

First Laureate Applied Research

- **Research Work Title:** Pathogenesis of malaria
- **Researcher:** Prof. Alan F. Cowman FAA FRS
- **Country:** Australia
- **Field:** Molecular Parasitology
- **Scientific Affiliation:** The Walter and Eliza Hall Institute of Medical Research



Abstract:

It is over a hundred years since discovery that 'the ague' (malaria) is caused by infection with a protozoan parasite transmitted between humans by mosquitoes. Malaria has been a scourge of humanity since antiquity. Over three hundred million people develop malaria each year with the loss of over 600,000 lives. There has been a strengthening of will to combat malaria and this coincided with an enhanced ability to genetically analyze the parasite, mosquito and human genomes. This provided information to utilize new approaches to understand pathogenesis and identify drug and vaccine candidates. Malaria has been a companion of humans throughout history and attempts to control it has been defeated by the parasite and mosquitoes ability to adapt. It is hoped the increased commitment to malaria, with full exploitation of scientific advances associated with our increased knowledge of the malaria genome, will bring this old enemy under control.

Biography:

Professor Alan Cowman is Head, Division of Infection and Immunity, the Walter and Eliza Hall Institute of Medical Research. He is a Fellow of the Australian Academy of Sciences and the Royal Society (United Kingdom) and has received a number of awards including the Glaxo Award for Advanced Research in Infectious Diseases, Gottschalk Medal for Medical Science and Biology from the Australian Academy of Sciences, Boehringer-Mannheim Medal, Glaxo-Wellcome Australia Medal and the Howard Taylor Ricketts Medal. He has also received the Victoria Prize from the Victorian Government and the Mahathir Science Prize from the Mahathir Science Award Foundation (Malaysia). He has over 300 research publications. His work is aimed at understanding the function of proteins in *Plasmodium falciparum*, the causative agent of the most severe form of malaria in humans and to use this information for the development of vaccines and drug targets against this parasitic disease.