

Inquiry into the Medical Research Future Fund Bill 2015 and the Medical Research Future Fund (Consequential Amendments) Bill 2015

The University of Melbourne appreciates the opportunity to provide comment on the *Medical Research Future Fund Bill 2015* and the *Medical Research Future Fund (Consequential Amendments) Bill 2015*.

The University is located at the heart of the Melbourne Biomedical Precinct, an internationally recognised hub of leading global research and teaching, which employs 10,000 medical minds across 25 partner institutions (including specialist clinics, hospitals and research institutes that are co-located and collaborate closely).

The University has a long-standing commitment to bringing research, clinical services and medical training together. Between 2008 and 2014 there were 24,628 publications jointly produced by the University and the combined independent Medical Research Institutes, demonstrating the significant collaborative work taking place with the Medical Research Institutes. The University produced approximately 66,000 publications during that same period.

The University:

- educates more than 7,000 biomedical, health and medical students each year;
- spends around \$1 billion on research annually of which \$500 million is spent by the Faculty of Medicine, Dentistry and Health Sciences;
- has approximately 5,000 candidates undertaking a research higher degree at any time — around 4,300 are PhD students of which 1,500 are enrolled in the Faculty of Medicine, Dentistry and Health Sciences.

The University is therefore pleased to endorse the establishment of the Medical Research Future Fund (MRFF), recognising its nation building potential and the significant efforts the government has made in support of medical research.

The University has identified several areas where the governance and the MRFF might be strengthened. These comments are based on our experience with medical research policy settings as the university sector is the major contributor to medical research in Australia. This includes basic biomedical research, translational research and health services research and is often done in partnership with independent medical research institutes and medical health providers. Supporters of the MRFF have a shared objective to ensure the Fund can maximise its impact, make the most efficient use of its resources and provide the Government with the best possible return on its investment.

In summary these points are:

- The allocation of funds should include a transparent process for independent, expert review of research proposals to ensure the global standing of Australia's research effort is maintained.
- A broad, inclusive definition of 'medical research' should be included in the Bill to ensure disciplines important to contemporary medical advances are not excluded.
- Transparent reporting of financial assistance to competitive research bids, including publishing online, should be adopted within the MRFF mandate to ensure confidence in the integrity of the financial allocation process.

The submission elaborates on each of these points below.

Transparent process of independent review

One of the rationales for the MRFF is the capacity it offers to do some things differently in relation to research and to do different things, such as fund clinical trials and translational and commercial medical research. It also expands the types of recipients eligible to apply for funding, including through agreements with the States and Territories, with corporate Commonwealth entities, with universities and with corporations. This is a positive development for medical research in Australia and reflects the interdisciplinary and collaborative arrangements often necessary to advance significant medical research endeavours.

However the legislation does not currently require the independent expert review of research proposals as a basis for deciding how to provide financial assistance. The integrity of independent expert review as a fundamental principle to guiding research grant allocation is recognised as best practice around the world, and is necessary if the outputs of this Fund are to leverage the already excellent standing of Australian medical research work. Since the intention of the Fund is to meet priority national needs and to address existing strategic gaps in medical research approaches, a rigorous evaluation by experts in the field will ensure the best return on the Government's investment aligned with its priorities.

Meeting standards of international best practice is also important to engaging successfully in global research opportunities and partnering internationally. Australia's international standing with overseas funding agencies and Trusts is paramount to attracting matched funding. Frequently, potential international funders and partners require independent review to consider partnering in Australia. It will be important that the MRFF establishes at the outset the global standing and importance of its work, and internationally recognised standards of assessment are part of this.

Quality research, backed by expert review, has enjoyed bipartisan support in Australia and all other leading research nations. The McKeon Review,¹ while recognising the need to

¹ McKeon Review - *Strategic Review of Health and Medical Research – Better Health through Research* 5 April 2013 - http://www.mckeonreview.org.au/downloads/Strategic_Review_of_Health_and_Medical_Research_Feb_2013-Final_Report.pdf

broaden the range of research eligible to apply for funding, also recognised the important role played by independent expert review of funding applications. It is a practice adopted by the leading international funding agencies including the US National Institutes of Health, European Commission, Wellcome Trust, Gates Foundation and the US Department of Defence.

