



Inventors

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Intellectual Property Status:

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Recombinant Bacterium Capable of Eliciting an Immune Response Against *Streptococcus pneumoniae*

AzTE Case # M08-061

Invention Description

Streptococcus pneumoniae is the most common cause of community acquired pneumonia. It also results in some two million deaths in children under five and is the major cause of otitis media (ear aches) in the US and Europe. Hence, there is a real need for an effective vaccine against this pathogen.

Professor Roy Curtiss and colleagues at Arizona State University's Biodesign Institute have developed four robust attenuated *Salmonella* vaccine strains capable of preventing infection by *Streptococcus pneumoniae*. These live vaccines are safe and suitable for oral delivery to humans. These vaccine strains are capable of withstanding the biological stresses and natural defenses imposed by human hosts, allowing them to invade host gut lymphoid tissues thereby stimulating a strong, protective immune response.

Potential Applications

- Human vaccination to prevent pneumonia and ear infections

Benefits and Advantages

- Robust vaccine
- Easy to administer
- Easy to be transported