



A Vaccine Against Chlamydia

The Technology

While Chlamydia is most commonly known as a sexually transmitted disease caused by *Chlamydia trachomatis*, the bacterium *Chlamydia pneumoniae* is responsible for a number of respiratory infections each year. *C. pneumoniae* is responsible for an estimated 300,000 cases of pneumonia per year in the United States. It is difficult to identify, therefore making it difficult to treat. If left untreated, *C. pneumoniae* can lead to more serious health problems. Vaccine development would eliminate the need to identify the pathogen.

Researchers at the University of Tennessee Health Science Center have demonstrated that a chlamydial protein complex has immunogenicity and adjuvancy, thus making it a candidate for vaccine development. When given to mice by intramuscular injection, the protein complex protected the mice from a later respiratory challenge. The research team has developed methods of isolating, purifying, characterizing and testing this complex for vaccine development. Work is ongoing to perfect vaccines against *C. trachomatis*, *C. pneumoniae* and the category B select agent, *C. psittaci*.

Benefits

- Be the first to market with an effective vaccine against *Chlamydia*.
- Both safety and efficacy established in a mouse model.

The Inventor

Dr. Gerald Byrne is a Professor and Chair in the Department of Molecular Sciences. His research focuses on various aspects of pathogenesis and immunity to infectious agents. He is particularly interested in understanding the interactions between *Chlamydia trachomatis*, *Chlamydia pneumoniae*, *Chlamydia psittaci* and their hosts. Ongoing projects in his lab include systems approaches for the study of *Chlamydia*, the development of new immune-based diagnostic tests for chronic chlamydial infections, defining genetic determinants of host resistance and susceptibility, and studies on the evolution of pathogen virulence.

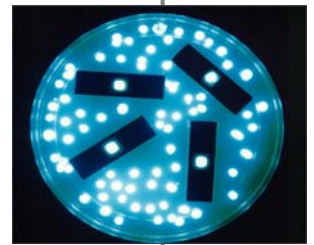
Patents

Not yet filed.

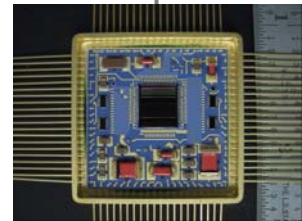
AGRICULTURE



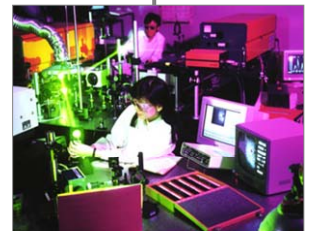
BIOTECHNOLOGY



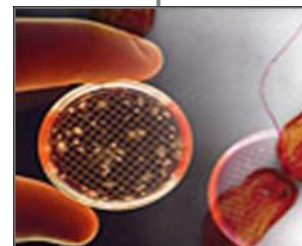
ENGINEERING



MATERIALS



MEDICINE





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Contact

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