

**INDEPENDENT REVIEW OF THE  
NHMRC RESEARCH FUNDING PROCESS**

**23-25 OCTOBER 2007**

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## 1. EXECUTIVE SUMMARY

The Independent Review of the funding processes of the National Health and Medical Research Council (NHMRC) was conducted from October 23 to October 25, 2007 in Canberra.

There have been extensive changes worldwide in the pace, cost and definition of health research. These changes are driven by a mix of new technologies, convergence of many disciplines and altered public expectations. Within Australia there have been additional issues and changes impacting on NHMRC. The NHMRC was established as an independent statutory authority in 2006, with a broad mandate. This structural change was in response to the Investment Review of Health and Medical Research – Sustaining the Virtuous Cycle for a Healthy, Competitive Australia<sup>1</sup>.

The broad mandate for NHMRC requires it to operate across a wide range involving biomedical and clinical research, health services and public health research and ethics. To achieve the best balance in addressing all of these areas, difficult decisions must be made and provision of funding prioritised. Australia has seen a three to four-fold increase in funding for medical research over seven years to accommodate this range of responsibilities but this has resulted in a requirement for NHMRC to undergo organisational change to make the best and most efficient use of its funds.

The Independent Review Panel (IRP) recognises that organisational change requires time and that many change processes have already been initiated by the new CEO, Professor Warwick Anderson AM. However, based on the current operations of the NHMRC, the IRP has identified some priority areas for action which, if adopted, it believes will strengthen NHMRC structurally and ensure that it is positioned to achieve world's best practice in research funding processes. The IRP has therefore made recommendations across a range of different areas, as summarised below.

In presenting these recommendations, the IRP would like to highlight three key factors that it believes would allow NHMRC to deliver optimally on its broader mandate. These emerge as common themes in the recommendations below and are:

- The need to increase staff levels in many areas, including appropriately qualified scientific staff to manage the grants process, as well as staff with expertise across the full range of areas for which NHMRC is responsible.
- The need to increase internal expertise in analysis and planning, which is responsible for a lack of robust processes for determining, implementing and reviewing the organisation's priorities for use of its funds.

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<sup>1</sup> John Grant et al., Sustaining the Virtuous Cycle for a Healthy, Competitive Australia, Investment Review of Health and Medical Research, 2004

- A lack of a suitable integrated information technology (IT) system for use in all aspects of funding processes, as well as for collection and analysis of data on NHMRC's programs.

### *Strategic Directions and Resource Allocation*

#### **Recommendation 1:**

That the CEO as a matter of urgency prepare an implementation plan for the next 12 months, with indicative information for the subsequent two years, setting out priorities, activities and resource allocation in order to implement its Strategic Plan. This plan should be presented for discussion and approval to the Research Committee (RC) and Council.

#### **Recommendation 2:**

That the implementation plan recognise, accommodate and be consistent with the broad landscape of structural and thematic priority areas relevant to NHMRC activities, noting specifically how these priorities are addressed within the range of NHMRC programs.

#### **Recommendation 3:**

That the CEO, working with NHMRC staff and Committees, develop an information-driven process for strategic allocation of resources across NHMRC activities, programs and priorities in the short and longer terms as an integral part of strategic and implementation planning. This may require addition of further expertise to the NHMRC staff.

### *Organisational Considerations*

#### **Recommendation 4:**

That the CEO work with the Chairs of the Council and the RC as well as their members to maximise their value in providing timely, meaningful and actionable advice by clarifying and strengthening their roles, and ensuring the development of work addressing NHMRC strategic priorities.

#### **Recommendation 5:**

That as part of the general re-organisation and development of the NHMRC staffing (a recurring theme within this report) appropriately qualified senior staff be allocated specific responsibility for the Council and Committees, ensuring that briefing papers are prepared and follow up actions carried out to ensure most effective operations of these advisory groups.

*Knowledge Translation*

**Recommendation 6:**

The IRP views knowledge translation as an integral, explicit and important component of the NHMRC's mandate and therefore recommends that the NHMRC develop a robust knowledge translation strategic plan. That plan should take advantage of the integration of the National Institute of Clinical Studies (NICS) into the NHMRC.

**Recommendation 7:**

That the NHMRC closely examine knowledge translation programs in other countries that have placed particular emphasis in this area (e.g. the Netherlands, Canada, the United Kingdom) to ensure implementation of best practice.

**Recommendation 8:**

That, as part of developing the knowledge translation strategic plan, NHMRC fully engages and consults with all stakeholders in this process, including the research community, caregivers, public health officials, policy makers and the private sector.

**Recommendation 9:**

That once a knowledge translation strategic plan is developed and approved, a detailed implementation plan, including costing and an evaluation procedure, supported by expert senior staff within the NHMRC, should be put in place.

*Partnerships*

**Recommendation 10:**

That the NHMRC establish a Partnerships Group within the organisation to facilitate partnering activities with others whose aims overlap with those of the NHMRC, with the objectives of both increasing the effectiveness of funding distribution and ensuring that partnerships appropriately advance strategic goals.

