



Research Priorities – The Consortium for the Advancement of Brucellosis Science (CABS)

A Scientific Synthesis to Inform Policy and Research

CABS will seek research ideas and secure funding for the following priorities: (1 (highest), 2 (higher), 3 (high) levels of priority)

Diagnostics from Direct/Indirect Markers in Various Species

- Immunological. To fill a research gap related to innovative platforms that include better, more rapid, and portable tests. (1 priority)
- Geonomics/Bioinformatic Analysis. To further research in this area by pursuing molecular diagnostics for detection, diagnosis, and epidemiology. (1 priority)

Vaccine Development

- Host-specific immunologic responses. Research designed to gain a basic understanding of immune system regulation, antigen processing, and presentation at a species level. And research conducted to gain an understanding of the disease in different hosts and the differences in pathogenesis. (1 priority)
- Reproducible disease models for bison, elk, and cattle. (3 priority)
- Correlates/surrogates of protective immunity. (3 priority)
- Antigen discovery/therapeutics. To address the need to apply gene discovery technologies relevant to infection in susceptible hosts. (2 priority) Research genomic/proteomic database mining. (3 priority)
- Continual adjuvant formulation and delivery optimization. To address the issue of targeted vaccine presentation and species specific vaccine optimization. (2 priority)
- Novel *B. abortus* genetically-engineered vaccines. Address gap in this research by evaluating live vaccines with targeted genetic modifications. (3 priority)
- Duration of immunity. Complete studies on RB51 longevity studies. (3 priority)