



**Association of Australian Medical Research Institutes**

**AAMRI Submission  
to the  
Evaluation of the Knowledge and  
Innovation Reforms**

**September 10 2003**

## **Executive Summary**

The independent medical research institutes (MRIs) perform a significant part of Australia's health and medical research. They carry out some of the nation's best biomedical research, winning more than one third of NHMRC-funded research. The MRIs attract more than \$29 million per year in funding from overseas granting bodies and they make a major contribution to biotechnology development.

All this is achieved against the odds. The MRIs are excluded from multiple Commonwealth schemes in stark contrast to the collaborative principles outlined in the Health and Medical Research Strategic Review of 1999, and the National Research Priorities announced in December 2002.

The Wills Review, endorsed by Cabinet, recommended a coherent approach to infrastructure funding that involved a cooperative approach from the Department of Education, Science and Training (DEST), the Department of Health and Ageing (DHA), the States and Territories, the National Health and Medical Research Council (NHMRC) and the Australian Research Council (ARC). More than four years later, the system of research infrastructure support remains fundamentally unchanged. Biomedical research in the non-university sector is still not directly eligible for Federal infrastructure support. It is excluded from Research Infrastructure Block Grants (RIBG), the Institutional Grants Scheme (IGS) and the Systemic Infrastructure Initiative (SII) administered through DEST.

Consequently, the AAMRI institutes are running on financial thin air. Operating costs have escalated to meet ever increasing professional indemnity, auditing and compliance requirements. Major pieces of equipment, eg for IT, are on the decline, and there is not enough funding to replace them. The government's investment in health and medical research is in danger of being wasted due to poor infrastructure, which in turn affects the ability of the MRIs to be both competitive and innovative. And yet, infrastructure support from the Commonwealth to the MRIs is a marginal investment to the existing investment in health and medical research.

The State / Territory Governments do provide some infrastructure support to the independent MRIs. But this is inconsistent, complex and inadequate. An AAMRI audit of 28 MRIs found that State / Territory infrastructure support was 19% of their total annual research income, compared to the university sector, which overall, obtained 37% of total annual research income in Federal infrastructure support (Figure 1, page 8).

There is no doubt the boundary between the Commonwealth and States has hindered progress in obtaining a consensus for coherent infrastructure support. Medical research within the MRIs is also excluded from much of the DEST portfolio. The AAMRI institutes are not even eligible to receive formal recompense (RTS) for post-graduate biomedical education. This money is paid to the corresponding universities, most of which is pocketed. Meanwhile, medical researchers in the university sector are eligible to compete for NHMRC grants from the DHA, and consequently attract DEST infrastructure funding. They are also eligible for research training support for their own students.

AAMRI recommends collaborative funding initiatives won in open competition to reward the best and most innovative research. Moreover, AAMRI supports a fair, transparent and adequate mechanism for research infrastructure funding and research training support. Additional Commonwealth funding is required so that support to the universities is not diluted.

## 1. Background

The Association of Australian Medical Research Institutes (AAMRI) represents 30 medical research institutes (MRIs) across Australia. The MRIs are independent, not-for-profit organisations, closely affiliated to hospitals and universities. They have an international reputation for outstanding science, and are a major partner in commercialisation of Australian biomedical discoveries. The MRIs employ some 4000 researchers and support staff, and train more than 1100 post-graduate students each year. A recent audit of 28 AAMRI institutes found they had an aggregate budget of about \$165 million in 2002. About half of this (\$84.6 million) was derived from the NHMRC, and more than \$29 million was awarded by international funding agencies.

The AAMRI institutes carry out much of Australia's distinguished biomedical research, in almost every aspect of human health and disease. A 2001 bibliometric study of NHMRC-funded research leading to publications in 1994/1995 found the block-funded institutes at that time (the Baker Medical Research Institute, Garvan Institute of Medical Research, Howard Florey Institute, Murdoch Institute for Research into Birth Defects, Walter and Eliza Hall Institute) had by far the highest citations per publication (cpp) with a cpp rate of 19.87 compared to 14.12 for NHMRC-funded research in aggregate (*Table 3, page 13, Analysing the Journal Output of NHMRC Research Grants Schemes, Butler and Biglia, 2001*).