*Peer Review Mechanisms*

**Recommendation 11:**

That NHMRC examine and adapt the best features from other national and international peer review policies and processes to address perceived deficiencies in the current application and review processes. Qualities they should be incorporated include a more streamlined and simplified application and review process with consistency from year to year, transparent selection of review panels and reviewers and integral use of IT.

**Recommendation 12:**

That an increased proportion of NHMRC staff should have a strong scientific background to enable internal staff to take ownership of the peer review process and drive analysis and evaluation.

**Recommendation 13:**

That a high priority should be given to funding, developing and implementing a state-of-the-art IT system to handle all aspects of the application and review process, increasing efficiency for applicants and providing a considerably accelerated process for the NHMRC. Ideally this system should draw from and adapt a system already being used successfully by other funding agencies, whether in Australia or overseas.

**Recommendation 14:**

That NHMRC consider establishing *ad hoc* Specialist Review Panels to assess multi-disciplinary, complex trans-disciplinary and emerging technology applications as well as applications where apparent or perceived conflicts of interest exist.

**Recommendation 15:**

That once Recommendation 13 has been implemented, NHMRC consider the option of calling for applications in at least two rounds per year. If this approach is adopted, the NHMRC should analyse whether the applicant response/rebuttal process has any impact on funding decisions and, if not, whether it should be abolished.

*Building a Better NHMRC*

**Recommendation 16:**

That NHMRC seek external advice to assist it in planning and building an organisational structure which is appropriate for fulfilling its strategic objectives and for making best use of its expert advisory structures.

**Recommendation 17:**

That NHMRC strengthen its general infrastructure, particularly for business systems, IT and communications capabilities. The enhanced system should integrate not only with the assessment application process but also seamlessly with systems supporting data collection and analysis and facilitate planning and reporting processes.

**Recommendation 18:**

That this report be made public and that the health and medical research community, as well as other stakeholders, be invited to provide comment both on the report and the proposed follow-up actions.

*Building on Previous Reports*

**Recommendation 19:**

That the NHMRC continue to utilise the wisdom contained in reports from previous reviews of the health and medical research sector, and ensure that both the recommendations from these reviews, and internal papers developed in response to them, form an important resource for NHMRC as it develops and implements its plans in the short and medium term.

## 2. PURPOSE AND BACKGROUND

The Independent Review of the National Health and Medical Research Council (NHMRC) Funding Processes was initiated by the NHMRC CEO, Professor Warwick Anderson AM, in 2007 as part of his response to the Statement of Expectation (SOE) from the Minister of Health and Ageing. Professor Anderson's Statement of Intent (2006-2007) (SOI in Appendix D) describes his intent to subject research funding processes to international scrutiny through an independent international review to ensure continued world's best practice.

The Review was also proposed in the *Strategic Plan 2007-2009* as a mechanism of action under Key Strategy "Improve Research Funding Processes" within Objective 1 "The Best and Most Relevant Research". In the Strategic Plan the Review is referred to as an International Review.

The purpose of the Independent Review was outlined in the Request for Tender (issued in June 2007) for a Consultant to facilitate the review.

The purpose of the Independent Review is to provide advice to the CEO on:

1. The NHMRC's research support strategies and peer review processes in relation to international best practice in health and medical research funding organisations.
2. Any aspect of NHMRC processes that may unintentionally disadvantage particular research sectors, groups or philosophies.
3. Emerging issues, techniques and technologies that may improve efficiencies in current processes, without compromising the quality.

The scope for the review included international analysis and comparisons of NHMRC strategies, plans for targetted investment, funding mechanisms and vehicles (for people, ideas and infrastructure) and the documents and processes associated with the various funding mechanisms.

The scope specifically excluded:

1. Analysis of governance requirements and organisational structure.
2. Measurement of efficiency, effectiveness, outputs and return on investment of previously funded research.
3. Knowledge management and transfer.

4. Communication strategies and partnerships with stakeholders.
5. The work of the other Principal Committee of NHMRC (i.e. the Australian Health Ethics Committee).
6. NHMRC's Government appropriation.

The CEO proposed a number of areas of key focus for the review:

1. Alignment of the NHMRC schemes to support research, people and infrastructure (particularly in regard to its major funding vehicles) with NHMRC's Strategic Objectives.
2. Processes for peer review (such as panel selection, the methods of gaining peer review comment, scoring and ranking) and the ability of these processes to select research to support NHMRC's Objectives. This includes the identification of excellence through processes that are fair, transparent and free from bias.
3. Support mechanisms for biomedical science, clinical science, health services research and public health research.
4. Support of Australian researchers at various stages of their research careers and the NHMRC's effectiveness in building Australia's research workforce.
5. Ways of conducting effective and fair peer review of complex research areas, such as multi and trans-disciplinary research, multi-party clinical trials, research supported by other funding bodies (especially international bodies) and rapidly emerging areas of research.
6. International trends in peer review about which NHMRC should be aware.

### 3. REVIEW APPROACH

The members of the Independent Review Panel (IRP) were selected and invited to participate in the Review by the NHMRC CEO, Professor Warwick Anderson. The IRP consisted of:

- Professor Alan Bernstein (Chair), President, Canadian Institutes of Health Research.
- Professor Toni Scarpa, Director for Scientific Review, National Institutes of Health.
- Dr Marilyn Sleigh, Life Sciences Strategic Consultant and former Managing Director of biotechnology company EvoGenix Ltd.

