

Victoria

Swinburne University of Technology

FT0991594 Dr LL Andrew

Approved Project Title **Increasing internet energy and cost efficiency by improving higher-layer protocols**

2009 : \$ 85,800
2010 : \$ 171,100
2011 : \$ 170,600
2012 : \$ 170,600
2013 : \$ 85,300

Primary RFCD 2302 STATISTICS

Administering Organisation Swinburne University of Technology

Project Summary

Australians rely heavily on our telecommunications infrastructure due to our geographic dispersion. We are also very susceptible to climate change, given our reliance on agriculture. Information technology is consuming a rapidly increasing fraction of our power and our budget. This research will help to reverse both those trends, by finding novel and practical ways to use our infrastructure more efficiently, and to minimise its energy use. This will enable the Australian telecommunications industry to provide better service (including to Australian industries and rural communities) at lower economic and environmental cost. This project will put Australia on the international stage as a leading contributor to energy-efficient internet technology.

FT0990405 Dr SM Russell

Approved Project Title **Polarity in lymphocytes: Regulation of immune function and cancer.**

2009 : \$ 111,400
2010 : \$ 222,800
2011 : \$ 222,800
2012 : \$ 222,800
2013 : \$ 111,400

Primary RFCD 2701 BIOCHEMISTRY AND CELL BIOLOGY

Administering Organisation Swinburne University of Technology

Project Summary

The Fellow will elucidate the mechanisms and consequences of a fundamental new phenomenon in immunology. This is likely to profoundly impact upon approaches to detecting and treating immune-related diseases such as autoimmunity, transplantation, vaccination and immunodeficiencies. The ongoing project and the work that led to our discovery involves interdisciplinary collaborations between physicists and biologists to apply frontier laser technologies to biological studies. These technologies will not only facilitate our elucidation of immune development and function, but will also be made available to other research in Australia and overseas.