Recently, there has been a significant drive to promote bio-innovation and commercial enterprise within Australia by both the Commonwealth and State Governments. State Governments have supported innovation via networks such as Bio-21 and BioFirst. Commitment to innovation at the Federal level is exemplified by Backing Australia's Ability, which implemented tax concessions, the development of the Biotechnology Centres of Excellence, and the Pharmaceutical Industry Action Agenda. Backing Australia's Ability also provided \$3.1 billion over five years for national science and innovation, a further \$583 million for research infrastructure funding, and an additional \$736 million was made available to the ARC for competitive research grants. Notably, the MRIs are excluded from most of this funding. Backing Australia's Ability did also increase funding to the Cooperative Research Centre (CRC) program. Importantly, the MRIs are partners in several medical sector CRCs including the CRC for Discovery of Genes for Common Diseases, the CRC for Vaccine Technology, the CRC for Asthma, and the CRC for Cellular Growth Factors.

The selection of "Promoting and Maintaining Good Health" as one of four National Research Priorities demonstrates the importance of health and medical research in underpinning improved healthcare. Significantly, this priority acknowledges that biomedical research is spread across "many universities, hospitals and health and medical research institutes, resulting in critical mass only in limited areas of research". In addition, this priority is designed to "promote health and prevent disease through a more focussed and collaborative effort". In light of this, the Commonwealth must recognise the significant contribution of the MRIs to the nation's health and medical research. Although more than one third of NHMRC-supported research is performed in health and medical research institutes, many Commonwealth initiatives, are not inclusive of biomedical research in the non-university sector (see Table 1, page 7).

## 2. Block Funding Mechanisms (IGS, RIBG and RTS)

*Currently, there is no formal, transparent mechanism for Commonwealth infrastructure / research training support to the MRI sector. The AAMRI institutes receive some infrastructure support from the State / Territory governments but this is inadequate, inconsistent and complex. Although the MRIs train more than 1100 postgraduate students in biomedical research each year, they only obtain a disproportionately small allocation of RTS funds from tertiary institutions (see below).*

### 2.1 Infrastructure Support

Research infrastructure indirectly supports research and includes information technology, libraries, animal houses and the salaries of research support staff. Also included are building maintenance, supply and service costs, salaries for management and administrative staff, intellectual property management, and ethics and safety committees. Conservative estimates of the full costs of research indicate each dollar of direct grant support requires 70 cents in infrastructure support. Notably, a Boston Consulting Group review requested by the National Board of Employment, Education and Training in 1992 estimated that research infrastructure costs add 70% to direct research costs.

The growth of Australian medical research post-Wills means the basic infrastructure costs that support research have also increased significantly. In addition, running costs of the MRIs have risen rapidly in recent years. Increasing audit requirements and compliance costs at both management and scientific levels require more resources to meet these demands. Furthermore, professional indemnity costs have escalated for some institutes.

The current system of infrastructure funding to the research sector is inconsistent, complex and lacks transparency. Although Cabinet endorsed the Health and Medical Research Strategic Review of 1999, the recommendation that Australia develops a coherent approach to infrastructure funding (section 5.3.3) has yet to be implemented. Notably, more than half of the MRI's research income is won competitively from the NHMRC, which does not provide funding for infrastructure support. Unlike the university sector, the MRIs are not eligible to directly receive Federal infrastructure funding such as Research Infrastructure Block Grants (RIBG) or the Institutional Grants Scheme (IGS), which dovetails with RIBG.

Some State / Territory governments provide direct infrastructure support to the MRIs, but the methods and levels of funding are variable across states, and even between institutes within the same state. An audit of 28 AAMRI institutes found that in 2002

- total infrastructure funding to the MRIs from State / Territory governments was 19% of total annual research income, compared to the university sector, which overall, obtained 37% of total annual research income in Federal infrastructure support (*The Case for Infrastructure Support to the Independent Medical Research Institutes*, page 2). See Figure 1, page 8.
- thirteen of 28 MRIs surveyed did receive some infrastructure support indirectly through associations with DEST-funded universities. Overall, the MRIs obtained less than 2% of their total annual research income in infrastructure support derived from RIBG and IGS paid to tertiary institutions. Thus, currently, total infrastructure support to the independent MRIs is about 21% of total annual income for research.

