

International Conference on **Influenza**

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How to stop influenza and its sequelae

David Charles Jackson
The University of Melbourne, Australia

Promising new approaches to combat infectious disease involve modulation of the host's innate immune system using agents which stimulate appropriate responses against a pathogen. Because these agents directly target the host rather than the pathogen, they are unlikely to result in the development of anti-microbial resistance even after repeated use. With the development of anti-microbial resistance to antibiotics and the need to update vaccines to accommodate pathogen evolution, the development of alternative forms of prophylactic agents with a broader spectrum of activity has emerged as an unmet medical need. The rapid response time and broad nature of the innate immune system indicates that treatment with these agents will provide a broader spectrum of protection and could be used in combination with other anti-microbial agents including vaccines. This presentation will demonstrate the potential of Pam2Cys as an agent that can stimulate the innate immune system to provide short term but immediate and antigen-independent protection against infection with respiratory pathogens and also provide a means of simultaneously delivering a vaccine to provide long term, antigen-specific immunity.

Biography

David Jackson has been an active researcher in immunology and immunochemistry over the last 40 years. His research efforts are now focused on the design, assembly and evaluation of innovative vaccines which have led to pre-clinical and clinical evaluation of vaccine candidates for influenza, hepatitis C virus, Group A streptococcus, Mycobacterium tuberculosis and human papilloma virus. He has also developed candidate vaccines against methamphetamine and cocaine and against the reproductive hormone luteinizing hormone releasing hormone. He has trained more than 50 graduate, postgraduate, doctoral and postdoctoral scholars and published more than 200 original research papers, invited reviews and book chapters in immunology, chemistry, biochemistry and vaccinology. He was one of the founders of the Cooperative Research Centre for Vaccine Technology and is senior inventor of a number of patents with licenses issued to the pharmaceutical industry. One of his inventions resulted in a first-in-man clinical trial of a synthetic epitope-based vaccine against hepatitis C virus. He is co-founder of 2 start-up biotechnology companies both of which are based on his own inventions. In the last five years his work has attracted more than twenty million dollars in research grants from nationally and internationally competitive sources, industry and investors. He is a Senior Principal Research Fellow with the National Health & Medical Research Council of Australia, a Professor in The University of Melbourne and a Chief Investigator of an NH&MRC Program Grant. In 2014 he was appointed Distinguished Professor in Hokkaido University, Japan.

davidcj@unimelb.edu.au

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