

The New Zealand Association of Scientists Awards for 2010

The Marsden, Shorland and Research Medals and the Science Communicator Award were presented by Mr Murray Bain, Chief Executive of the Ministry of Science and Innovation, on Thursday, 4 November, at a ceremony at Turnbull House, Wellington.

Mr Bain briefly addressed the audience and stressed that science was a central plank in the Government's strategy to achieve its economic goals and seen by Government as an investment rather than a cost.

Marsden Medal

The Marsden Medal is awarded for a lifetime of outstanding service to the cause or profession of science, in recognition of service rendered to the cause or profession of science in the widest connotation of the phrase. The recipient for 2010 is **Emeritus Professor Brian Robinson FRSNZ**.



Brian Robinson has served the Chemistry Department of Otago University for over 40 years, and taken a very active role in all areas. Although his core research area has been organometallic chemistry, he has continued to be very innovative in examining new areas. His publications have been widely cited in the scientific literature; his work has been appreciated internationally. In addition to the normal roles in teaching, mentoring and research he has served as Head of Department for 10 years, and his service role has been extensive in several areas such as quality assurance and academic audits, controlling chemical hazards, safety, and commercial developments. In all this Brian has maintained an innovative approach to new areas of chemistry – he has served science extremely well.

Shorland Medal

The Shorland Medal is awarded in recognition of major and continued contribution to basic or applied research that has added significantly to scientific understanding or resulted in significant benefits to society.

The recipient for 2010 is Professor **Kenneth McNatty FRSNZ**, Victoria University of Wellington.



Ken McNatty is one of the world's leading figures in reproduction biology, having made a number of important basic research discoveries and then seen them through to applications with significant economic benefits. He is the author of 260 peer-reviewed research papers

and holds 10 patents. Ken's reputation was founded on a number of discoveries during the '70s and '80s relating to follicular development and egg viability and the differences between humans, sheep and cattle. This work led to Ken becoming a Fellow of the Royal Society of New Zealand in 1992, having been nominated by Brian Shorland. Further fundamental research on ovulation followed, and provided insight into the system that regulates the number of eggs released at ovulation. This work provided the basis upon which Ken's team at AgResearch developed AdroVax, a sheep twinning vaccine that has made a substantial contribution to the New Zealand economy, estimated to be in excess of \$100 million per annum. Now based at Victoria University, Ken continues to develop new insights into reproduction, with projects focused on human health, agricultural benefits, environmental impacts on reproduction and even seeking to improve rates and success of reproduction in New Zealand's native avian fauna.

Research Medal

The Research Medal of the New Zealand Association of Scientists is awarded for outstanding fundamental or applied research in the physical, natural or social sciences published by a scientist under the age of 40, during the year of the award or the preceding three calendar years. The recipient for 2010 is **Dr Shaun Hendy** at Industrial Research Limited (IRL).



Shaun Hendy has pioneered, established and continued the transformational research area of theoretical nanotechnology in New Zealand. Shaun's major research discoveries include identifying new solid-liquid phase behaviour induced from nano-scale collisions, and the classification of novel recoil behaviour of nano-particles. These new phenomena are absent from both the smaller atomic-scale, and from the larger macro-scale. Their discovery by Shaun attests to his scholarship, especially given the very applied and industrially-motivated aims of the research programmes. Shaun's mathematical discoveries have resulted from the application of new numerical methods, called Hybrid-Kinetic Monte Carlo methods, developed jointly with Prof Tim Schulze from the University of Tennessee, which allow both a fine computational grid where significant atomic redistribution is occurring, but with a coarse grid where atomic distributions are largely static. Shaun has also discovered new laws relating at the nano-scale, for the drag between a liquid and a solid surface; and obtained new results for droplet entry into nano-tubes. His IRL responsibilities have included successful application for, and management of over NZ\$20 million of research contracts.

Shaun has been employed at IRL since 1998, where he is a Distinguished Scientist and is currently Deputy Director of the MacDiarmid Institute for Advanced Materials and Nanotechnology.

Science Communicator Award

The Science Communicator Award is made to a practising scientist for excellence in communicating science to the general public in any area of science or technology.

The recipient for 2010 is **Dr Marc Wilson**, Victoria University of Wellington.

Marc Wilson describes himself as ‘intellectually indigeneous’ to Victoria University, having started studying psychology there in 1991 and never leaving. After completing his PhD in 1999, he undertook some of the less popular academic jobs at the time. These included teaching research methods



to 100-level psychology students in one of the largest courses offered at VUW. Marc is a teacher, first and foremost, whether this involves teaching formal classes, or through print, radio, and television media. He regularly presents to schools, organisations, and anyone else who will listen and, taking seriously the obligation of tertiary education in New Zealand to contribute

to ‘the development of cultural and intellectual life’, he has gone out of his way to help out various media organisations in New Zealand. Marc routinely provides commentary on topical social issues – after all, what better way to champion one’s discipline than through media willing to do the work for you? In the words of one journalist ‘I swear to God, you seem to be the only psychologist in Wellington who speaks to the media’. Marc has won both local and national recognition for his teaching, and this has led to the opportunity of an academic lifetime – the chance to design material for, and present, two of TVNZ’s consumer psychology series, ‘The School of...’ in 2007 and 2008 (watched by more than 800 000 people). He has collaborated with several outlets (including TV3 and the *Sunday Star Times*) on large-scale studies on topics such as supernatural and superstitious beliefs, and personality and criminality, which have also served as vehicles for data collection for his research – these partnerships are a win-win for both academics and media. Most recently he has been engaged in a study of public beliefs about evolution that has involved surveying Fellows and Members of the Royal Society of New Zealand, Secondary School science teachers, members of the general public, and (because it’s traditional) first-year Psychology students. On the down side, he has also been described by Paul Henry as a ‘Kiwi cultural commentator’.