POLICY REVIEW OF THE ARC NATIONAL COMPETITIVE GRANTS PROGRAM

DISCUSSION PAPER RESPONSE FROM THE AUSTRALIAN ACADEMY OF HEALTH AND MEDICAL SCIENCES

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Comprised of the most outstanding scientific leaders, the Australian Academy of Health and Medical Sciences is the independent and authoritative body working to solve the most complex and pressing health challenges facing our nation.

In providing expert advice, the Academy reduces health inequity by enabling high-quality, evidence-based healthcare driven by science and innovation.

From lecture hall to lab bench, and then patient bedside, our Fellows are at the forefront of translating ground-breaking research into real world outcomes that advance healthcare, inform policy, and save lives.

The Academy's unique composition and reach brings together an unparalleled network of Australia's leading health and medical experts across industry, academia and decision-making bodies to advance the health of our nation.

Introduction

The Australian Academy of Health and Medical Sciences welcomes the opportunity to respond to the Australian Research Council's (ARC) Policy Review of the National Competitive Grants Program (NCGP).

As the biggest funder of research outside of health and medicine, the ARC plays a critical role in shaping an optimised, thriving research ecosystem. It supports and enables domestic discovery and innovation, the impacts of which ultimately improve lives and help to secure Australia's position in an ever-shifting global landscape.[1]

By aligning the NCGP with the ambitious objectives of the amended ARC Act, the Policy Review has the potential to nurture the next generation of Australian research leaders, catalyse collaboration, and strengthen both breakthrough research and our national resilience in the face of emerging global challenges.

The Academy's submission responds to consultation questions 1-3 and makes a recommendation in relation to each, as follows:

Recommendation 1: Protect the entire research pipeline by ensuring the NCGP continues to support both curiosity-driven and priority-driven research.

Recommendation 2: Develop and implement medium- to long-term support mechanisms to improve the job security and career progression of early-career researchers.

Recommendation 3: Foster a culture of trust that enables university-industry collaboration by developing integrated teams and refining intellectual property agreements.

From inception to impact: Connecting the research pipeline

Consultation question 1: Does the proposed model provide a strong and clear basis for the NCGP over the next 20 years?

Australia is home to some of the world's most pre-eminent researchers who have contributed significantly to shaping the scientific, social, cultural and economic landscape, both in Australia and globally. The ARC has played a crucial role in this success, having funded important research with many positive outcomes for the nation, including valuable contributions to economic growth, jobs creation and societal impacts. From a health and medical sciences (HMS) perspective, research funded by ARC is crucial to addressing increasingly complex global challenges, which require multidisciplinary solutions, as well as having direct applications in health and medical research (HMR).

The proposed model takes steps to secure the next two decades of Australian research by simplifying funding schemes, reducing administrative burden, and supporting cross-sector collaboration. These are steps in the right direction.

The ARC supports the development of foundational knowledge that often enables transformative advances, with applications in health and medicine. For example, an ARC and NHMRC funded project that used advanced cellular biology techniques to visualise mitochondrial structure and function is today informing a Medical Research Future Fund (MRFF) Investigator Grant-awarded program to improve the diagnosis and treatment of

mitochondrial diseases (MD).[2] [3] Academy Fellow Professor Aleksandra Filipovska is currently leading this project, using state of the art technology to streamline the existing diagnostic process for MD, which is complex, and to identify more effective treatments.[4]

A strong and strategically aligned ARC is important for the optimal functioning of Australian R&D – including the translation of research outcomes into practical applications that benefit society. In health, this includes for example, commercialisation of research into marketable products, improved care pathways and more effective public health measures.

While the restructure outlined in the proposed model has the potential to streamline the NCGP and better align funding with national priorities, it could benefit from greater clarity on how support will be balanced across the research pipeline. A coordinated, missions-based approach that focuses research efforts has the potential to enable Australia to meet its most urgent challenges. However, the success of this approach hinges on the discovery science that underpins it, which must continue to receive sufficient resourcing.

