

February 5, 2016

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Department of the Treasury  
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**Re: Pre-Budget Submission**

Since 1961, the Australian Society for Medical Research (ASMR) has provided advice to government on behalf of the health and medical research sector. The ASMR represents more than 1700 direct members and an additional 120,000 Australians through our affiliated professional societies, medical colleges and corporate/disease related foundation members.

Advice from ASMR is always evidence based; our goal is to assist government in developing policies that allow our country's highly skilled health and medical research workforce to maintain and expand their contribution to the health and economic wellbeing of all Australians.

**The health science and innovation economy will collapse if the workforce is not retained**

- This country faces an **imminent brain drain** from its health and medical research sector.
- In the absence of a stable research ecosystem, **Australia's best and brightest are being lost.**
- Australia is in danger of squandering its opportunity to capitalise on years of investment into our highly qualified and talented workforce -the enabler of research capacity and improved health.

The Government has recently outlined its vision for innovation, pledging to turn scientific discoveries into improved health outcomes and economic returns, strengthen our standing as one of the global leaders in the field of medical research, and generate an "Ideas Boom" to drive the Australian economy into the future. However, the realisation of this vision will require sustained investment. In terms of global leaders and as a comparator, Australia's current investment into National Health and Medical Research Council (NHMRC) is 0.6% of the total Health spend, while US investment into the National Institutes of Health (the US equivalent of the NHMRC) sits at 4.5% following the annual injection of \$117B since 2012<sup>1</sup>.

Intrinsic to the Government's innovation strategy is the scientific endeavour and momentum of discovery generated by the research workforce. **The people and projects generating this momentum are irreplaceable.** Should the current vibrant and highly qualified research community continue to suffer attrition due to lack of opportunity, its renewal and restoration would take decades and be enormously costly on many levels.

The very nature of the research endeavour relies on the inspiration, imagination and perspiration of people with ideas and vision. Breakthrough science – the kind of health and medical research which has served Australia so well – can only occur where our researchers, the human capital which produces intellectual property, are supported. Their talents and vision are not replaceable.

**The health and medical research sector faces a variety of serious constraints and challenges:**

(i) Over the last 5 years, NHMRC, the peak agency for supporting Australia's health and medical research innovators (contributing to over 70% of health and medical research workforce salaries) has been under considerable pressure to maintain its capacity to sustain research. For example, NHMRC currently funds less than 1 in 7 project grant applications (13.7 % in 2015, a historical low), compared to a funding rate of over 1 in 4 a decade ago (27% in 2007). This decline in funded rates has resulted in many innovative research ideas, judged worthy of funding by world standards, going unsupported.

(ii) The workforce is at serious risk as evidenced by the following incontestable data.

- There has been a 16% loss of human capital (FTE researchers) from the major NHMRC Funding Scheme (Project Grants) within the last 3 years.
- The total number of researchers in the leadership tier of the NHMRC Fellowship Scheme (Senior and Principal Fellow) has fallen by an astounding 25% since 2011. This represents not only a loss of highly qualified, talented and motivated individuals in the short-term, but also a devastating loss of leaders necessary to train and develop the next generation of intellectual capital.
- Nearly a quarter of the health and medical research workforce is uncertain as to whether or not they have employment in 2016, as evidenced from an ASMR workforce survey conducted in November 2015.

Taken together, these losses to the health and medical research workforce equates directly to decreased productivity and innovation performance. This disabling loss of intellectual capital will have a profound impact on Australia's ability to respond to future health challenges, which in turn will cripple the government's ability to exploit the proven exceptional health and economic returns it has enjoyed from past investment and negate future progress.