Brief biographies of each panel member are provided in Appendix B.

The Review was facilitated by Growing Your Knowledge Pty Ltd, (GYK), a healthcare and biotechnology consultancy firm retained by the NHMRC.

The IRP met at the NHMRC offices in Canberra, Australian Capital Territory (ACT) from Tuesday October 23 to Thursday October 25, 2007. Dr Anne Fletcher and Dr Lisa Selbie, consultants from GYK, attended all sessions of the meeting, provided secretarial support, and liaised with NHMRC staff.

GYK undertook the background research for the Review, including web-based searches, the gathering of relevant information from NHMRC and its Research Committee as well as from other sources and collated and analysed the material.

Several weeks prior to the Review, briefing materials were prepared by GYK, approved by the CEO and sent to panel members. The briefing materials included the following documents:

- Briefing Information 1: A summary of key issues and background information prepared by GYK.
- The NHMRC Act 1992.
- The Statement of Intent (2006-2007) by the NHMRC CEO.
- The NHMRC Strategic Plan 2007-2009.

- The Minister of Health and Ageing's Statement of Expectations<sup>2</sup> (3 August 2007).
- The NHMRC Research Funding Facts Book (May 2007).
- The NHMRC Project Grants Peer Review Guidelines.
- Changes to NHMRC Project Grants Peer Review Process for 2007.
- Short Descriptions of the Key NHMRC Funding Vehicles.

A further set of materials and papers was prepared by GYK, approved by the CEO and made available to members of the IRP in Canberra, ACT. These papers included a second and more detailed briefing document prepared by GYK (Briefing Information II), background information on the NHMRC structure and leadership, detailed agenda papers and a pack of printed public information provided by the organisation. Reference materials were also assembled and provided for ready access in the Meeting Room. Further documents were provided to the IRP by NHMRC staff (upon request) during the Review process. Full details of all the documents viewed by the IRP are provided in Appendix F.

During the three days of the meeting the Panel consulted with a variety of personnel including Professor Anderson (the CEO), Professor Michael Good (the Chair of the Council), Professor James Best [the Chair of the Research Committee (RC)], several members of the RC, Professor Margaret Sheil (the CEO of the Australian Research Council (ARC) and senior members of NHMRC staff. The full list of those persons consulted is provided in Appendix C.

Professor Anderson made a detailed presentation to the IRP outlining his objectives in initiating the Review, provided some recent history of the organisation and identified a number of issues which were relevant to the IRP's deliberations. Professor Anderson also outlined the manner in which he intended to seek further input from stakeholders once the Report was finalised and he had formulated his response on behalf of NHMRC.

The Panel drafted a report and this was provided to Professor Anderson in draft form for review on 28 November 2007.

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<sup>2</sup> The CEO's Statement of Intent (2007 to 2008) had not been concluded at the time of the Review.

#### 4. CHAIRMAN'S PREAMBLE

Health and medical research is undergoing a wide variety of changes worldwide. Of course, Australia is not immune to these changes. The pace and nature of these changes presents a particular challenge for NHMRC, as Australia's premier organisation for fostering internationally recognised medical research and translating this to improved health outcomes for Australians.

Globally, new technologies, the size of the health research community, the costs of health research, public expectations, and the convergence of many disciplines have transformed the pace and nature of health research. Within Australia, changes specifically impacting on the NHMRC include the government's broad mandate for the NHMRC, the establishment of the NHMRC as an independent statutory authority in 2006, the recruitment of Professor Warwick Anderson as the CEO, and the three to four-fold increase in the NHMRC's budget for research funding over the past seven years (due in part to two recent reviews of the Australian Health and Medical Research Sector<sup>3,4</sup>). For all these reasons, this is a timely opportunity to examine the policies, processes and future directions of the NHMRC.

There have been challenges resulting from the separation of the NHMRC organisation from the Department of Health as it was established as a separate entity with its own financial, HR, IT support systems as well as its own facilities. The NHMRC is clearly an organisation in transition and the IRP recognises that we are observing the NHMRC at a specific moment in time. We also recognise that organisational change needs time and that many change processes have already been initiated by the new CEO.

Professor Anderson has brought a new energy and clarity to the NHMRC. His ability to transform the NHMRC into essentially a new organisation capable of delivering on its broadened mandate will require strong support from the government, the Department of Health & Ageing (DoHA), the NHMRC Council, Research Committee, the broad Australian health and medical research community and the NHMRC staff. In turn, there is a significant personal challenge for Professor Anderson in reaching beyond the traditional NHMRC base in the biological and clinical medical research community to ensure full participation by public health, health services, social scientists and others who contribute to the wider aspects of the NHMRC brief.

Although the NHMRC has received very generous increases in its level of support from the Australian government over the past seven years, its broadened mandate requires

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<sup>3</sup> Peter J Wills, AM et al., *The Virtuous Cycle - Working Together for Health and Medical Research. Health and Medical Research Strategic Review*, 1999.

