



Australian
Academy of Health and
Medical Sciences

Response to the consultation on developing a University Research Commercialisation Scheme

A SUBMISSION BY THE AUSTRALIAN ACADEMY OF HEALTH
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About the Academy

The Australian Academy of Health and Medical Sciences is the impartial, authoritative, cross-sector voice of health and medical science in Australia. We advance health and medical research in Australia and its translation into benefits for all, by fostering leadership within our sector, providing expert advice to decision makers, and engaging patients and the public.

We are an independent, interdisciplinary body of over 400 Fellows – elected by their peers for their outstanding achievements and exceptional contributions to health and medical science in Australia. Collectively, they are a representative and independent voice, through which we engage with the community, industry and governments.

Executive Summary

The Australian Academy of Health and Medical Sciences ('the Academy') thanks the Department of Education, Skills and Employment for the opportunity to provide feedback on development of a scheme to support university research commercialisation. Although the consultation refers exclusively to universities, it would be an error to exclude medical research institutes and hospitals from the scheme.

The Academy supports the proposed concept of a government-funded research commercialisation scheme as it has the potential to address a key barrier and funding gap for commercialising Australian cross-disciplinary research. Through a scheme like the proposed University Research Commercialisation (URC) scheme, the Australian Government could play a key role in supporting early-stage commercial development of research outcomes, reducing risk and making it more attractive for private investors.

While supportive of the principle behind establishing a research commercialisation scheme such as this, the Academy would like to highlight key learnings from the health and medical research sector that could inform its design.

The Academy has provided the following points for consideration in the university research commercialisation scheme scoping study:

- 1) The scheme should have sufficient **flexibility and scale** to address both **immediate and future national priorities (unmet needs)**
- 2) The scheme should **complement the existing funding landscape** that supports research and translation in Australia
- 3) The scheme should encourage and enable **collaboration and partnerships**
- 4) Design of the scheme should consider how to recognise **commercialisation outputs and milestones as metrics of success for researchers.**

These four features are discussed in the submission below.

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This submission can be made publicly available.

We would like to thank the Academy's Fellows and Associate Members who contributed to this response.

Introduction

The Academy supports the proposed concept of a government-funded research commercialisation scheme. Through a scheme like the proposed URC, the Australian Government could play a key role in advancing Australia's successful research outcomes to the marketplace and maximise existing government investment in research.

As highlighted in the consultation paper, Australia is renowned for world-class research but there is room for improvement when it comes to translating those research findings¹. Commercialisation is one key pathway for translating research. The valley of death is well known as one of the main barriers to research commercialisation – that is, the difficulty in obtaining funding early in the commercial development process when the venture is less attractive to investors. By providing support at an early stage of commercial development, a URC scheme has the potential to provide much needed financial support to assist in traversing the valley, enabling more economic and social benefits of Australian research to be realised. This scheme could bring the greatest benefits if it maintains an appetite for high-risk projects that may have difficulty in obtaining that crucial first investment from any source.

The Academy would like to put forward four key features for consideration in the design of a university research commercialisation scheme, discussed in the following sections.

1. Flexibility and scale to address immediate and future unmet needs

A scheme such as this for commercialising research could provide the greatest benefits if it is of sufficient scale and flexibility to support commercial opportunities as they arise from research, while also maintaining capacity for a longer-term strategic approach to addressing the needs of the nation.

One example of the value of scale and flexibility is the Australian Government's \$20 billion Medical Research Future Fund (MRFF)². Now at full capitalisation, the fund will be providing about \$600 million per year for priority-driven health and medical research and its translation. The MRFF is guided by a long-term investment strategy spanning 10 years³, however, in 2020 the MRFF provided a mechanism to rapidly fund research and translation activities responding to immediate national priorities – health impacts of devastating bushfires⁴ and the COVID-19 global pandemic^{5,6}. It should be noted that the MRFF was established to fund research translation activities more broadly and research commercialisation forms only part of this overall approach⁷.

