

2012 McKeon Strategic Review of Health and Medical Research Response to Consultation Paper, 31 October 2012

Executive Summary

The Australian Early Mid Career Researcher Forum commends the Strategic Review of Health and Medical Research (McKeon Review) panel for their consideration of all the issues at hand and the evidence provided. Overall, the Consultation Paper recommends initiatives and strategies that, if implemented, will result in positive change to the future of Australia's health and medical research (HMR) sector – and importantly, Australia's health and economy.

The Forum strongly supports the vision of 'better health through research'. Embedding research into the health system, facilitating collaboration through academic centres, engaging more health professionals in research and streamlining clinical trials will integrate basic, translational and clinical research, and expedite beneficial health outcomes and effective health policies. The increased focus on improving innovation and enhancing the impact of our research benefits not only Australia's community and economy, but also the HMR workforce by creating new professional career opportunities for young scientists.

In September 2012, the Forum held its first national meeting, *Science Pathways: Getting Science on the National Agenda*. Over 135 early/mid career researchers (EMCRs) engaged with their peers, Fellows of the Academy, and government, education and industry representatives. With many in HMR, EMCRs identified the key issues facing them, discussed potential solutions and developed an action plan. **Career Structure** and **Funding** were identified as the top two imperatives facing EMCRs and these align closely with the challenges and vulnerabilities identified by the Government in recent years^{1,2}. The NHMRC Postdoctoral Reference Group also identified similar issues at their first symposium, with young researchers concerned about the longevity of their careers in research. The possible solutions discussed at both meetings concur with many of the recommendations in the Consultation Paper.

The Forum appreciated that the McKeon Review Panel listened to EMCRs and considered their issues during the consultation period. Although the Consultation Paper acknowledges it is critical to effectively train and retain the current and future research workforce, **there is little detail provided** as to effective strategies to achieve this goal.

The Forum urges the panel to detail effective strategies around the following four points:

- (1) PhD Training:** develop diverse training that produces highly competitive PhD graduates who are job-ready for multiple professional career paths across different sectors;
- (2) Research Fellowships:** dedicate funding to increasing opportunities for EMCRs with new investigator grants; develop more comprehensive Track Record assessment; encourage early and mid-career researchers to apply as Chief Investigator A on grants, to allow them to establish a solid track record earlier and avoid competing with established senior researchers with extensive track records;
- (3) Research Career Structure:** develop secure, long-term paths to 'box up the pyramid' and;
- (4) Gender Equity:** develop family-friendly policies to support both men and women with carer duties, but also develop strategies to support female researchers and their scientific careers. This will reduce the loss of female talent and help retain women in scientific research.

¹ Australian Health of Science Report, Chief Scientist's Office, 2012

² Research Skills for an Innovative Future, Research Workforce Strategy, Department of Innovation, Industry, Science and Research, 2011

PhD Training, Research Fellowships, Research Career Structure and Gender Equity

These four key issues fall under the top two imperatives identified at the Forum's *Science Pathways* meeting – Career Structure and Funding. Though these issues can overlap, impact each other and fall within the scope of several of the Consultation Paper's recommendations, the Forum would specifically like to see **more detailed strategies** outlined for all four within Theme III 'Maintain Research Excellence'. Specifically, Recommendation 8:

Recommendation 8. Train, Support and Retain the Research Workforce

Actively monitor workforce shape, dynamics and people support schemes

It would be helpful if the Consultation Paper could suggest ways to monitor the workforce effectively. For example, it could be stated that universities should **track the professional careers of PhD graduates for up to 10 years** via surveys - such as those performed by Graduate Careers Australia³. Incentives could be provided by the universities and/or the Government to encourage individuals' participation in these surveys, with ongoing investment to shape and improve the monitoring process overall.

Support career entry with higher APA stipends and 'early investigator' grants focused on few total research years rather than 'new to NHMRC'

The Forum strongly supports the recommendation to increase the PhD scholarship stipend. This not only provides increased remuneration to our best and brightest students to reduce their need for part-time work and increase their standard of living, but also increases the appeal and prestige of pursuing a PhD degree. However, there is no mention of diversifying PhD training to provide additional skills such as commercialisation, IP and business management, finance and media training, to ensure graduates possess transferable skills for today's 'corporatised world'. Comprehensive PhD training programs, such as the Invasive Animals Cooperative Research Centre's Balanced Scientist PhD Program⁴, could be strongly encouraged at all universities by the Government.

