-State faculty, staff, and students; faculty from other academic institutions; industry scientists; and government personnel. They study a wide range of disease-causing pathogens, including zoonotic diseases — those affecting both animals and humans — as well as animal-only pathogens, pathogens that cause crop diseases, and foodborne pathogens.

Areas of emphasis include:

- Basic biology of pathogens of animals, humans or plants
- Diagnostic technology development for rapid and accurate disease detection
- Vaccine development, testing and validation
- Detection of pathogens in food, both pre- and postharvest
- Food safety and security in food processing
- Disease transmission between hosts and vectors



Facility Features

The BRI boasts 31,000 square feet of safe and secure containment laboratory, animal holding and support space. In addition, 10,000 square feet is dedicated to educational and training space, while another 10,000 square feet serves administrative needs.

Features that support unique containment projects include:

- BSL-3 enhanced research laboratories
- Core facilities to support molecular virology and immunological studies
- Animal BSL-3, or ABSL-3, small-animal and BSL-3Ag large-animal research spaces
- BSL-2 full-scale food animal safety/security and food processing facility
- Arthropod Containment Level-3, or ACL-3, insectary supported by a BSL-2 rearing room
- Controlled environment rooms for plant and cell culture
- Walk-in cold rooms/freezers
- State-of-the-art decontamination, HEPA filtration and waste treatment technologies, including tissue digester capabilities
- Robust safety and security training program for all staff and scientists