

SECURING AUSTRALIA'S FUTURE PROSPERITY THROUGH HEALTH AND MEDICAL RESEARCH

2022–23 AAMRI Budget Submission



aamri

Association of Australian
Medical Research Institutes

**“OUR EARLY TO MID-CAREER
RESEARCHERS ARE TOMORROW'S
SCIENTIFIC LEADERS, AND
WITHOUT ACTION TO SUPPORT
THEM WE WILL LOSE THEM...”**

Prof Kathryn North AC, AAMRI President

- Early- to mid-career researchers are our brightest minds, who will lead our response to future health challenges.
- Early- to mid-career researchers also struggle to secure funding, with not enough fellowships they often rely on philanthropic funding for support.
- The Australian Government should fund 288 additional grants each year to ensure the future of our next generation of research leaders.
- The economic downturn resulting from COVID-19 will mean even fewer funding opportunities for early to mid-career researchers.

www.aamri.org.au/2022budgetsubmission

EXECUTIVE SUMMARY

- Australia's past investment in medical research has helped prevent the deaths of tens of thousands of Australians from COVID-19.
- The 2022-23 Budget will determine whether Australia seizes the opportunity to maintain its position as a global leader in medical research, attracting new investment, technology and clinical trials.
- The MRFF is focussed on the translation of research discoveries into clinical practice, and the commercialisation of novel therapies and technology. However the discovery pipeline administered through the NHMRC is currently severely underfunded, limiting research career opportunities for our best and brightest, and our ability to generate new ideas. These ideas are the lifesaving treatments of tomorrow.
- Without action, billions of dollars of previous investment, and a generation of knowledge and experience will be lost, as new economic challenges result in hundreds of early- and mid-career researchers leaving the health and medical research sector.

THE PROPOSAL

STRATEGIC NEW INVESTMENT SHOULD ENSURE SUPPORT FOR EARLY- AND MID-CAREER RESEARCHERS TO PURSUE INNOVATIVE DISCOVERY RESEARCH.

AAMRI recommends that the Australian Government fund:

288
additional Ideas Grants per year

These grants will secure the next generation of research leaders needed to face the nation's future health challenges, and allow them to make the medical research discoveries Australia needs to respond to future health challenges.

THE ISSUES

1

THE NEXT GENERATION OF MEDICAL RESEARCHERS ARE BEING SQUEEZED OUT OF FUNDING PROGRAMS

SUCCESS RATES WITHIN THE NHMRC GRANT PROGRAM HAVE FALLEN TO HISTORIC LOWS.



Figure 1. Total number of funded grants and funded rate for NHMRC Project Grants (previous grant program) and Ideas Grants (current grant program) from 2013 to 2021¹.

For some career levels in NHMRC grant schemes, there is only enough funding available to fund 8.8% of applications received.

This is despite more than 50% of applications deemed to be of sufficiently high quality to be funded.

Over the last decade the trend has seen funding success rates fall from around 20% to around 9-12% (depending on the scheme).

OUTSTANDING WORLD-CLASS MEDICAL RESEARCHERS ARE BEING SQUEEZED OUT OF FUNDING PROGRAMS AND END UP BEING PUSHED OUT OF RESEARCH.

While this issue impacts the whole health and medical research workforce, it is causing acute problems for early- and mid-career researchers.

These researchers are less likely to have access to other sources of funding that can sustain their research careers while they are in-between grant funding opportunities.

They have also been disproportionately impacted during the COVID-19 pandemic.

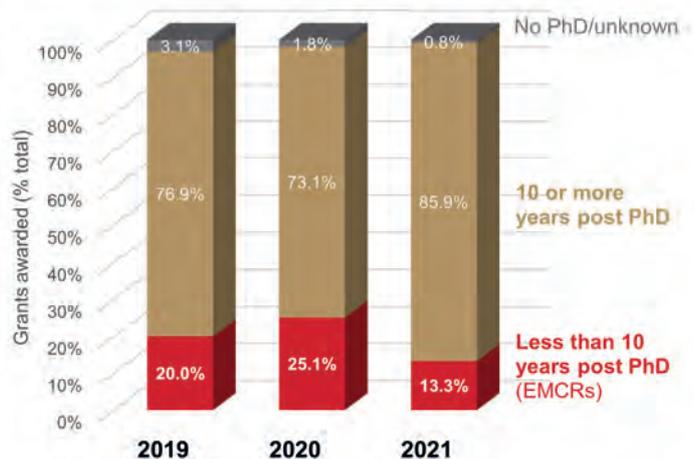


Figure 2. Proportion of NHMRC Ideas Grants awarded, by career stage of the lead investigator (CIA)².

^{1,2,3} Data sourced from NHMRC, available at www.nhmrc.gov.au/funding/data-research/outcomes

THE ISSUES CONT.

2

FUNDING FOR INVESTIGATOR-LED AND DISCOVERY RESEARCH HAS FLAT-LINED WHILE THE COST OF WORLD-CLASS RESEARCH IS INCREASING

NHMRC Ideas grants are the primary funding source for early- and mid- career researchers and their innovative research.

This research leads to new knowledge that can be turned into new treatments, and improved health outcomes.

IN REAL TERMS, NHMRC FUNDING HAS FLATLINED OVER THE LAST DECADE, AND THE TOTAL NUMBER OF FUNDED GRANTS FOR INNOVATIVE RESEARCH PROJECTS HAS HALVED.