In a recent development, the Global Research Council,² backed by the US National Science Foundation, issued a *Statement of Principles for Scientific Merit Review* which states:

Rigorous and transparent scientific merit review helps to assure that government funding is appropriately expended on the most worthy projects to advance the progress of science and address societal challenges.

The *Statement of Principles on Scientific Merit Review* was developed with two objectives:

- the worldwide agreement on core, high-level principles should foster international cooperation among funding agencies that support the scientific research community; and
- for those countries that are developing new funding agencies, the principles provide a global consensus on the key elements necessary for a rigorous and transparent review system.

While this best practice approach should be adopted by the MRFF, it need not necessarily utilise the existing NHMRC framework. It might productively do so, however, in the same way that the State Cancer Councils, for example, utilise the NHMRC processes for quality review whilst reserving final investment decisions for their respective Boards.

Recommendation

The University recommends that the Bill acknowledges the centrality of independent, expert review of research applications as best practice in the transparent, efficient allocation of competitive research funding and require that it be adopted for allocating grants through the MRFF.

Broad, inclusive definition of ‘medical research’

The Bill would be enhanced if ‘medical research’ is defined across a broad disciplinary base so that critical multidisciplinary research is recognised as one important avenue to drive medical advances.

² The initiative was auspiced by the US National Science Foundation, which said on release of the Principles: “The merit review process, as practiced by NSF and other leading funding agencies, is recognised as an essential tool for evaluating scientific research. In releasing a set of common principles, the Summit participants identified best practices and standards that will cultivate multinational research cooperation among countries and across continents”. With an annual budget of \$7.3 billion (FY 2015), the NSF is the funding source for approximately 24 percent of all federally supported basic research conducted by America’s colleges and universities https://www.nsf.gov/news/news_summ.jsp?cntn_id=124178

Currently the Bill could inadvertently exclude those non-medically related disciplines such as physics, engineering, information technology and mathematics (and also allied health disciplines) that are part of the contemporary approach to medical research.

Medical physics and branches that will impact the translation of medical research, such as informatics and computations, are important to the next generation in health advances. For example, much of the imaging revolution has come out of physics and engineering which is revolutionising treatment of neurological disorders, deep brain stimulation for Parkinson's disease, and Cochlear implants.

This powerful trend advancing new frontiers in medical research was detailed in a paper published by the Massachusetts Institute of Technology³ which describes an evolution of new interdisciplinary research areas that will require disciplinary integration to derive maximum value from the potential.

Using the term *convergence* to describe the evolution, MIT explains how it will enable the innovation necessary to meet the growing demand for accessible, personalised, affordable health care. It will also be a mechanism that will boost the commercial returns from research.

To ensure the MRFF is able to facilitate contemporary best practice in medical research the University would suggest it adopt a definition of medical research such as:

Medical research can draw on many disciplines and is broadly defined as the investigation into the causes, prevention and treatment of disease that includes, but may not be limited to, an understanding of fundamental biological processes, applications of basic research or translational research that generate new knowledge in the fields of biomedicine, clinical medicine, trauma, public health or allied health sciences.

Recommendation

The University recommends the Bill adopts a broad, inclusive definition of 'medical research' to reflect the multidisciplinary nature of modern medical research.

Transparent reporting

The integrity of the MRFF grant making process will be enhanced by transparency. Therefore, applications should be called for and made through a public, competitive process with all funding decisions published online at regular intervals in any given year.

Recommendation

The University recommends that the Bill require the public reporting of successful grant applications at regular periods throughout the year.

³ Massachusetts Institute of Technology, *The Third Revolution: The convergence of the life sciences, physical sciences and engineering*, January 2011 <http://dc.mit.edu/sites/dc.mit.edu/files/MIT%20White%20Paper%20on%20Convergence.pdf>

The University offers these suggestions to enhance the operation of the MRRF, to ensure it is established on a robust foundation that can support the long-term impact on the health and wellbeing of Australians for decades to come.

To discuss this submission, or to request further information, I can be contacted on jamesm1@unimelb.edu.au or (03) 8344 3238.

Sincerely



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