The Australian Society for Medical Research

30th June 2005

Mr Tony Gargan
Branch Manager
Skills Analysis and Research Strategy Branch
Department of Education, Science and Training
GPO Box 9880
Canberra ACT 2601

The Australian Society for Medical Research (ASMR) is the peak body representing health and medical researchers. In addition to direct membership, ASMR represents the sector through 42 affiliated professional societies and Medical Colleges, representing some 15,000 people actively involved in health and medical research in Australia. In addition, corporate and disease related foundation memberships bring a further 100,000 Australians with an interest in health and medical research into association with ASMR. Our mission is to foster excellence in Australian health and medical research, and to promote community understanding and support for health and medical research in Australia. ASMR achieves these goals through public, political and scientific advocacy. I am writing on behalf of ASMR Board to submit comments to the audit of Science, Engineering and Technology Skills (SET).

In summary, we present our assessment that in the field of health and medical research, the current career structures do not offer sufficient support or continuity to attract or retain graduates with SET skills. As a result, many of our best and brightest students are not undertaking undergraduate or postgraduate studies in this field, and those that do are then seeking employment overseas, with no incentive to return to Australia (brain drain, not brain gain). We believe that further investment is required to develop medical research career schemes, in order to build long term capacity to meet Australia's future health and economic needs.

Yours truly,

Jacqueline K Phillips BVSc (Hons) PhD
Director and Research Careers Convenor, Australian Society for Medical Research.

The Australian Society for Medical Research ACN 000 599 235 - ABN 18 000 599 235
145 Macquarie Street. Sydney, 2000 Ph: (02) 9256 5450, Fax (02) 9252 0294
Email: asmr@world.net, Website: www.asmr.org.au Snr Executive Officer: Catherine West

Overview

Australian health and medical research has historically made a significant impact on international health gain, well-being and knowledge-based economic growth. World class achievements by Australian medical researchers, such as the development of the bionic ear, the discovery of Helicobacter pylori and its link to peptic ulcer, and ground breaking scientific research into the cause of sudden deaths in infants, have improved our quality of life and reduced the burden of disease. Investment in medical research has not only saved and improved countless lives but has also saved significant amounts of money for the Australian community. Underpinning the knowledge, health and wealth gains is a highly-trained health and medical research workforce. However, we believe there a number of barriers towards maintaining this appropriately trained workforce as we have detailed below:

Specific Responses to key themes/issues/questions of SET Audit:

1. The career paths of persons with SET qualification, including early career researchers:

In the recent Investment Review of Health and Medical Research (Grant Review), the fellowship schemes within the National Health and Medical Research Council (NHMRC) were identified as requiring refinement. A key issue for **early career researchers** in the field is the lack of job security and a clear career pathway. It was identified in the previous Wills Review that many new and developing researchers who are the potential stars of tomorrow are not given the opportunity to flourish in the current system. We believe this is still the case. Our talented SET graduates are not being attracted to the NHMRC career training scheme because entry is incredibly difficult to achieve, and those who do enter the scheme have uncertain long term-career prospects. This is the result of inadequate funding.

There is a great need to provide a career structure for medical and science researchers, especially one that provides a viable long-term career structure for our SET graduates. Medical research is already perceived by many young researchers as an unattractive option that is poorly paid and high risk. Unfortunately some of our outstanding young research students are not even considering PhD opportunities or if they do, they are not progressing to postdoctoral positions. This is largely because they cannot see a viable research career path. Whilst their peers in other careers may have achieved financial stability - they see researchers around them struggling on with little security and minimal income. Many of our best students are now rejecting the research career option as unsustainable. For those that are undertaking PhD's, many go on to postdoctoral positions overseas, where funding opportunities, personal financial reward and security are greater.

Many SET graduates in the health industry do not undertake post-graduate study and enter the work force as technicians or research assistants. The current funding system is centered on 3 year project grants and so no long-term job security is available to these individuals. Indeed, with the current project grant peer review process, many technicians and post-doctoral researchers find out in November that they have no job come January 1st.

For medical research scientists in the next phase of their careers, the career path ahead becomes even less clear. There is a large gap between early career development awards and the more senior NHMRC Fellowship scheme. The majority of researchers will fall at this first hurdle and be lost to medical research. In 2003, there was only sufficient funding for 50% of applicants ranked in the top 10% in their field internationally. These ***mid-career researchers*** are in desperate need of support at this critical time. Further investment in the fellowship scheme is clearly needed if Australia is to maintain a competitive advantage in health and medical research.

2. Higher education - Do available research career pathways cause researchers to seek alternative careers?

A teaching/research position at one of the many excellent universities around Australia is an alternative career path for medical researchers. While highly competitive, these positions may be tenured, with a well-defined career progression structure. The administrative and teaching demands of these positions restrict the time available for research in all the SET fields. Academics may thus find it difficult to compete for funding with full-time researchers.

An alternative for many of our SET graduates is to seek employment overseas. While overseas experience is an important part of scientific career development, it is important that Australia have mechanisms to attract our graduates back to Australia. NHMRC CJ Martin Fellowships provide a stipend for two years of post-doctoral overseas study and, two years of funding back in Australia. These highly competitive fellowships do not however cover direct research costs and many graduates choose to return overseas at completion of the award. At a senior level, the Australian Research Council (ARC) Federation Fellowships Scheme is an excellent mechanism to encourage highly successful Australian scientists working overseas to return to Australia. However, most eligible Australian scientists working overseas do not view Australia as a viable base for their research, due primarily to funding concerns. As a result Federation Fellowships have largely been awarded to 'locals'.

3. Whether there is need for long term capacity building in terms of SET to meet Australia's future economic needs.

We believe that the insecurities associated with funding that influence employment and career development in the medical research field have had a great impact on Young Australians' perceptions about studying science at school. This then flows through to the career choices made by those SET tertiary graduates and many of our best and brightest students are opting for alternative career pathways or seeking employment in SET fields overseas.

The health and medical research industry improves health, creates jobs and results in positive economic returns to Australia. The recent Access Economic Report (Exceptional Returns – The Value of Investing in Health R&D in Australia) showed that for every $1 invested in Health and Medical Research, there is a $5 return to Australia's Economy. For example, commercialisation of health and medical research has created over 350 companies and 3,000 to 4,000 new knowledge-based jobs since 1992. However, medical research funding in Australia is currently static. At the current level of funding, ASMR has used NHMRC data to predict that only 20% of NHMRC project grant applications will be funded in 2006. This is a decline from a 23% success rate in 2005. With the current static level of funding, this will diminish to 14% of applications in 2010.

The much welcomed doubling of the NHMRC budget ($613.7 million over 5 years) in response to the Health and Medical Research Strategic (Wills) Review is now complete and we need to build on Wills funding with further investment from both Government (State and Federal) and the private sector (industry and philanthropic). The Investment (Grant) Review of Health and Medical Research released by the Federal Government in December 2004 made a number of recommendations including a reorganisation of the National Health and Medical Research Council to administer research funds in a more streamlined and strategic fashion and an increase in Federal government investment in health and medical research to $1.8 billion per annum by 2008-9, bringing Australia up to the OECD average level of investment of 0.2% of GDP. We believe that if this funding is forthcoming it will address many of the issues raised above and contribute to the development of a 'wide & deep' workforce (eg across all health areas, biotech and socioeconomic).

References

Exceptional Returns – The Value of Investing in Health R&D in Australia, Access Economics Report 2003.

The Investment Review of Health and Medical Research 2004 (Grant Review).

Health and Medical Research Strategic Review 1998 (Wills Review)

Intergenerational Report 2002/2003.