<sup>4</sup> John Grant et al., *Sustaining the Virtuous Cycle for a Healthy, Competitive Australia, Investment Review of Health and Medical Research*, 2004

difficult prioritisation decisions to be made. How should funds and other resources be allocated across health research, knowledge translation, people and infrastructure support, and how should priority areas for development set by the government, the health community and NHMRC itself be integrated with these funding categories to achieve the best and most efficient use of public funds?

Furthermore, the NHMRC's broad mandate, which now includes an emphasis on harnessing the outputs of research to improve health and the health care system, will require further strengthening of NHMRC's existing linkages and partnerships with health service providers, the Commonwealth DoHA, State Departments of Health, and other stakeholders. The reporting responsibility of the NHMRC CEO to the Minister for Health makes strategic sense as it aligns with the NHMRC's mandate to develop consistent health standards between the various States and Territories.

At this point in its transition, the NHMRC requires stronger support structures, IT systems, peer review processes, and the necessary high level staff to address these difficult strategic decisions, and to optimise the opportunities to interact with stakeholders to facilitate the best health outcomes for the community.

The IRP has seen a clear opportunity for the NHMRC to build from past learning and recent strategic planning to generate a strong and clear implementation plan, giving effect to its strategies and opportunities. Enhanced focus and effectiveness of the NHMRC will be facilitated by strengthened staff, including individuals with a recognised background in research, policy and knowledge translation. Furthermore, the roles of the Council and the Research Committee, which between them bring together a formidable array of leaders in health and medical science, and key stakeholders, can be clarified to ensure that the CEO is best able to access the inputs from these highly expert advisers. The NHMRC Council and the RC need to feel ownership both of their own decisions and the strategic directions for the agency. By so doing, they are a key source of support for the CEO as he moves the NHMRC into new areas and when difficult priority decisions must be made.

## 5. INTERNATIONAL COMPARISONS

Other countries, most notably Canada, Sweden and the United Kingdom (UK), are undergoing transformative changes in the ways they organise and support health and medical research. Profound changes are taking place worldwide in the pace, costs and even definition of health research. These issues require that funders develop a variety of strategies, both strategic and programmatic, to maintain and strengthen international competitiveness. Some of these challenges, and the responses developed by some other countries, are listed below.<sup>5,6,7</sup> Some particular challenges being addressed internationally include:

The world is changing:

- With the rapid expansion in genetics, imaging, neuroscience, etc the pace of discovery in biomedical and behavioural sciences has accelerated significantly and it is expected to continue to do so.
- The way biomedical research is done today has also changed. Complex multidisciplinary and translational research is on the increase, with research often done collaboratively by many investigators, working in different institutions and even continents, and using large and shared facilities. Project teams are larger and require more funds. These changes pose new challenges in allocating and maintaining effective support across the research community, including encouragement of newer investigators.
- With an increased volume of research to be reviewed, the “volunteer” resources which have been the lynchpin of traditional review processes for allocation of research funding are increasingly stretched and efficient use of these resources has become essential.
- In developed countries, in recent years the diseases of greatest cost to the healthcare system have changed. Diseases such as diabetes and obesity are chronic rather than acute and affect the whole body rather than a single organ or tissue. Approaches beyond the traditional may be needed to reduce the impact of

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<sup>5</sup> *Nature*, 449 (7159): 115, 13 Sep 2000.

<sup>6</sup> *Nature*, 449 (7159): 141-142, 13 Sep 2007.

<sup>7</sup> *NIH News* (US - National Institutes of Health), 6 Sep 2007.

these conditions on the health care system and translate research findings to improved patient outcomes.

*Particular challenges*

During the last ten years, not only in Australia, but also in many other countries, government funds for biomedical research have dramatically increased (doubling of the NIH budget in the USA, tripling in Sweden, significant increase in UK) These countries have experienced problems similar to those faced by NHMRC associated with such a rapid expansion. These difficulties include the need to respond to a broader mandate that has come with the increased funds, including setting of priorities and developing processes to deal with responsibilities beyond the traditional funding of research.

In the research area, increased funds have largely been expended in growth in the budget of individual grants, rather than in the number of new grants or initiatives – this reflects the changing nature of research, but alters the spread of funds across the research community, with newer researchers often disadvantaged. This sets new challenges to plan effectively for long term requirements of the health sector as a whole, and ensure that funds are allocated accordingly. In all cases, an expansion of funds has been paralleled by increased expectations for results and accountability from the public and elected officials. Hence “doing more of the same” may no longer be acceptable.

The basic mechanism of allocating biomedical research in many countries, through review and commentary by other knowledgeable members of the research community (“peer review”), has been largely unchanged since it started 60 years ago. More recently, several countries have taken initiatives to recognise the changes discussed above, and to develop new and improved processes for allocation of research funds.

The table below summarises some of the current challenges facing organisations such as NHMRC, and possible responses based on international trends. More information on points included in this table can be found in references 5, 6 and 7.

