

Role of universities in innovation (Abstract)

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Universities exist to innovate – and to train innovators. Sometimes the discoveries emanating from universities have direct economic value through their value in industry, while sometimes the value is to society or humanity without any apparent direct impact on our economy. Governments and their advisors continue to fret about whether universities focus sufficiently on economic outputs, as if these are somehow opposed to intellectual pursuits. Yet there is plenty of support for the concept that the intellectual and the economic are inextricably linked – that the greatest economic gains any country can make in a competitive world depend on deep investigation of difficult problems. The key to unlocking the value in university innovation is presumably then to ensure that universities are well linked to industry, while enabling the universities to do what they do best.

Are such linkages in place in New Zealand? While it's difficult to provide a nationwide assessment, at least some of our universities now have deep experience of the paths between innovative research and its commercialisation, and signpost these clearly to their staff. As a result, for many university staff in New Zealand, there is no conflict between an academic output and an industrial one – you can discover, protect, publish, then commercialise in one smooth journey. Universities are also making their intellectual capital available to industry in contract research, and many academics are setting aside their own

research passions to pick up questions lobbed in from outside. These two activities – innovation that drives commercial opportunities, versus innovation that responds to commercial need – require different management, and some universities have developed specialised systems to support both.

Can universities do better in fostering innovation? Universities can tweak their own research engines, especially in developing long-term strategies to grow world-leading research programmes. Universities might also engineer more effective contact with a commercial sector that often has limited knowledge of their capacity. And universities can work together, and with other partners, to generate national research consortia of sufficient scale to compete internationally.

New Zealand universities seem ready to accept a greater role in actively promoting economic development. Many academic staff recognise there is no fundamental conflict between academic freedom and maximising the economic benefits of their work, since the availability of pathways for research commercialisation need not interfere with the pursuit of excellent research. Regardless of how greater economic impact is achieved, universities are likely to insist that the diversity of the academic community needs to be preserved, along with the capacity of its members to innovate in whatever field they choose. This 'universality' within universities is one of the hallmarks of a successful industrialised nation, and allows some of the most valuable innovation to spring from the most unexpected corners.

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Rod Dunbar graduated MBChB from the University of Otago, and later completed a PhD in immunology at the Wellington School of Medicine. After 6 years at Oxford University's Institute of Molecular Medicine, he returned to New Zealand in 2002 under a Wellcome Trust International Senior Research Fellowship, and founded a new laboratory at the University of Auckland's School of Biological Sciences.

Associate Professor Dunbar's current research encompasses a multi-disciplinary programme to develop new immunotherapies for cancer and investigate the use of primary human cells in medicine. In 2008 he was appointed the Director of the Maurice Wilkins Centre for Molecular Biodiscovery, a Centre of Research Excellence.