



Australian Academy of Science

SUBMISSION TO THE

NHMRC STRUCTURAL REVIEW

FROM THE AUSTRALIAN ACADEMY OF SCIENCE / AUGUST 2016

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Draft submission to the public consultation on the structural review of NHMRC's grant programs.

The Australian Academy of Science welcomes the NHMRC's review of the structure of its grant program, and acknowledges the importance of the stated objective of identifying changes that will reduce the burden on applicants and reviewers, and provide better opportunities for early-and-mid-career researchers. The Academy also notes the emphasis in the consultation paper on ensuring allocation of funding to high-quality research that stands the best chance of achieving better health outcomes for Australians.

The Australian Academy of Science is not in a position to comment in detail on any of the models proposed in the consultation paper. Instead, the Academy wishes to comment on the principles it believes should underpin any changes to the structure of the NHMRC's grants programs, as follows:

Funding must be prioritised

1. Public health and medical research funding is currently insufficient to support all of Australia's health and medical researchers, to support all worthwhile research proposals, or to support research into every health and disease area at the level warranted by current or future burden of disease.
2. Because of this, it is necessary for funding decision makers to prioritise available funding in a way that maximises the likelihood of better health outcomes through research.
3. Such prioritisation must recognise that in almost all cases, research leading to improved health outcomes is based on extensive underpinning and pre-cursor research findings (basic research) that is subsequently applied through translational research or commercialisation processes.
4. For this reason, the full quantum of public funding for pre-commercial health and medical research across all of Australia's funding agencies should be allocated in broadly equal proportions to basic, pre-clinical and clinical/translational research.
5. Prioritisation of funding must also reflect the current and anticipated future burden of disease. Because basic research has implications across many disease areas, this implies that basic research funding should be largely investigator-driven while clinical/translation research should be informed in larger part by health priority areas.

Funding must support a pipeline of researchers

6. The health and medical research endeavour spans generations. Consequently, it is necessary to ensure that funding models support researchers across the career spectrum from doctoral students through to senior research leaders.
7. While it is not possible to support every researcher, funding models should be structured so that currently limited opportunities for career progression are improved across the spectrum.
8. This will require a change from the current model in which progression at mid-career levels is disproportionately more challenging than at other levels. However, any changes should not reduce opportunities for the most intellectually and experimentally able researchers at doctoral and postdoctoral levels.
9. Any changes must focus particularly on removing barriers to retention, re-entry and progression in research that disproportionately affect women and those with caring responsibilities.
10. In particular, funding programs must be structured in a way that addresses the issue of job security that affects the health and medical research sector more than most other professions.
11. Finally, the significant strides that have been made by the NHMRC in encouraging gender equity in health and medical research must be maintained and built upon in any restructure of programs.

Funding must support the best researchers and research ideas

12. Within the context of any overarching priorities, research funding must be allocated to the best research proposals—as judged by peer-review—put forward by the best researchers—as judged by track-record relative to opportunity.
13. In many areas of health and medical research, the scale and skills required to solve problems requires multidisciplinary teams. For this reason, funding programs must be structured to encourage multidisciplinary and collaboration.
14. While there are clear clinical or health service applications for most pre-clinical, clinical and translational research, future applications of underpinning basic research are generally unpredictable. Because of this, assessment of basic research proposals should de-emphasise clinical significance
15. Likewise, the skills and abilities required to commercialise or translate research findings into practice are often distinct from those required to perform high quality research. Because of this, assessment of researcher track record should de-emphasise translational and commercialisation outcomes, particularly for basic researchers.

Need for coordination of funding and engagement with industry

16. The NHMRC is the largest of several public, philanthropic and private funders of health and medical research in Australia, including the new Medical Research Future Fund and Biomedical Translation Fund. As such, the NHMRC cannot be expected to solve the issues facing the health and medical research sector in isolation.
17. Better health outcomes, as well as the stated outcomes of this review, will only be achieved in full if efforts are made to coordinate priorities and streamline processes across funding agencies and organisations.
18. Within this context, it will also be necessary to ensure that public funding for research—particularly clinical and translational research—is allocated in such a way to encourage collaboration and leverage co-investment from philanthropic sources and from industry, including public hospitals and health services administered by the States and Territories.

Acknowledging that such coordination is not likely to happen in the immediate future, the Academy recommends that in considering options to restructure its grants program, **the NHMRC should emphasise those areas that are and will likely remain its core business—namely basic investigator-driven multidisciplinary research across the career spectrum—and, without excluding, de-emphasise those areas that are or are likely to become core business of the MRFF and other funding programs—namely, clinical/translational research, and to a lesser extent pre-clinical research.**