The ARC is uniquely positioned to safeguard this balance. For Australia's research and innovation pipeline to function, the NCGP must continue to provide robust support for discovery research across the disciplines (whether it occurs in the lab, the clinic, or elsewhere). ARC investment across diverse research fields, from science and engineering through to social sciences and humanities, drives productivity, scientific advancements, and societal benefits. This support should be protected from narrow interpretations of impact that do not account for long-term, uncertain or unexpected applications.

By maintaining its vital commitment to basic research, the ARC can ensure Australia's translation and commercialisation ambitions are built on stable and sustainable foundations. To realise this, the ARC should continue to work with the NHMRC, MRFF and other key government funders and initiatives, to align their collective priorities and approaches.[1]

The Policy Review provides an opportunity to embed a whole-of-system perspective into the design of the NCGP – strengthening the integration between fundamental, translational, and applied research, while actively supporting connectivity across sectors and stages.

Recommendation 1: Protect the research pipeline by ensuring the NCGP continues to support curiosity-driven and priority-driven research across the pipeline.

The future of Australian innovation: Supporting early-career researchers

Consultation question 2: Does the proposed model adequately address your concerns or those expressed in the initial consultation?

The proposed model goes some way to addressing concerns around scheme complexity and encouraging collaboration across disciplines and sectors.

One concern that remains unaddressed by the proposed model is the challenges faced by early-career researchers (ECRs) across the research sector, including career progression and job insecurity. Currently, nearly 75% of ECRs would not recommend scientific research as a career, and over 75% of researchers cite job insecurity as the factor most likely to motivate them to leave the research sector.[5] The HMS are not immune to these challenges;

over the 5-year period during June 2019-June 2024, 47% of HMS postdoctoral fellows left the sector when they changed roles.[6]

The ARC has long played a vital role in developing Australia's research workforce at all career stages, including ECRs. The Embedded Fellowships included in the proposed NCGP model go some way to nurturing ECRs by facilitating closer membership of these professionals within project teams. However, the proposed two-year term limit of the Embedded Fellowships risks perpetuating the job insecurity endured by this vital cohort.

Recommendation 2: Develop and implement medium- to long-term support mechanisms to improve the job security and career progression of early-career researchers.

Cultures of trust: Catalysing collaboration

Consultation question 3: What issues need to be addressed in the transition from the current NCGP schemes to the new model?

The proposed NCGP model outlines welcome steps towards better supporting exploratory research, including by offering *Initiate* grants that enable higher risk, higher reward projects – partly through fostering early-stage research collaboration between universities and industry. As a champion of the health-academia-industry interface, the Academy has mapped opportunities to expand this collaborative nexus in our comprehensive report, *'Research and innovation as core functions in transforming the health system'*, where we highlight the importance of integrated teams and cross-sector collaboration and set out plans for how Australia can achieve an active and dynamic health–academia–industry interface.[7] We highlight the importance, for example, of targeted programs to build a generation of cross-sector knowledge brokers who can collaborate and mobilise across health, academia and industry to drive Australian research and innovation in health and medicine. We also call for an 'Alliance' that brings together governments, healthcare, academia, and industry to transform healthcare through research.[7]

Cross-sector collaboration that leverages the unique resources of all those involved can reduce silos and support a systems-based approach to research and innovation. However, this collaboration can only flourish where there are cultures of trust – such as those that characterise integrated health-academia-industry research teams cultivated by NHMRC-accredited Research Translation Centres.[7]

Many of the challenges to promoting a culture of university-industry collaboration concern intellectual property (IP). There are barriers and procedural burdens that currently deter industry engagement, and ambiguities over IP protection that concern universities. In reviewing the NCGP, the ARC has an opportunity to work across government by engaging with the ongoing Strategic Examination of R&D to simplify and strengthen IP agreements to provide industry with clear pathways to leverage university knowledge and provide universities with the confidence that their IP is safe.[8]

Recommendation 3: Foster a culture of trust that enables university-industry collaboration by developing integrated teams and refining intellectual property agreements.

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