



# Biotech and medtech grant funding changes needed to improve commercialisation

BY MEGAN O'CONNOR

**C**SL, COCHLEAR, and Gardasil are all great Australian biotech success stories; we have done it before. How do we do it again and again?

With the \$20 billion Medical Research Future Fund, as well as other new significant funding programs such as the \$2.2 billion *University Research Commercialisation Action Plan* and the recently announced \$1.5 billion *Advanced Medical Manufacturing Fund*, do we have the answer to the 'Valley of Death' funding issue?

The economic opportunity for improving our commercialisation rates of medical innovation is great. The market is global, the need is ever growing, and there are early- and late-stage opportunities to generate an economic return.

For example, in 2021, CSL earned more than \$15 billion, with \$14 billion derived from overseas, and Australia continues to derive royalty income from the Gardasil vaccine, which earned more than \$8 billion in 2021.

However, our ability to generate economic returns from a product service or a therapy that healthcare systems will pay for is low, despite having a world-class starting point.

Australia is not just good at medical

research; we excel at it. The *2022 Nature Index* ranks Australia at number nine in the world for scientific output in the life sciences.

However, behind every great commercialisation story are brilliant scientists and an equally smart dedicated commercial team. To improve our commercialisation rates, we don't just need a strong discovery sector; we need a vibrant industry sector.

The UK and Singapore are examples of countries that have successfully grown their life science industry sector and their output through industry-focused programs.

In 2001, the UK established their *Small Business Research Initiative* (SBRI), which provides funding to businesses via research contracts valued from about \$85,000 to \$17.5 million to address specific public sector needs.

Modelled off the US SBRI program, the UK's SBRI is generous to businesses, providing up to 100 per cent funding for projects. The program has awarded more than \$1.7 billion in funding to date, with the majority of grants being awarded to industry (85 per cent).

The output of the SBRI to date is impressive. A review of the program found that it had returned £2.40 in economic output for the UK for every pound awarded.

Today, the UK is the largest biotech hub in Europe, with more than 30 per cent of biotech firms in Europe originating in the UK, according to a 2021 article by McKinsey & Company.

Closer to home, Singapore's life science ecosystem has achieved six-fold growth over the last decade and was ranked the world's second-most innovative country

in 2021. Its biomedical manufacturing sector has been steadily growing, and in 2019 comprised approximately 4 per cent of Singapore's gross development product (GDP).

This growth and output is in spite of being ranked 11 places lower than Australia in the *2022 Nature Index* for scientific output in life sciences globally. This has been largely in response to the Singapore Government's investment in the industry. In 2016, the Singapore Government committed to a \$4.2 billion budget to drive research and commercialisation activities in the health and biomedical sciences.

Singapore initiatives launched include the Biomedical Sciences Innovate 'N' Create Scheme, which provided seed funding investments between \$265,000 to \$2.1 million in the form of equity or convertible loans, and the Start-up Enterprise Development Scheme (SEEDS) which provides seed funding to start-ups.

What do these commercialisation-focused programs have in common? Largely, they have been well-funded and industry-focused, enabling industry to strengthen and tackle the long and risky task of commercialisation in the life science space with government support.

Taking lessons from overseas, for Australia's commercialisation rates to improve, we need not just well-funded, well-intended programs, we need programs that significantly strengthen and empower the industry sector and are assessed and measured against commercial outcomes.

First and foremost, this requires providing industry direct and equal access to commercialisation-focused programs. This means enabling industry participants to lead projects and funding applications, not just as a partner to academic-led projects, which has commonly been the funding structure adopted, particularly for grants where significant funding is awarded.

Additionally, applications to commercialisation-focused programs should be assessed by a panel where at least 50 per cent of the assessors are from industry.

Academic expertise is critical to assess the scientific basis of a project, however, the probability of commercial success is equally dependent on the ability of the solution to meet a real unmet medical need and have a realistic, well-planned pathway to the market. This must be assessed by those who have travelled this tough and complex road.

The Labour Government's announced \$1.5 billion Advanced Medical Manufacturing Fund is an extremely exciting opportunity for the life science industry. To prevent inadvertently excluding many small and medium-sized enterprise (SME) players in this sector, programs within this fund should include building new or improved research and development (R&D) facilities, the early stages of the manufacturing value chain, as eligible activities.

Additionally, these programs should remove requirements that applicants must be a trading entity or revenue generating, which has been a common criterion for manufacturing-focused grants.

The criterion would exclude many life science companies focused on commercialisation activities and undertaking advanced medical manufacturing, as they are commonly pre-revenue and non-trading. Indeed, AusBiotech's *Biotech Blueprint* reports that 80 per cent of the Australian biotech industry is pre-revenue.

Lastly, it is imperative the actions and the outcomes of commercialisation programs are tracked and reported. The number and value of commercialisation-focused grants awarded to industry should be tracked and published, and the split of academic versus industry assessors on



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an assessment panel should be publicly known.

These funding programs should be tracked and assessed by commercialisation success outcomes, including progression along the clinical trial pathway, number of licensing agreements achieved, revenue generated, exports generated and jobs created.

We currently have an amazing opportunity to make the structural changes needed with the current commercialisation focused funding to improve commercialisation rates in the life sciences and generate smart economic returns for this lucky country. ■