

## **The Australian Society for Medical Research Submission:**

### **Medical Research Future Fund (MRFF)\_Consultation for the Development of the Australian Medical Research and Innovation Strategy and related Priorities**

The health and medical research community is currently in an unenviable and vulnerable position due to five years of static investment into the National Health and Medical Research Council (NHMRC) Medical Research Endowment Account (MREA). This has placed unprecedented pressure on the health and medical research workforce and its capacity to respond to the call for innovation and translation – key priorities of the Medical Research Future Fund (MRFF). These challenges prompted a timely Structural Review of the NHMRC grants program in order to streamline the process and adapt to current circumstances. Given the outcomes of this review are yet to be determined, it is difficult to make recommendations on the strategy for the MRFF, since the success of the MRFF is reliant on adding value to the NHMRC program, with the ultimate aim of improving the health and wellbeing of all Australians. Therefore, our recommendations are based on current gaps in the NHMRC as a result of static government investment. ASMR's recommendations for the Australian Medical Research and Innovation Strategy and related Priorities, which are intentionally broad, will provide substantial and immediate benefit to the health and medical research workforce and increase industry development and commercialisation of clinically translatable outcomes. We emphasise that these are ASMR's recommendations for the initial round of MRFF priorities; these will need to be revisited following release of the NHMRC structural review to avoid possible unintentional negative impacts.

### **Recommendations for the Initial Round of the MRFF Priorities**

Given the malaise within the health and medical research workforce, the initial disbursements from the MRFF must make a positive, profound and immediate impact. Specifically, we recommend MRFF investment into:

1. NHMRC program schemes that complement key translational objectives of the MRFF, such as Development and Partnership Grant schemes.
2. Training and education of the health and medical research community to encourage cultural change and the development of new skill sets that facilitate collaboration across industries and scientific disciplines, thus improving innovation performance and translational outcomes.

### **Gaps in Current and Future Health and Medical Research System in Australia:**

1. Members of the sector are not well equipped to meet the remit of the MRFF and maximise outcomes
2. Development and partnership investment is a small part of the health and medical research pot

## **Immediate Strategy to Bridge these Gaps:**

### **A) ASMR recommends investment in NHMRC Development and Partnership grant schemes using MRFF funds.**

NHMRC Development and Partnership grants directly meet the MRFF goal of translating research findings into clinical practice and improving the health and wellbeing of all Australians.

The NHMRC provides an established and respected mechanism for disbursing research funds, including substantial independent expert review and grant management capabilities and a well-versed relationship with the Minister's Office. Taking advantage of this existing system will expedite the allocation of MRFF funds to the most meritorious proposals, thereby minimising any delay in achieving the aims of the MRFF. Further financial support (independent of MRFF disbursements i.e. additional governments funds) to the NHMRC would be required to offset the additional administrative burden of managing these disbursements, however this would be negligible compared to the cost of establishing a new administrative system.

It is expected that MRFF investment into these complementary programs will alleviate some of the pressure on the NHMRC MREA, which is currently operating with funded rates at historic lows and a rapid decline in the number of full-time equivalent funded positions. This will provide increased opportunity for expert researchers and restore some stability to the health and medical research community – an important step in retaining our best and brightest talent and maintaining research momentum.

ASMR provides an example of a worthy scheme that should attract investment from the MRFF, based on a very favourable track record. The NHMRC Development Grant Scheme, which funds proof of concept projects, sits perfectly within the remit of the MRFF and has been shown to be highly productive. An independent and comprehensive review of 40 completed grants in 2012 showed 6 resulted in product to market, 80% had found a commercial partner (majority being Australian biotechnology firms) and 55% were under some form of commercial development. Current NHMRC funding for this scheme is \$14M per annum; based on past success, a significant injection of financial support could be easily argued.

### **B) ASMR recommends that MRFF disbursements be invested in education and training of health and medical researchers.**

Achieving Australia's innovation vision and the objectives of the MRFF requires a broad programme that is accessible to all industry sectors and aims to improve effectiveness by encouraging industry investment in R&D. This will require researchers and industry to form productive partnerships to solve the complex health problems that transcend traditional approaches. A key ingredient for success will be the (re-)training of health and medical researchers to maximise industry links and develop partnerships that span different disciplines. However, the challenge is not simple and will require careful consideration of the optimal approaches for boosting the skill sets and leadership capabilities of the researchers, to enable them to capitalise on innovation, take products to market and improve patient outcomes. In recent times Australia has ranked poorly for innovation

performance, measured in terms of marketplace outputs commercialised in Australia. This likely reflects Australia's low rate of collaboration between research and industry sectors (one of the lowest in the OECD).

Australia's highly-skilled health and medical research workforce is underutilised by industry. Although it has a strong international reputation for quality and ideas, relative to the USA and European nations, local industry is relatively small and thus many Australian discoveries are commercialised and developed off-shore. Australia has the ability to commercialise medical products and influence medical practice, as evidenced by innovations such as the bionic ear, human Papilloma Virus vaccine, discovery of the cause and treatment of stomach ulcers, and influenza drug. Nonetheless, *despite science and innovation being the platform for Australia's future economic strategy*, a recent ASMR survey of the health and medical research sector revealed some alarming trends: *81% of respondents said that commercialisation opportunities and intellectual property exploitation was a weak influencing factor in their decision to come or return to Australia, 65% of respondents felt that they were not adequately equipped to forge links with industry and almost one in five respondents deemed linking with industry to be not applicable to them.* Clearly, effective education and training strategies need to be implemented to promote a culture where researchers embrace collaborative opportunities with industry partners and see this as an imperative of their work.

Finally, innovation occurs at the intersection of cultural and scientific divides (disciplines); the convergence of cultures, skill sets and knowledge (trans-disciplinary research conducted in large teams) is required to achieve the innovation vision. In addition, Australia needs to abandon its risk adverse culture and fear of failure if it is to pioneer the scientific breakthroughs and take them to market place with greater innovation performance. It is recommended that disbursement of funds from the MRFF will be required for training and retraining purposes in order to provide researchers the skills, leadership capabilities and opportunities to make this cultural transition. Whether these initiatives are best implemented through the NHMRC and/or the ARC via existing Fellowship schemes (including clinical development fellowships) or through newly initiated programs that create and incentivise industry and clinical partnership remains to be determined. Whatever the administrative arrangements, new skill sets will be needed in the research community to ensure outcomes that improve Australia's innovation performance and thus commercialisation prospects. In closing, these above measures will assist in building the capacity of the health and medical research sector to respond to the objectives of the MRFF when it is fully operational.