- the infrastructure component passed on to the MRIs from tertiary institutions varied with individual agreements. In fact, three institutes who submitted grants through a university had not even been advised on what basis they received their infrastructure allocation (*The Case for Infrastructure Support to the Independent Medical Research Institutes, page 4*).

Given the Federal national research priority of "Promoting and Maintaining Good Health", such inequity in infrastructure funding to the MRIs is unacceptable. Clearly, there is an urgent need for a new system of infrastructure funding to address the current deficiencies in infrastructure support across the entire research sector. Commonwealth infrastructure funding linked to competitive research grants would promote research excellence and provide a transparent, accountable mechanism for research infrastructure support. As a short-term measure, Federal infrastructure funding could be linked to NHMRC grants at the current rates received by the university sector, irrespective of whether the administering institution is a university or MRI.

## **2.2 Research Training Scheme (RTS)**

The AAMRI institutes provide research placements for more than 1100 post-graduate students enrolled through several major universities. The MRIs not only provide a research training environment but play the major role in supervising students.

However, the MRIs are not eligible to directly receive Federal RTS funding and there is no clear-cut mechanism for funding to flow from the university sector to external organisations. Currently, institutes receive a fraction of RTS funds from the universities, on the basis of individual agreements. This process lacks uniformity and is inequitable, given these students are trained principally within the MRIs.

## **3. Health and Medical Research and National Innovation**

*The MRIs are also excluded from Commonwealth initiatives that directly aim to promote innovation. This is detrimental to the national research effort's ability to target commercially promising research and contribute to biotechnology development in Australia.*

Currently, more than one third of NHMRC-supported research is performed in health and medical research institutes. In addition, a significant proportion of Australia's commercial output originates from research in the MRIs.

The exclusion of the AAMRI institutes from Commonwealth block funding schemes such as RIBG and RTS is seriously threatening their ability to be innovative and competitive. Particularly poor infrastructure support to the MRIs has a number of severe consequences. Research output is limited and the gains of Wills are not reaching their full potential. Innovative capacity is also restricted because of declining facilities that are vital for cutting-edge research. It is increasingly difficult for MRIs to function, operating costs often exceed their ability to raise support for infrastructure. Furthermore, the growth of some MRIs will soon be limited as they will be unable to accept additional grants that do not provide infrastructure support.

Backing Australia's Ability largely ignored the role of the independent MRIs in the nation's health research. The AAMRI institutes are also excluded from a number of Commonwealth schemes aimed at enhancing innovation, such as the AusIndustry Preseed Fund (PSF) Program. This contrasts with the NHMRC Development Grants Scheme, which is open to the university

sector as well as the MRIs. Omitting MRIs from the PSF Program not only undermines the interdisciplinary foundation of medical research but counters the recommendations of the Health and Medical Research Strategic Review, which proposed stronger incentives for collaboration. In addition, barring the MRIs from the PSF Program could potentially hinder investment in intellectual property because of joint appointments between universities and the MRIs.

The innovative capacity of the nation's health and medical research would be improved by Commonwealth initiatives that support partnership across the research sector. A level playing field that promotes collaboration is essential for high quality, internationally competitive research.

#### **4. Recommendations**

AAMRI recommends:

##### **1. Federal funding initiatives that promote collaboration across the research sector**

(a) This should include eligibility of the MRIs to the PSF Program

##### **2. A bipartisan approach to government that supports the research sector**

(a) This would include a cooperative approach to resolving incoherent and inadequate infrastructure funding to the independent MRIs

##### **3. Appropriate Federal infrastructure support that includes the independent MRIs**

AAMRI proposes the following strategy for infrastructure funding:

(a) The Federal Government should provide infrastructure support on Federal grants

(b) State and Territory Governments should provide adequate infrastructure support on non-Federal grants and State-by-State initiatives

(c) NHMRC fellowships should be included in the strategy, with a component for both instrumentation and administration of the fellowship