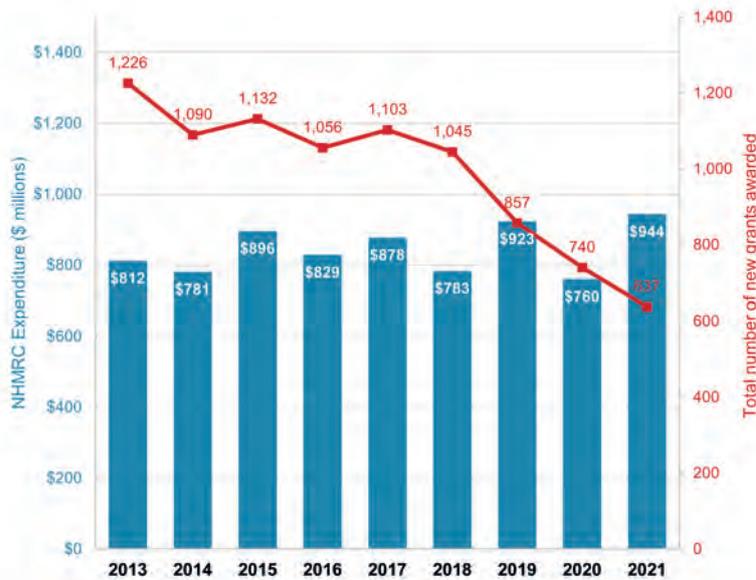


Figure 3. Total NHMRC grants and funding from 2013 to 2021³.

The decline in grants and funding for this research is partly due to the rising costs of undertaking research, NHMRC funding not keeping pace with inflation, and changes to the structure of the grant program.

This has led to fewer funding opportunities available to researchers, particularly those that are early in their career.

THE IMPACT

LOSS OF 6000 YEARS OF INVESTMENT IN MEDICAL RESEARCH EXPERTISE THAT HAS THE POTENTIAL TO PRODUCE TOMORROW'S GAME-CHANGING VACCINES AND CURES

The negative impacts caused by the declining success rates of researchers supported through the NHMRC grant program is disproportionately harming the career development of the next generation of medical research leaders.

These researchers are at a critical stage of their career development where they are about to establish new research teams, but also face the greatest funding challenges to continue with their work.

Every time one of these highly skilled medical researchers is unable to secure funding to continue with their research, 20 years of past training expertise is lost.

Losing 300 early- and mid-career researchers would see Australia lose the equivalent of 6,000 years of past investment in medical research training.

Each year, the NHMRC only funds 9% of applications received by this critical cohort of researchers. The loss of these researchers will set back Australian medical research decades, delaying the development of new therapies for cancer, diabetes and cardiovascular disease to name just a few.

Retaining our existing talent is far more efficient and cost-effective, than recruiting hundreds of new or less-experienced researchers to fill the gaps.

**A DIMINISHED
MEDICAL RESEARCH
WORKFORCE WILL
LEAVE AUSTRALIA
UNABLE TO
RESPOND
EFFECTIVELY TO
FUTURE HEALTH
THREATS.**

THE RESPONSE

STRATEGIC INVESTMENT TO PREPARE AUSTRALIA FOR THE FUTURE HEALTH CHALLENGES FACING THE NATION

Australia can use the COVID-19 crisis to establish itself as the best place in the world for medical research. However, without urgent intervention, Australia risks our research workforce becoming ill-equipped to deliver the health and economic benefits the nation expects.

Urgent intervention is needed to prevent this wasteful loss of talent, and to ensure that Australia is equipped to deal with the acute health challenges that threaten our future wellbeing.

We recommend that the Australian Government fund 288 additional Ideas Grants each year for early- and mid-career researchers.

These grants should be specifically targeted at researchers who are in the first ten years of their career post-PhD, where the workforce continuity challenge is most fragile. A gender equity commitment should be made to ensure their fair allocation.

ONGOING FUNDING FOR THE 288 IDEAS GRANTS EACH YEAR SHOULD BE THROUGH NEW ADDITIONAL INVESTMENT ALLOCATED THROUGH THE NHMRC.

THIS FUNDING WOULD INITIALLY BE \$97 MILLION IN YEAR ONE, BUILDING UP TO AROUND \$278 MILLION IN ONGOING INVESTMENT EACH YEAR.

PROPOSAL COSTINGS

THE REQUESTED FUNDS WOULD SUPPORT 288 NEW GRANTS PER YEAR, RAISING THE FUNDED RATE FOR IDEAS GRANTS TO ABOUT 20%.

Estimate of additional investment required for a funded rate of 20% in the NHMRC Ideas Grant scheme¹

Number of applications	Number of grants to be funded for a 20% success rate	Average budget for funded Ideas Grants	Total Ideas Grants funding per year for 20% funded rate	Additional grants to be funded	Additional annual funding requested
2503	536	\$964,641	\$517,240,268	288	\$278,009,409

Proposed approach to introduce additional funding to the new level over three years²

	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Funding requested	\$96,464,056	\$192,928,112	\$278,009,409	\$278,009,409	\$278,009,409
Number of additional grants	100	200	288	288	288
Estimate of funded rate	13.9%	17.9%	21.4%	21.4%	21.4%

¹Estimates for requested funds were based on yearly numbers of applications, total Ideas Grant funding and average budget for funded grants in the NHMRC Ideas Grants outcomes in the 2021 round, available at www.nhmrc.gov.au/funding/data-research/outcomes

²Estimated funding requested in each year is based on the number of grants and the average budget for funded Ideas Grants in the 2021 round

IMPLEMENTATION

READY TO ROLL-OUT WITH NO NEW ADMINISTRATIVE PROCESSES

There would be minimal administrative burden incurred in funding this proposal.

All that is required is for the existing NHMRC Ideas Grant process to fund additional applications.

Each year the NHMRC funds less than 10% of Ideas Grant applications received, despite there being more than 50% of sufficiently high quality to be funded.

Funding further applications would mean no further award processes need to be deployed.

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