

News Release



Breakthrough in understanding of genes and depression wins Liley Medal

Auckland, 17 November 2004

Identifying a genetic connection between life stress and depression has earned the University of Otago's Associate Professor Richie Poulton the inaugural Liley Medal for health research.

The medal, to be awarded annually by the Health Research Council of New Zealand (HRC), recognises an individual whose research has made an outstanding contribution to the health and medical sciences.

Associate Professor Poulton, Director of the Dunedin Multidisciplinary Health and Development Research Unit, was awarded the prestigious medal for research that has opened up the exciting new field of behavioural genetics and provided new insights into the role of environment on gene expression.

The study used information from the Dunedin Multidisciplinary Study that follows the lives of close to 1,000 people born in Dunedin 32 years ago. HRC Chief Executive, Dr Bruce Scoggins, says the Dunedin Multidisciplinary Study is widely recognised as one of the world's foremost longitudinal cohort studies and one the HRC is proud to have supported since it began in 1972.

"The paper that won this award has been internationally recognised as a major breakthrough in our understanding of gene-environment interactions," he says.

More....

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Published in the international journal *Science*, Associate Professor Poulton's research was voted the 2nd most important breakthrough in 2003 in any area of science by the American Association for the Advancement of Science.

The work has received glowing tributes from international leaders in the field. One leading authority said about the study "It might not be an exaggeration to say that, if replicated, the study will turn out to have been a watershed moment in the history of behavioural genetics." The findings have since been replicated in Australia, the United States, the United Kingdom and the Netherlands.

The Liley Medal is named after Sir William Liley KCMG, BMedSc, MBChB PhD FRSNZ, FRCOG to recognise his lifetime contributions to health and medical sciences.

Sir William (Bill) Liley developed techniques enabling the first blood transfusion to a baby in the womb in 1963. He was able to diagnose Rh hemolytic (blood) disease by taking amniotic fluid from the mother during pregnancy, now a routine diagnostic procedure. These discoveries saved many babies' lives and made him the father of fetal medicine.

The medal was designed by Philip O'Shea Esq NZ Herald of Arms Extraordinary to Her Majesty The Queen, and crafted by Thomas Fattorini and Sons of Birmingham. The reverse design features fern fronds, reflecting Sir Liley's work – some coiled (alluding to new birth), and other fully extended (healthy) fronds. In Maori art, the coiled fern frond often suggests an embryo.

Associate Professor Poulton was presented the medal at a ceremony on Wednesday 17 November 2004.

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Health Research Council of New Zealand Te Kaunihera Rangahau Hauora o Aotearoa

Sir William Liley KCMG, BMedSc, MB, ChB, PhD (ANU), Hon. DSc (VUW), Dip Obs, FRSNZ, FRCOG, Hon. FACOG (1929 – 1983)

Although it is more than 20 years since his passing Sir William Liley's contribution to medical science, particularly in the area of obstetrics, is still celebrated.

Born in Auckland in 1929 Albert William Liley – who always preferred to be known as Bill – was educated at Royal Oak Primary School before moving on to Auckland Grammar where his intellectual capacity began to blossom.

Awarded a University National Scholarship in 1947 Bill Liley distinguished himself at both Auckland and Otago Universities. He was gold medallist in anatomy in 1950, secured a Senior Scholarship in medicine and was awarded the Travelling Scholarship in medicine in 1954.

Instead of taking up the scholarship he headed for the Australian National University where he took up a research scholarship in physiology, working on various aspects of synaptic transmission. Despite being a recently qualified medical graduate he had four papers published in the Journal of Physiology.

Bill Liley returned to Auckland as a Sandoz Research Fellow and in 1958 was awarded a Research fellowship in obstetrics by the Medical Research Council of New Zealand, the HRC's predecessor. From that time until his premature death in 1983 he held a series of appointments with the MRC, including being a council member between 1972 and 1978 and Chairman of the South Pacific Health Committee between 1973 and 1978.

In 1968 Bill Liley was appointed to a personal Chair in Perinatal Physiology at the University of Auckland's Postgraduate School of Obstetrics and Gynaecology. He was particularly attracted to the problems of unborn and newly born children and his major focus became Rh haemolytic disease of the newborn – a major issue in obstetrics. At the time he entered the field perinatal mortality was about 25%.

One of his great contributions lay in extending the use of spectrophotometry of amniotic fluid to a much wider range of potentially affected pregnancies – work which gained him an international reputation. The technique he developed made it possible to identify which baby could be retained safely in utero for a normal gestation period and which should be delivered. As a result perinatal mortality from haemolytic disease at National Women's Hospital fell to 8%.

A CMG in 1967 and was followed in 1973 by a knighthood (KCMG). Sir William's work was also internationally recognised by a variety of organisations. He served as a member of the WHO Expert Advisory Panel on maternal and child health from 1968 until his death. He was an Honorary fellow of the American College of Obstetricians and Gynaecologists and was appointed a member of the International Association for Advice and Research on Mental Deficiency. He also held several other honorary fellowships and memberships of prestigious societies overseas.

An extended biography prepared by Sir John Scott sums up his life in this way:
“Sir William Liley embodied many characteristics which have typified the leaders and giants of scientific endeavour in New Zealand. He combined top-flight intellectual ability with practical skills, humanity and humility. His accomplishments indicated to his generation and those coming after that achievement on a world scale was very much within the grasp of dedicated scientists who chose to return or remain in New Zealand.”

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