

Regional Biocontainment Laboratory (RBL)

A University of Tennessee Health Science Center Institutional Core



MISSION

The mission of the RBL is to provide facilities and expertise in support of basic research in pathogen biology and translational research that advances discoveries of treatments and vaccines for the infectious diseases impacting global health.

FACILITY DESCRIPTION

In addition to common public health threats in infectious disease, the Regional Biocontainment Laboratory (RBL) is certified for select agent use through the Centers for Disease Control and Prevention (CDC) and received AAALAC accreditation. The facility houses six ABSL-3 suites, eight BSL-3 laboratories, and one large BSL-2 laboratory with a cell culture suite. Several of the BSL-2 and BSL-3 laboratories are dedicated in support of specific services such as flow cytometry and molecular discovery labs (pathogen sequencing and biomarker discovery). The RBL has two drug discovery labs, one at BSL-2 and a second at BSL-3, in support of high-throughput screening of small molecules using Janus robotics and EnVision readers. As desired our staff will work with you on the design and development of your next screen or animal study, and we can also provide you with support during implementation. Our facility is approved by the CDC for work with select agents.

CORE CAPABILITIES

The UTHSC RBL offers state-of-the-art essential services in support of BSL-2 and BSL-3 pathogen and biomarker discovery, assay development and implementation, small

molecule screening, and testing and evaluation of small molecules and vaccines in small animal models. Broadly, the scope of our Animal Services include: (1) production and characterization of the pathogens for challenge; (2) determination of optimal route and dose for pathogen challenge; (3) natural history of infection in small animal models; (4) determination of the best indicators of infection and correlates of immunity; (5) development and standardization of non-GLP Animal Models. We also have GLP capabilities in support of *in vitro* and *in vivo* services. A second core capability is in providing services in support of biomarker and pathogen discovery from NexGen sequencing to biomarker discovery. The RBL has hematology and clinical chemistry services in support of your animal samples! Serum or plasma (lithium heparin) can be used for clinical chemistry analysis for a full diagnostic panel. Lastly, the RBL provides biosafety cabinet certification and repair services.

Please contact the RBL Services Program Manager to discuss your project needs. Please contact the RBL Services coordinator to schedule biosafety cabinet certifications or to discuss ILAB.



REGIONAL BIOCONTAINMENT LAB

EQUIPMENT

BSL-2 Equipment

- MAGPIX®
- MiSeq
- JANUS robot
- Envision
- Synergy II
- Luminex 200
- Multiflo FX

BSL-3 Equipment

- Multiflo FX
- FACS Aria II
- MAGPIX®
- JANUS robot
- Envision
- QuantStudio 6

Animal Research Equipment

- IVIS Spectrum
- Bio-aerosol Nebulizing Generator (BANG)
- DiaSys Respos® 910 Vet clinical chemistry analyzer
- Xpedite HEM Vet hematology analyzer

SERVICES AND TRAINING

- Equipment Training
- Training for Work with Select Agents
- Biosafety Cabinet (BSC) Certification and Repairs

STAFF

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UTHSC RESEARCH CORES AND SHARED RESOURCES

UTHSC Institutional Cores are dedicated to the success of your project. We serve the UTHSC research community by providing access to state-of-the-art equipment and to expert consultation services.

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For more information:

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uthsc.edu/research/institutional-cores/rbl/