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IP OPPORTUNITY

New Immunoregulatory Therapy For Asthma

The University of Newcastle

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Newcastle Innovation facilitates the transfer of knowledge, technology and research from the University to industry and commercial partners.

Invention Description

Researchers at the University of Newcastle are developing a novel immunoregulatory therapy (IRT) for the treatment and prevention of Allergic Airways Diseases (ADDs) including asthma.

The IRT is based on the properties of *Streptococcus pneumoniae* (Spn), which is comprised of the Spn capsular polysaccharide and Spn exotoxin or exotoxoid together with one or more additional antigenic or immunomodulatory constituents. The IRT is expected to suppress allergic immune responses and induce protective immunity against allergic airways diseases.

Inventors

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Potential Application and Market Opportunities

According to the World Health Organisation, over 300 million people suffer from ADDs such as asthma worldwide, and the incidences of asthma are increasing. Currently there is no cure to treat the underlying cause, but treatments exist to control or reduce symptoms. The disease still remains under-treated due to various limitations in the use of existing drugs, like steroidal overuse, and also factors like under- diagnosis and patient non-compliance.

The proposed IRT is expected to address the unmet need of treating the symptoms and preventing the onset and development of asthma. It is likely to suppress both eosinophilic and neutrophilic inflammation, and is expected to completely treat acute and chronic disease in affected individuals of all age groups, including those that are steroid resistant.

The global market for the treatment of asthma is US\$15 billion, and it is estimated that the IRT will capture a significant proportion of this market.

Development Stage

The technology is currently at the proof of concept stage with initial studies showing promising results. Additional validation work is in progress to establish pre-clinical optimization, safety and toxicity of the novel therapeutic before progressing to human clinical trials.

Commercialisation

A patent application has been filed and is currently in the PCT stage titled "Vaccine compositions", with international application No: PCT/AU2009/000120. It is due to enter National Phase. The technology is available for licensing or R&D partnership deals with interested industry partners.

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