**NHMRC has an unparalleled track record in supporting the health and medical research workforce** – a workforce that is the engine room behind advances in health outcomes. We know investing in NHMRC makes 'good economic sense' as it has proven positive returns; in the last decade funding into the NHMRC has averted nearly \$6 billion in health system costs due to increased well-being<sup>2</sup>. ***It is crucial that there is an immediate injection of \$300M into the Medical Research Endowment Account (MREA) to stem the loss of intellectual capital and underpin predicted benefit from the Medical Research Future Fund (MRFF)***<sup>3</sup>. ASMR requests this investment into the NHMRC for 2 inter-related key reasons. (1) To maintain the capacity to undertake research – an endeavour only achieved by protecting our intellectual capital and, (2) to mitigate the escalating and unsustainable cost of health expenditure by improving the health and well being of Australians, which in turn benefits the economy as a direct result of increased productivity growth.

## KEY MESSAGES

**The health science and innovation economy will collapse if the highly qualified health and medical research workforce is not retained** – this most valuable asset underpins Australia's health system and economy and is not easily replaced.

**Australia is facing an imminent brain drain as evidenced by**

- a quarter of the health and medical research workforce are uncertain as to whether they have employment in 2016.
- 16% of the workforce has been lost from the NHMRC Project Grant Scheme in the last 3 years.
- a 25% decrease in the total number of researchers in the leadership tier of the NHMRC Fellowship Scheme.

**Replacing lost intellectual capital is costly.** Replacing 25% percent of the PhD-qualified health and medical research sector would cost Australia \$570 million in 2009 dollars, based on estimates of \$140,00±57,000 per 4 year PhD (excluding the cost of supervision and scholarships)<sup>4</sup>.

**Investing in the NHMRC to support the workforce has proven positive returns** and averted almost \$6 billion in health system costs over the past decade<sup>2</sup>.

**NHMRC funded rates are at an historic low.** Only one in seven Project Grants were funded in 2015; ie. six Projects, if funded, that could be the next 'Penicillin'.


Health and prosperity are worthy goals for any country to pursue; independent data clearly demonstrate that investment into the NHMRC provides exceptional returns in both these areas<sup>2</sup>. Our evidence indicates that we are at a critical point in history; without an immediate injection of investment into the NHMRC there will be widespread and continued attrition of our valuable workforce, with Australia facing the prospect of a long 'dark age' for health and medical research. We urge you to take this opportunity to ensure the Government's ability to capitalise on past and current investment into the sector.

Supporting the workforce by investing in NHMRC makes 'sound economic sense' and we urge you to consider the implications arising from the fact that the sector's workforce and intellectual capital are not a renewable resource in the short term. Immediate investment into the NHMRC's MREA of \$300M, can put the sector back on a sound footing and enable the realisation of benefits accrued for both health and economic returns. Injection of \$300M is an important first step into a long term strategy to generate a sustainable health and medical research ecosystem to achieve expenditure of 3% of the Health budget by 2025<sup>6</sup>; that in broader terms will enable the full integration of research into the healthcare system.

Sincerely,



Dr Sarah Meachem  
President



Dr Phoebe Phillips  
Immediate Past President



Dr Daniel Johnstone  
President Elect

1. The Journal of the American Medical Association (JAMA). 313;174-189, 2015.
2. Deloitte Access Economics Returns on NHMRC funded Research and Development. In: 2011, <http://www.asmr.org.au/Publications.html>
3. Extrapolated returns from investment into the MRFF:2014 [http://www.asmr.org.au/ASMR%20Deloittee%20Report\\_MRFF.pdf](http://www.asmr.org.au/ASMR%20Deloittee%20Report_MRFF.pdf)
4. Schofield DJ, Meachem S, West C, Kavallaris M, Callander EJ. A crisis in the making? Education, ageing populations and the future of the medical research workforce. Med Educ. 2011 45(2):200-7.
5. Access Economics. Exceptional returns: The Value of Investing in Health R&D in Australia II. In: 2008, <http://www.asmr.org.au/Publications.html>
6. Extrapolated returns on investment in NHMRC in Medical Research 2012 <http://www.asmr.org.au/ExtrapolatedNHMRC12.pdf>