

THE JOHN CURTIN SCHOOL OF MEDICAL RESEARCH &
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ANU PUBLIC LECTURE SERIES 2009

World Day of Immunology 2009 Public Lecture

THE PROMISES & CHALLENGES IN DEVELOPING NEW VACCINES, WITH A FOCUS ON DISEASES OF THE DEVELOPING WORLD

Professor Michael Good AO

Director of The Queensland Institute for Medical Research



Wednesday 29 April, 7.30pm

Finkel Lecture Theatre, The John Curtin School of Medical Research,
Building 131, Garran Road ANU

This lecture is free and open to the public. Enquiries T: 02 6125 2031 or E: Gerard.Hoyne@anu.edu.au

Learning how to harness the power of the immune system to combat infectious killers has been one of the most dramatic developments in the history of medicine. Eradication of smallpox and the near elimination of polio serve to remind us that the destiny of disease can be written by human ingenuity. These and other great feats continue to inspire us all as we strive to combat major infectious killers of the 21st Century. Success rarely comes easily and we are enormously challenged by various viruses, bacteria and parasites that collectively cause several million deaths per year. A common thread of the resistance to immunity and vaccine development is the uncanny ability to escape immune attack by altering coat proteins and to further subvert the immune system. A major strategy of vaccine development is to identify a non variable region of the organism that can be an immune Achilles heel for the germ. Another approach is to combine the most common immune determinants ('epitopes') of different strains of a particular organism into a single vaccine in the hope that the vaccine will prevent infection with the majority of strains.

Developing effective vaccines requires not only scientific nous but an understanding of the daily challenges of those peoples whose lives are affected. It is critical that they are centrally involved in the research program and understand both the hope and the limitations of the various approaches. If not, it is unlikely they will persist in a collaborative program that may take many decades to realise ultimate success. Malaria vaccine research, as an example, has provided a roller coaster emotional ride over the last 25 years for both researchers and those living in endemic countries. While this can be disconcerting it is critical that we continue for malaria and the many other challenges that we face. The consequences of not doing so are too awful to contemplate.

Professor Michael Good is the Director of the Queensland Institute of Medical Research (QMIR), Chair of the National Health and Medical Research Council of Australia, Director of the Griffith Medical Research College, Professor in the School of Population Health, University of Queensland, and Head of the Molecular Immunology Laboratory at QIMR. In 2008 he was awarded an Officer of the Order of Australia for service to medical research, particularly in the fields of infectious disease immunology and vaccine technology, through leadership roles at the Queensland Institute of Medical Research and contributions to education.

Professor Good graduated MD PhD DSc from the University of Queensland and the Walter and Eliza Hall Institute of Medical Research in Melbourne. His interests are in the field of immunity and immunopathogenesis to malaria and group A streptococcus/rheumatic fever, with particular relevance to the development of vaccines.

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