Issues facing granting organisations	International trends to address these issues
<p><i>Rapid pace of research</i></p> <ul style="list-style-type: none"> <li>• Increased volume of research application submissions.</li> <li>• Static or decreasing success rates (applications funded) despite increased funds available.</li> <li>• Greater funding needed to support</li> </ul>	<p><i>Rapid, responsive, transparent processes.</i></p> <ul style="list-style-type: none"> <li>• Some agencies now hold at least two competition cycles per year (or have no deadline for submissions) and are moving to shorten the time between submission and notification.</li> <li>• Individual scientists may be</li> </ul>

<p>research groups (larger or multiple grants).</p> <ul style="list-style-type: none"> <li>• Increased university reliance on government research funds.</li> </ul>	<p>permitted to have only one application per mechanism under review. This compels self-selection of the best proposals, relieving pressures on the review process, but necessitates a funding cycle that takes at most six months.</p> <ul style="list-style-type: none"> <li>• Integrated electronic handling of applications and reviews at all stages, for increased efficiency.</li> </ul>
<p><i>Over-stressed review systems</i></p> <ul style="list-style-type: none"> <li>• Larger number of reviewers needed, especially to deal with the increased volume of applications and emerging, multidisciplinary and specialised areas.</li> <li>• Fatigue amongst reviewers.</li> <li>• Difficulty in reviewing applications in certain disciplines because of actual or perceived conflict of interests or a small local pool of expertise.</li> </ul>	<p><i>New approaches to assessment needed</i></p> <ul style="list-style-type: none"> <li>• Increased use of junior reviewers because of volume of applications and senior scientists already extensively used. This requires balance by a significant level of expertise and judgement within the granting agency.</li> <li>• Greater use of international reviewers especially in small countries with a limited pool of qualified reviewers (in some countries, all reviewers are international, e.g. Sweden).</li> <li>• Many agencies are recognising that recruiting and retaining the best reviewers is more important than the mechanics of review itself. Hence, they have developed additional platforms of review (video-based, electronic chat-based, etc) which permit the use of reviewers unwilling or unable to travel or commit time to meetings, particularly international reviewers.</li> <li>• Different approaches to encourage membership of review panels. Probably the most effective is to make membership on a panel prestigious, and an educational, if not an enjoyable experience. In many agencies the service is without compensation, in others honoraria paid are significant. Some agencies add incentives for reviewers (different deadlines for their applications, extension of their grants, etc).</li> <li>• Most agencies are now cutting the</li> </ul>

	<p>burden for reviewers by decreasing the size of the applications, by pre-screening or not discussing uncompetitive applications, and by using platforms of review which do not necessitate travel.</p>
<p><i>New Technologies</i></p> <ul style="list-style-type: none"> <li>• The changing nature of health research is being driven by powerful new technologies and the associated equipment and facility requirements, such as robotics and microarrays for DNA sequencing and drug discovery, mass spectrometry for proteomics, new imaging technologies, powerful new IT and bioinformatics capabilities for both laboratory and epidemiological research, tissue and tumour banks, and mouse knock-out and stem cell techniques.</li> </ul>	<p><i>Enhanced Infrastructure</i></p> <ul style="list-style-type: none"> <li>• In response, many funders have developed programs specifically designed to support the development of regional and/or national infrastructure centres that can be used as a communal resource to address such infrastructure requirements.</li> </ul>
<p><i>A growing trend to team, multidisciplinary and interdisciplinary research.</i></p> <ul style="list-style-type: none"> <li>• The convergence of many disciplines in individual research projects and the new desired emphasis in multidisciplinary and translational research has created a new challenge for many grant agencies: how to review the scientific quality of individual scientific components as well as the significance of the whole application.</li> </ul>	<p><i>New funding vehicles and application and review processes to support more complex research teams.</i></p> <ul style="list-style-type: none"> <li>• Many funding agencies are developing new programs, such as consortia or team grants, to encourage and fund multidisciplinary research.</li> <li>• Recently the NIH in the USA has established a new application for multiple investigators, at the same or different institutions, where each investigator's budget is recognised as independent.</li> <li>• Increased use of <i>ad hoc</i> reviewers. can provide expertise on complex multidisciplinary grants.</li> <li>• A few countries are considering reviewing translational-multidisciplinary research in two stages, with the different scientific components of the application reviewed electronically by appropriate experts and then the overall application evaluated for its impact and significance by a face-to-face panel of broader reviewers.</li> </ul>
<p><i>Increased emphasis on knowledge</i></p>	<p><i>Knowledge translation requires new</i></p>

<p><i>translation.</i></p> <ul style="list-style-type: none"> <li>The mandate statement of the NHMRC requires that greater emphasis be put on translating the results of research for the health and economic benefit of Australians. This new emphasis is also explicit in the mandate statements of other agencies internationally (e.g. CIHR).</li> </ul>	<p><i>programs and new approaches to peer review.</i></p> <ul style="list-style-type: none"> <li>This challenge is being addressed by a review process which emphasises the importance of the problem and the likelihood that the applicants will be able to move their research from the laboratory or office into the health system or the marketplace. In such cases, the end-users of medical research (e.g. venture capitalists, clinicians, health care executives, lay people and government policy makers) are ideally represented on peer review committees as well as within applicant groups.</li> </ul>
<p><i>Increased competition for funds</i></p> <ul style="list-style-type: none"> <li>The increased costs of research, the broad mandate of many funding agencies, and the significant expansion of the health research community, puts increasing pressure on organisations like the NHMRC to make difficult prioritisation decisions. Any lack of consistency or transparency in such prioritisation can result in unproductive discontent in the research community.</li> </ul>	<p><i>Transparent priority setting.</i></p> <ul style="list-style-type: none"> <li>Other funding agencies have addressed such concerns by ensuring that priority decisions are made as a result of objective, data-driven processes, and are reviewed and supported by groups of highly respected scientists, lay people, and end users, who make up their advisory and/or governing bodies.</li> </ul>
<p><i>Greater accountability to the public and elected officials</i></p> <ul style="list-style-type: none"> <li>Increased allocation of funds and a broader mandate come with increased pressures for demonstrable outcomes of benefit to stakeholders.</li> </ul>	<p><i>Effective governance procedures</i></p> <ul style="list-style-type: none"> <li>Many agencies have dramatically increased consistency and transparency, have comprehensive websites, house frequent public meetings, and interact extensively with the research community, specialised disease groups and other government and public stakeholders.</li> <li>Some countries require that all committees making financial decisions should have lay persons among their membership. Lay persons are often included in review panels.</li> <li>Much greater scrutiny for conflict of interest at various levels is also on the horizon of many countries and agencies.</li> </ul>