(d) State / Territory infrastructure support to the MRIs must not be reduced

(e) Infrastructure support should be paid directly to the administering institution

(f) Additional funding will be required so current funds to the universities are not diluted

##### **4. Research training support that recognises the significant contribution of the MRIs to post-graduate biomedical education.**

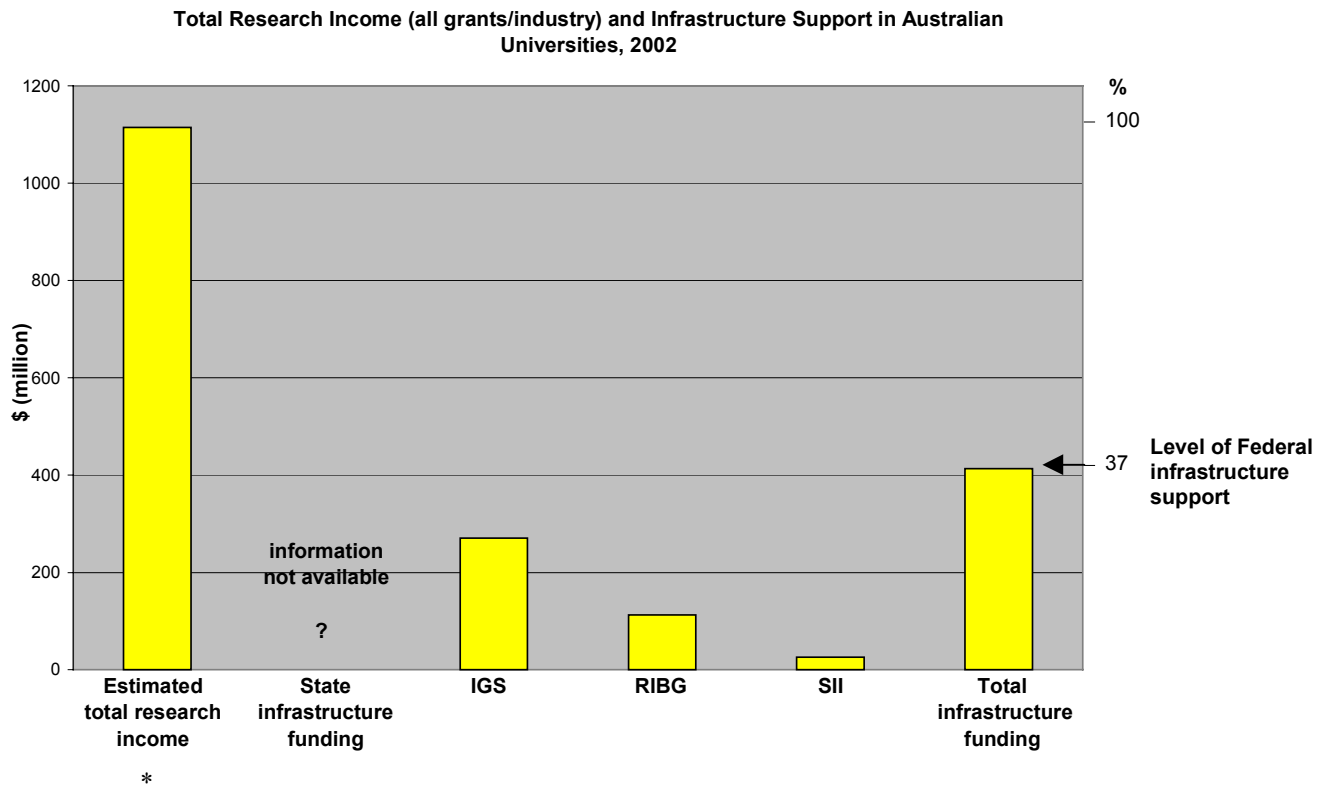
(a) A national formula should impart a fair proportion of RTS funds to the institution with primary responsibility of the student

	<b>MRI Sector</b>	<b>University Sector</b>
NHMRC funding	+	+
ARC funding	-/+	+
CRC	+	+
RIBG	-	+
IGS	-	+
SII	-	+
RTS	-	+
PSF Program	-	+
State infrastructure funding	+	-/+

