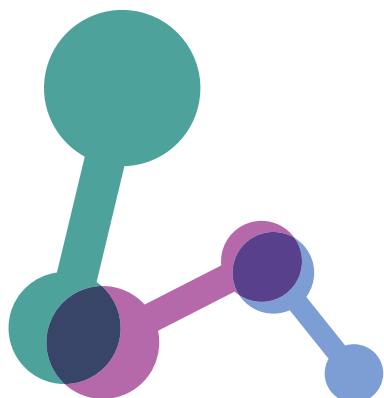




## INFECTIOUS DISEASE



Lovelace Biomedical is a globally recognized leader in treatment and regulation against infectious diseases. Our team conducts a full range of infectious disease research studies under both Good Laboratory Practice (GLP) or non-GLP guidelines. We have the capability of exploring a variety of infectious diseases with our ABSL 1,2,3, & 3+ facilities. We integrate quality, leading-edge expertise, and an experienced and well-trained staff to meet study goals.

Our infectious disease models are state of the art, allowing us to both explore the pathogenesis of disease as well as applying them to develop novel prevention and therapeutic strategies. Our professional staff has a vast experience in programs including both in vivo and in vitro components. We use these methods and other capabilities in order to fully understand the host's response to infection and evaluate new medical countermeasures against recurring and emerging biological threats.

## CAPABILITIES

Lovelace Biomedical's preclinical infectious disease research program is actively developing and refining enhanced in vivo and in vitro capabilities and systems to improve our understanding of the host response to infection, as well as to evaluate medical countermeasures against recurring and emerging biological threats. These capabilities serve to positively impact human health through the evaluation of vaccines, therapeutics, and other medical countermeasures against bacterial, viral, fungal, and toxin exposures.

### CAPABILITIES INCLUDE:



- Production of highly characterized viral, bacterial, and fungal challenge stocks
- Viral and bacterial neutralization and clearance assays using standard titer techniques, serological assays, as well as PCR-based, and immunofluorescence methods
- High-resolution histopathology, morphometry, in situ hybridization, and immunohistochemistry with epithelial cell markers for distinct lung cell populations



# INFECTIOUS DISEASE MODELS

AGENT	MOUSE	RAT	GUINEA PIG	HAMSTER	RABBIT	FERRET	NHP
<b>BACTERIAL MODELS</b>							
<i>Yersinia Pestis</i>	✓	✓	✓		✓		✓
<i>Bacillus anthracis</i>	✓		✓		✓		✓
<i>Francisella tularensis</i>	✓						✓
<i>Burkholderia pseudomalleia</i>	✓						
<i>Pseudomonas aeruginosa</i>	✓	✓					
<i>Streptococcus pneumoniae</i>	✓						
<i>Haemophilus influenzae</i>	✓						
<i>Klebsiella pneumoniae</i>	✓						
<i>Staphylococcus aureus</i>	✓	✓	✓	✓			
<i>Sepsis (MRSA, E. Coli)</i>		✓	✓				✓
<i>Additional MDR gram negative bacteria</i> (Carbapenem-resistant Enterobacteriaceae, DR-N. gonorrhoeae, Acinetobacter, Campylobacter, Vancomycin-resistant Enterococcus, DR Salmonella, Shigella, Group A/B Streptococcus)	✓	✓					
<b>VIRAL MODELS</b>							
<i>Coronaviruses (SARS-CoV-2, 229E, OC43, NL-63)</i>	✓	✓	✓	✓		✓	✓
<i>Influenza (seasonal, recombinant, HPAI, LPAI)</i>	✓	✓	✓			✓	✓
<i>Adenovirus Sub Groups B,C,E</i>	✓	✓	✓				
<i>Rhinovirus Group 1&amp;2</i>	✓	✓					
<i>Hantavirus</i>				✓			
<i>Rabies virus (aerosol, IM, IN)</i>	✓						
<i>Chikunguna virus (aerosol &amp; SC)</i>							✓
<i>Orthopoxviruses</i> (mousepox, vaccinia, rabbitpox, cowpox, monkeypox)	✓	✓			✓		✓
<i>Respiratory Syncytial Virus (RSV)</i>	✓	✓					✓
<i>Dengue virus</i>	✓						
<i>Zika Virus</i>	✓						
<b>FUNGAL MODELS</b>							
<i>Candida albicans</i>	✓						
<i>Cryptococcus neoformans</i>	✓	✓	✓				
<i>Aspergillus fumigatus</i>			✓				