Victoria

The Walter and Eliza Hall Institute of Medical Research

FT0992317 Dr JG Beeson

Approved Project Title **Identifying the major targets of protective antibodies against malaria**

2009 :	$ 85,800
2010 :	$ 171,600
2011 :	$ 171,600
2012 :	$ 171,600
2013 :	$ 85,800

Primary RFCD 3210 CLINICAL SCIENCES

Administering Organisation The Walter and Eliza Hall Institute of Medical Research

Project Summary

This project aims to understand how immunity to malaria develops and to use this knowledge to develop effective vaccines against malaria. The development of a malaria vaccine would be of great value in Australia's region where malaria is a leading cause of death and illness and impairs economic development. The project will advance our knowledge of how the immune system fights infections and will contribute to building Australia's strength in infectious diseases research and developing strategies to combat important infections. The project will help build and maintain expertise in developing vaccines in Australia and the approaches used and knowledge gained will be applicable to understanding and combating other important infections.

FT0992105 Dr PE Czabotar

Approved Project Title **Structural investigations into the regulation of programmed cell death**

2009 :	$ 85,800
2010 :	$ 171,600
2011 :	$ 171,600
2012 :	$ 171,600
2013 :	$ 85,800

Primary RFCD 2701 BIOCHEMISTRY AND CELL BIOLOGY

Administering Organisation The Walter and Eliza Hall Institute of Medical Research

Project Summary

One in three men and one in four women in Australia will develop cancer by the age of 75 at current incidence rates. At its heart, cancer is a disease of uncontrolled cell proliferation. One of the body's main defence mechanisms against excess cell proliferation is Programmed Cell Death, a process which becomes dysfunctional in cancer cells. This work will provide three dimensional images of the machinery that controls Programmed Cell Death. This information is critical for the development of drugs designed to re-initiate Programmed Cell Death in cancer cells.

FT0992164 Dr A Kallies

Approved Project Title **Transcriptional and epigenetic regulation of terminal lymphocyte differentiation and alterations of the same that lead to leukemia.**

2009 :	$ 85,800
2010 :	$ 171,600
2011 :	$ 171,600
2012 :	$ 171,600
2013 :	$ 85,800

Primary RFCD 2702 GENETICS

Administering Organisation The Walter and Eliza Hall Institute of Medical Research

Project Summary

In the developed world infection diseases are the number three killer behind heart disease and cancer, and huge financial effort is put into treatment and prevention. Despite this, results have often been disappointing. One cause of these poor outcomes is the lack of knowledge of how effective immune responses are generated. This project aims to better understand the processes that control the generation of protective lymphocytes. It will deliver information that may enable a more targeted approach to vaccine-development and treatments of infections. As defective differentiation can also be a cause of leukemia it may also lead to targets of cancer treatment.

FT0992257 Dr A Uren

Approved Project Title **Unraveling the genetic networks of cancer development.**

2009 :	$ 85,800
2010 :	$ 171,600
2011 :	$ 171,600
2012 :	$ 171,600
2013 :	$ 85,800

Primary RFCD 2702 GENETICS

Administering Organisation The Walter and Eliza Hall Institute of Medical Research

Project Summary

Cancer causes nearly 30% of all deaths in Australia and the aging of our population means that its incidence will increase for the foreseeable future. The past two decades of cancer research have yielded great advances in identifying the genetic mutations that contribute to cancer, but our understanding of how these mutations cooperate to transform a healthy cell into a tumour cell remains limited. High-throughput genomic analysis of DNA from large numbers of tumours is essential to identify and understand the combinations of cancer mutations that are most deadly. Such studies can form the basis for developing better diagnostics and new treatments for patients whose tumours are resistant to current therapies.