Increase the number of training and career fellowships focusing on genomics/bioinformatics, health economics, biostatistics and health services research

Increased opportunities to cross-train and/or employ EMCRs in fields of greatest need are welcomed by the Forum. Within the scope of such funding, it would be prudent to also outline an effective program that could 'fast-track' existing researchers into new burgeoning fields. This would allow the retention of expertise and knowledge, while providing ongoing professional development opportunities in the latest research areas and technologies.

Provide increased flexibility of track record definitions in grant applications to encompass a broader range of research activities and contributions

Nobel Laureate Professor Brian Schmidt presented the inaugural Chuwen Keynote Address at the Forum's *Science Pathways* meeting. During his address, he said: *"We need to value employees by a range of things - more than just the number of publications, citations and h indexes. This will require the Government to judge our research institutions in the same way."*

There is opportunity to provide greater detail as to exactly which additional areas could be assessed and valued such as collaborations, teaching and education roles (at primary, secondary and tertiary levels), community engagement, innovation, science communication, secondments in other sectors (education, business, government and industry), policy advice and research, committee service and mentoring.

³ Graduate Careers Australia – surveys. www.graduatecareers.com.au/research/surveys/

⁴ Invasive Animals CRC, Balanced Scientist PhD Program www.invasiveanimals.com/research/goals/goal-11/11e1/

Retain more researchers in the system through longer grants, flexibility for career breaks or part-time work, removal of barriers to retention and funded capacity for mentoring

If implemented across all levels of academia (including early investigators as CIA), this recommendation has the potential to transform the long-term career trajectory for Australia's HMR workforce.

In his keynote address Professor Schmidt also said: *"More than half the people coming to university now are women, and yet we still provide a very unappealing career structure to almost any sensible person."*

"Despite more and more women coming into our workforce, we find today a situation where men still dominate research positions. We have a 1950s career structure in the 2010s. This is especially challenging for allowing women to stay in the workforce."

"We need to re-evaluate our career structure to accommodate the modern person."

Science cannot be turned on and off like a tap – both the scientists and the research need to be supported longer term. EMCRs call for longer grants, earlier in their research careers, to bridge the transition from postdoctoral fellow to established investigator. Longer grants for EMCRs would facilitate longer-term planning for research projects, as well as provide some job stability. Leading independent research also allows EMCRs to establish their track record earlier in their career. The Forum is surprised that there was no specific mention in the Consultation Paper of encouraging universities and institutes to establish ongoing Staff Scientist positions for senior postdoctoral fellows (such as at the Senior Scientist positions at the Florey Neuroscience Institute and the 'Team Leader' positions at the Queensland Institute of Medical Research).

As supported by the Forum and also in the NHMRC's McKeon Review submission, there is opportunity to encourage a culture shift for institutes and universities to develop positive gender equity and family-friendly policies. Several ground-breaking initiatives⁵ are available at the Walter and Eliza Hall Institute of Medical Research in Melbourne. These include competitive funds to hire a Research Assistant while a researcher is on maternity leave; assistance with childcare expenses, which could include covering childcare costs while travelling to conferences; provision of a family room for short-term visits when children need to come to work with their parents; and the Suzanne Cory Fellowship, which provides five years of funding to promote highly qualified women into the Laboratory Head role.

Increased uncertainty and enhanced competition for limited funding resources creates a nervous research environment, particularly for those who are attempting to establish an independent research career. When a scientist's primary concern is where they will get their next research dollar, their creativity is negatively impacted and they devote less time to thinking about their next discovery - resulting in reduced performance and productivity. This also fosters a more conservative approach to research, sticking to 'safer' subjects and shorter term strategies that bring only incremental advances in knowledge, rather than innovative breakthrough ideas from our best and brightest minds.

HMR Down Under: *the young scientist's perspective*

Over the past year, young scientists in HMR have amply demonstrated their energy and passion about how scientific research should be done in Australia. The Forum's vision is that all early-mid career researchers will receive the best training possible to ready them for the future, fully equipped with the knowledge, skills and support they need to overcome the challenges they will face and move forward into any professional career in science.

⁵ WEHI Gender Equity Policies www.wehi.edu.au/about_us/gender_equity/