EXECUTIVE SUMMARY [NON-CONFIDENTIAL, NON-TECHNICAL ABSTRACT FOR PUBLIC INFORMATION OR PROGRAM PROMOTION]: State in layman's terms the application's broad, long-term objectives and specific aims, making reference to the potential public benefits of the project relevant to California. Do not include proprietary or confidential information. This may be distributed before the funding decision has been finalized.

Brucella species cause brucellosis, a disease that rarely occurs in the United States. So far relatively few efforts have been devoted to study this disease. However, all *Brucella* species that are pathogenic to humans have now been identified as bioterrorism threats that could be targeted against military personnel, civilians, or food supplies. Therefore, we need to design strategies to control the possible intentional dissemination of these bacteria. We recently initiated a project to characterize *B. abortus,* one of the pathogenic species. We have now completed the nucleotide sequence of its entire genome. Our long term goal is to identify and characterize functions essential for establishment and maintenance of *B. abortus* infection and design suitable control strategies based on the knowledge gained. Our goals, to be achieved during the period covered by this grant proposal, are: (a) to generate microarrays containing a complete representation of the genome and (b) to utilize these microarrays to discover genes involved in different stages of the infectious process. The benefits of this project are obvious; there is an urgent need for research on those agents that are potential candidates to be used in bioterrorist acts. The research proposed here will contribute to increase our preparedness against the bioterrorist threat.