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# Yersinia Pestis Vaccine

**AzTE Case # M10-055**


## Inventors

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## Invention Description

Plague is endemic in many areas of the world, including even the western United States. The etiological agent of the disease, *Yersinia pestis*, infects both humans and rodents. Once a potential host is exposed, *Y. pestis* can rapidly invade the lymphatic system to produce systemic and often fatal disease.

Recent efforts to create a safe and effective plague vaccine have focused on the development of recombinant subunit vaccines that elicit antibodies against multiple *Y. pestis* antigens. These live, attenuated vaccine strains, however, are produced by selection rather than genetic manipulation and thus have generated concerns about their genetic composition and stability.

To address this problem, researchers at the Biodesign Institute of Arizona State University have developed a recombinant *Yersinia* bacterium as a live vaccine agent to generate both a humoral and cellular immune response in a host.

## Potential Applications

- The technology provides a vaccine against *Y. pestis*.

## Benefits and Advantages

- The genetically engineered agent is polyvalent, well-characterized, and stable.

**Intellectual Property Status:**
*Patent Pending*

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