## 6. MAJOR FINDINGS

The IRP considered a variety of documentary evidence and interviewed a number of NHMRC staff, including the CEO, representatives of the Council, the RC and the ARC. Time did not permit the IRP to consult with the scientific community and other external stakeholders. It is understood by the IRP that consultation with stakeholders by the CEO will occur once the report is finalised. The IRP's understanding is that this Report will become a public document. We hope that it will serve as a useful starting point to stimulate discussion within the senior committees of the NHMRC and more broadly.

A number of themes emerged during the review process. These themes were within the scope of the review, were largely consistent with key elements of the Strategic Plan 2007-2009 and addressed a number of the key issues which had been identified by the CEO as being of special interest. The six themes of the Report are:

1. **Strategic Directions and Resource Allocation**
2. **Organisational Considerations**
3. **Knowledge Translation**
4. **Partnerships**
5. **Peer Review Mechanisms and Processes**
6. **Building a Better NHMRC**

**Strategic Directions and Resource Allocation** encompasses key issue No. 1 (as proposed by the CEO): The alignment of the NHMRC's funding schemes with its Strategic Objectives.

**Peer Review Mechanisms and Processes** includes consideration of the key issues in No 2: Processes of peer review and No 5: Ways of conducting peer review of complex and multi-disciplinary research and rapidly emerging areas of research and No 6: International trends in peer review.

The themes of **Strategic Directions and Resource Allocation** and **Organisational Considerations** include key issue No 3: Support mechanisms for the four pillars of NHMRC research support (Biomedical Science; Clinical Science; Health Services and Public Health).

Key issue No 4: Support mechanisms for Australian researchers was covered under three of the themes: **Strategic Directions and Resource Allocations, Organisational Considerations** and **Peer Review Mechanisms and Processes**.

## 6.1 Strategic Directions and Resource Allocation

The roles and responsibilities of the NHMRC are clearly articulated in the National Health and Medical Research Act 1992 (amended 2006)<sup>8</sup>, and further developed through its agreed Strategic Plan 2007-2009, and through the annual SOE from the Minister of Health and Ageing and the CEO's SOI, which is written in response to the SOE. These last documents set out the directions of NHMRC at a high level towards fulfilling its broad program.

The next stage in implementing these high level aspirations is the development of an implementation plan, setting out in more detail the priorities, goals or targets, and the specific activities to be carried out in the short and medium term. The IRP recognises that NHMRC has responsibilities across a broad area, and a number of challenges before it, some of which are highlighted in this report. This means that any useful implementation plan will need to present a realistic view of what might be achieved in the immediate term, given current constraints in a number of areas of its operations, not least in its ability to allocate strategic priorities in a robust and transparent manner.

The broader mandate for NHMRC requires that it fund research across the four pillars in support of the health of Australians - Biomedical Science, Clinical Science, Public Health and Health Services. Within these areas, resources may be utilised in a number of different ways – through projects carried out by NHMRC staff or by external consultants, through support of research, researchers and research environments to advance these areas, and through specifically targeted activities such as establishment of new and needed capabilities in emerging areas.

The organisation is also subject to a number of priorities, some set externally, such as the National Research Priorities (NRPs) and the Australian Government's National Health Issues (focused on particular disease areas), and some identified internally, including current and emerging health issues as described in the Strategic Plan 2007-2009. As well, opportunities arise periodically to co-fund research with other bodies driven by particular sectoral priorities. Accommodating these often overlapping, sometimes conflicting, priorities and opportunities is a key strategic challenge for NHMRC. The IRP was not aware of a robust and transparent mechanism by which the NHMRC could translate these priority areas and issues into specific strategic decisions which can guide the allocation and efficient use of its resources over the medium term.

Within its research funding programs, NHMRC has further difficult decisions to make on the correct balance of funding among support for people, infrastructure, research projects, programs and centres. These decisions can have a long term impact on the

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<sup>8</sup> National Health and Medical Research Council Act 1992 was amended on 1 July 2006 Act Compilation (current) - C2006C00354.

profile of health research in Australia, and as far as possible need to be taken against a background of available historical and international data, and utilising robust projections of the potential impact of alternative strategies.