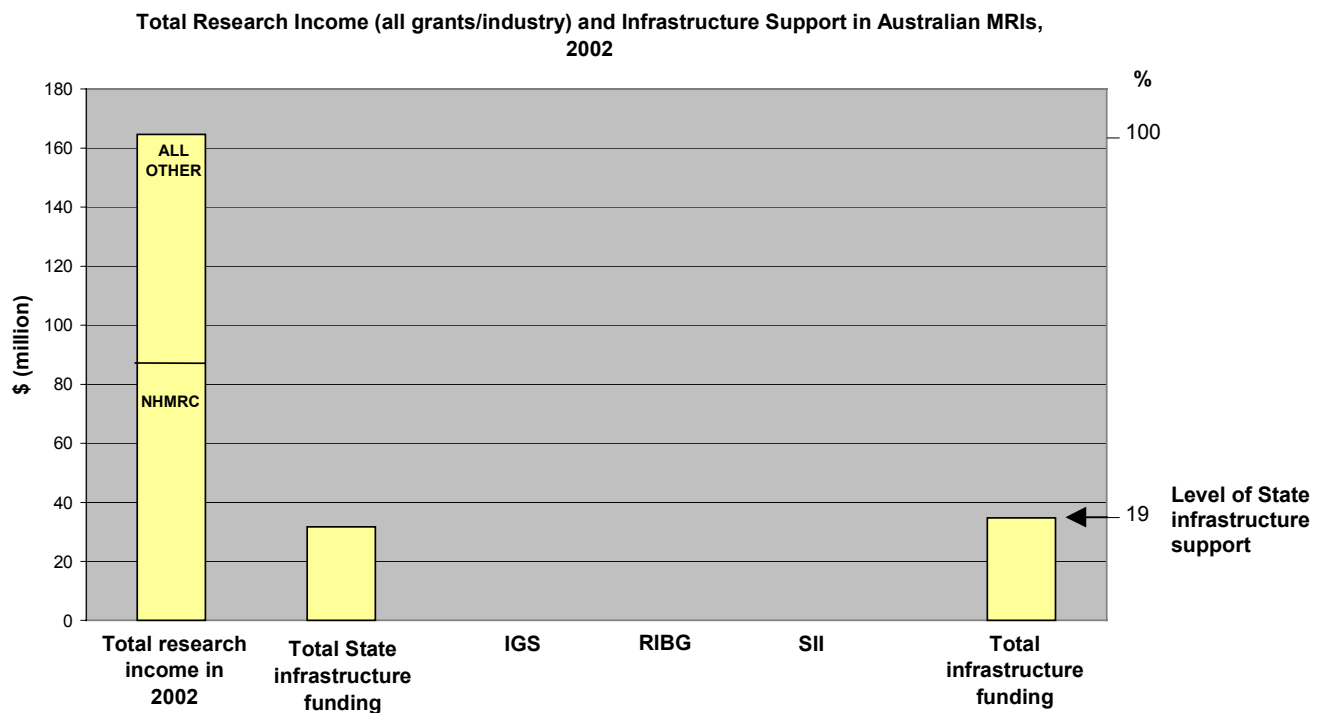
**Table 1.** Eligibility of the MRI and University Sector to Commonwealth initiatives and State infrastructure funding.

*CRC Cooperative Research Centre Program; RIBG Research Infrastructure Block Grants; IGS Institutional Grants Scheme; SII Systemic Infrastructure Initiative; RTS Research Training Scheme; PSF Preseed Fund Program*

**A**



**B**



**Figure 1**

(A) Graph shows total annual research income and infrastructure support in Australian universities in 2002. Federal infrastructure support is 37% of total annual research income.

\* Estimate derived from "Key Statistics on Higher Education November 2002" by the Australian Vice-Chancellors Committee. In 1999, total income was \$914 million and had increased by \$63 million from 1998.

(B) Graph shows total annual research income and infrastructure support in 28 AAMRI institutes in 2002. State infrastructure support is 19% of total annual research income.

*RIBG Research Infrastructure Block Grants; IGS Institutional Grants Scheme; SII Systemic Infrastructure Initiative*