One way to achieve this balance is through grand challenges and mission-level initiatives, an approach discussed in the consultation paper. There is an opportunity for a URC scheme to establish this type of funding structure but with a commercial focus, informed by evidence and advice from leading internationally experienced industry-based experts, researchers and consumers as to where the greatest unmet needs lie. There should also be flexibility to fund a range of activities within universities, including boosting workforce capabilities in research commercialisation.

2. Complement the existing investment landscape for research and translation

A URC scheme should complement existing government investment in research and commercialisation, which would in turn boost and strengthen the research translation ecosystem in Australia. This whole-of-government approach was recommended by Industry Innovation and Science Australia in their 2021 report, *Driving effective Government investment in innovation, science and research*⁸.

A number of government-backed research commercialisation schemes supporting different stages of development already exist in Australia. Examples of existing schemes include the Cooperative Research Centres⁹, NHMRC Development Grants, ARC Linkage funding and more recently, the Biomedical Translation Fund¹⁰ and schemes under the MRFF Medical Research Commercialisation initiative¹¹. This list is by no

means exhaustive. The funding landscape for research commercialisation also includes schemes funded by state and territory governments such as the \$2 billion Breakthrough Victoria Fund¹² and the New South Wales Government Boosting Business Innovation Program¹³ or by other funders in the sector (eg BioCurate¹⁴). A national URC scheme should acknowledge and interact with other government-funded and independent ventures, aiming to build an over-arching strategy for national research commercialisation

There is an opportunity for the URC scheme to help coordinate and optimise the existing investment landscape. This could include building commercialisation capability in the research workforce by considering alternative funding models for researchers, reducing reliance on the short-term grant cycle to progress their findings through a commercial translation pathway. The URC scheme design should complement the existing funding landscape and aim to harmonise the commercialisation pathway from public to private investment and towards the market, maximising the benefits from Australia's world-class research.

3. Encourage and enable collaboration and partnerships

Collaboration is the lifeblood of multi-disciplinary research. Consequently, a URC scheme should recognise that successful research programs led by universities are likely to involve non-university partners long before researchers seek commercial investment. The scheme should not ignore the key role that hospitals and medical research institutes play in successful research commercialisation, which is not limited to universities.

Development of vaccines, diagnostics and standard of care for the current COVID-19 pandemic is an excellent example of the success that can come from combining expertise across disciplines, and across different types of organisations – industry, universities, health providers and medical research institutes that conduct health and medical research. International industry connections and perspectives have been essential for getting products for the pandemic response to market, where industry has delivered the novel tests and vaccines needed across the globe. Australia's internationally-experienced scientists could provide an international industry perspective for both design and delivery of a URC scheme, not only through their own experiences but also through their industry-based networks.

4. Recognition of commercialisation outputs as metrics of success for researchers

Design of a university research commercialisation scheme should consider how best to recognise outputs from commercialisation activities as metrics of success for university researchers. This should recognise outputs from both research organisations and individual researchers.

Australia has no university that ranks in Reuters list of the World's top 100 most innovative universities whereas other top academic universities outside Australia figure prominently in that list¹⁵. Australian universities could boost commercialisation by setting incentives that encourage academic researchers to embrace translation and innovation. One approach could be to introduce innovation metrics into performance measures for Australia's research institutions, and also for their researchers. This could be complemented by publishing an annual list of measures demonstrating successful commercial activities fostered by universities and research organisations alongside those for research funds awarded.

Currently, the primary performance indicators for university researchers are centred on academic outputs such as peer-reviewed publications. These indicators are fundamental to demonstrating productivity in a researcher's track record and are essential for securing government research funding from agencies such as ARC and NHMRC. Recognising outputs of research commercialisation with similar weighting as traditional academic outputs in promotion and grant application processes would enable researchers to prioritise commercialisation activities when opportunities arise. This would reduce or eliminate the risk of an apparent gap in the appreciation of their overall research output and enable a smoother and more nimble

exchange of talent between academic research and industry research. This approach could significantly assist in building a strong, commercialisation-savvy research workforce as well as provide industry mentors for academic researchers.

References

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