Decisions on how resources are allocated across this broad range of categories is a complex but vital process that will drive the success of NHMRC in its ambitious goal of improving the health of Australians. The IRP believes that such allocation can only follow from provision of authoritative data and projections to support decision making on structural and thematic priorities, as well as periodic review and refreshment of strategic and implementation plans. To achieve this, the organisation requires an enhanced level of expert support for the CEO and the NHMRC's Council and RC in a number of areas.

**Recommendation 1:**

That the CEO as a matter of urgency prepare an implementation plan for the next 12 months, with indicative information for the subsequent two years, setting out priorities, activities and resource allocation in order to implement its Strategic Plan. This plan should be presented for discussion and approval to the Research Committee and Council.

**Recommendation 2:**

That the implementation plan recognise, accommodate and be consistent with the broad landscape of structural and thematic priority areas relevant to NHMRC activities, noting specifically how these priorities are addressed within the range of NHMRC programs.

**Recommendation 3:**

That the CEO, working with NHMRC staff and Committees, develop an information-driven process for strategic allocation of resources across NHMRC activities, programs and priorities in the short and longer terms as an integral part of strategic and implementation planning. This may require addition of further expertise to the NHMRC staff, as discussed below.

## 6.2 Organisational Considerations

The recently revised the NHMRC Act 1992 (amended in 2006) provides a sound governance structure for the organisation, comprising the CEO, NHMRC Council and Committees and the staff of the NHMRC. The Act sets out the function of the NHMRC and the reference of matters to the CEO, Council and Principal Committees by the Minister. The establishment of the Council is prescribed in Section 20 which in turn specifies that certain nominated officers are to be members and further specifies the expertise which additional members appointed by the Minister under Section 41, must possess. The Council is charged with providing advice to the CEO in relation to the performance of his functions. The CEO may delegate additional functions to the Council (Section 82 of the Act). Thus the Council is charged with providing advice to the CEO.

The composition of the Council was noted by the IRP to be appropriate to this role of higher level guidance for the CEO across the broad range of NHMRC responsibilities, in that it has representation of the Chief Medical Officers of the Commonwealth and each State and Territory Government as well as members with expertise in health and medical research, research training, healthcare delivery, professional standards and ethics as well as members representing business and consumer affairs.

The establishment by the Minister of the Principal Committees - the Research Committee (RC) and the Australian Health Ethics Committee (AHEC) - and their functions are also set out in the Act.

The functions of the RC are:

1. to advise and make recommendations to the Council on the application of the Account (*i.e. delivery of research funding*); and
2. to monitor the use and assistance provided from the Account; and
3. to advise the Council on matters relating to medical research and public health research; including the quality and scope of such research in Australia; and
4. such other functions as the Minister from time to time determines in writing after consulting with the CEO; and
5. any other functions conferred on the Committee by this Act, the regulations or any other law.

It is clear from the Act that both the Council and the RC are established in a manner which allows them (and indeed expects them) to provide expert advice to the CEO. In

the case of the RC, its recommendations are made to the Council and from there to the CEO. The CEO (or the Council) is specifically enabled under Section 35 and Section 82 of the Act to delegate additional functions in addition to those described above to the RC.

The IRP concluded that the RC should be empowered to provide an authoritative advisory role to the CEO on matters in which it has expertise. It appeared from the interactions between the IRP and some members of the RC that RC was not completely clear on its functions and to what extent these represented a continuation of or a change from its responsibilities and level of authority under the previous NHMRC structure. It is possible that the Council, now constituted as an advisory rather than a governing board, has the same uncertainties. The IRP suggests that a retreat with the CEO or other similar mechanism may be an appropriate means to clarify functions and expectations.

Comments from both Council and RC suggested that recent turnover and loss of some long-serving staff from within the NHMRC had had a negative impact on their abilities to deliver advice of the desired quality and breadth. As well, and as discussed in the previous section, it appeared that resource allocation decisions that need to be strongly driven by data and strategy were taken on a more *ad hoc* basis, with potentially negative but unknown impact on efficiency and effectiveness of use of resources in the longer term. As one specific example, covered further under the Peer Review section, some of NHMRC's funding schemes appeared to the IRP to have been developed historically without recent review, some as "one off" schemes and others operated on an *ad hoc* or on a continuing basis. For greater transparency and increased efficiency, an examination of the large number of different funding vehicles NHMRC has in place is encouraged. The IRP suggests that processes be streamlined and simplified by combining some of the different targeted funding vehicles as thematic directions within a unified application and assessment process.

**Recommendation 4:**

That the CEO work with the Chairs of the Council and RC as well as their members to maximise their value in providing timely, meaningful and actionable advice by clarifying and strengthening their roles, and ensuring the development of work addressing NHMRC strategic priorities.

**Recommendation 5:**

That as part of the general re-organisation and development of the NHMRC staffing (a recurring theme within this report) appropriately qualified senior staff be allocated specific responsibility for the Council and Committees, ensuring that briefing papers are prepared and follow up actions carried out to ensure the most effective operation of these advisory groups.

### 6.3 Knowledge Translation

The NHMRC Act 1992 (amended 2006) states that the NHMRC should pursue activities designed:

1. to raise the standard of individual and public health throughout Australia; and
2. to foster the development of consistent health standards between the various States and Territories; and
3. to foster medical research and training and public health research and training throughout Australia; and
4. to foster consideration of ethical issues relating to health.

Thus, the NHMRC is clearly charged with harnessing the results of both NHMRC funded research as well as research funded by Australia and international countries. This set of activities is referred to as *knowledge translation* in this report.

Knowledge translation is a relatively underdeveloped area of activity both in Australia and elsewhere and is generally neither understood nor appreciated within the health research community or universities. There are exciting opportunities, working with partners in the healthcare system, the DoHA, State Government Health departments, lay groups, and industry to reap the health and economic benefits of advancing knowledge. However, the mechanisms to achieve effective transfer of research findings into improved health practice need to be assessed, organised and resourced differently from mechanisms for generation of new knowledge.

While knowledge translation was not itself a focus for the IRP's activities, the panel viewed this as a vital aspect for further development within the NHMRC, given that it is the principal publicly funded body charged with carrying out this activity to achieve better health outcomes for the community. In particular, the input of RC and other relevant parts of NHMRC (eg. National Health Committee and Health Evidence and Advisory Branch), working with appropriately expert staff within the NHMRC, could be utilised to develop a knowledge translation program in line with world's best practice.

#### **Recommendation 6:**

The IRP views knowledge translation as an integral, explicit and important component of the NHMRC's mandate and therefore recommends that the NHMRC develop a robust knowledge translation strategic plan. That plan should take advantage of the integration of the National Institute of Clinical Studies (NICS) into the NHMRC and

build on the Policy and Practice Plan described in Objective 2 of the Strategic Plan 2007-2009.

**Recommendation 7:**

That the NHMRC closely examine knowledge translation programs in other countries that have placed particular emphasis in this area (e.g. the Netherlands, Canada, the UK) to ensure implementation of best practice.

**Recommendation 8:**

That, as part of developing the knowledge translation strategic plan, NHMRC fully engage and consult with all stakeholders in this process, including the research community, caregivers, public health officials, policy makers and the private sector.

**Recommendation 9:**

That once a knowledge translation strategic plan is developed and approved, a detailed implementation plan, including costing and an evaluation procedure, supported by expert senior staff within the NHMRC, should be put in place.

## **6.4 Partnerships**

The NHMRC has a number of partnerships with government agencies and research funding organisations both within Australia and elsewhere. Generally, the dollar value of these partnerships is small relative to the size of NHMRC's budget, there appear to be no partnerships with industry or State Governments, and many of the partnerships appear to reflect the strategic priorities of the partner rather than of NHMRC.

Appropriate partnerships provide opportunity, particularly in a small country like Australia, not only to leverage additional funds, but also to align priorities and programs between agencies for more effective delivery and to reduce duplication. International partnerships are a strategic tool for nations to forge relationships and build bridges. In particular, knowledge translation is intrinsically a partnership activity requiring the active engagement of the funder, the researcher(s) and the stakeholders who are generally the end users and implementers of research knowledge.

The NHMRC could play an important role in facilitating partnerships between Australian institutes and possible partners abroad. The IRP encourages such proactive involvement in partnerships, particularly partnerships which require provision of matching funds, provided that these are consistent with and driven by NHMRC's own priorities, set within the national context.

### **Recommendation 10:**

That the NHMRC establish a Partnerships Group within the organisation to facilitate partnering activities with others whose aims overlap with those of the NHMRC, with the objectives of both increasing the effectiveness of funding distribution and ensuring that partnerships appropriately advance strategic goals.

## 6.5 Peer Review Mechanisms and Processes

Peer review, if transparent, fair and timely, is the keystone of highly respected and internationally recognised health and medical research. Peer review as a basis for decisions on the distribution of research funds is a relatively recent activity and has evolved in a similar manner in many industrialised countries. Because of the profound changes in the pace and nature of health research currently taking place, peer review in many countries is itself evolving to better reflect these changes. The IRP noted the large number of different funding schemes in operation. The IRP concentrated on the major NHMRC funding vehicles, research projects and research programs. Most of the IRP's observations are based on the project grant peer review process. The IRP notes that they did not receive a complete overview of the NHMRC current peer review processes and in some cases, where more detail was available, were not left with a clear view of the processes actually being employed.

Based on this incomplete picture of peer review, the IRP noted the following apparent issues with current processes:

- The peer review process in NHMRC appears to be unnecessarily complicated and lacks the transparency to be understood by stakeholders.
- The RC is currently taken up with managing the actual peer review process, diminishing its opportunity to play a more strategic role.
- NHMRC lacks the internal scientific staff to assume ownership of the peer review process (selection of chairs, panel members, external reviewers, and assignment of applications, etc) the key steps of which are presently carried out by a small number of non-staff members of the research community.
- Many Grant Review Panels (GRPs) review very broad areas of science; hence, they may lack the necessary scientific depth and expertise. For this and other reasons, applicants receive very generic feedback on their applications, which may be of little value in formulating an improved application.
- The key step in the peer review process takes place in a face to face meeting occurring once a year and lasting four days, raising questions on the quality and consistency of decision making that can be achieved, and possibly limiting the range of experts utilised for grant review.
- The limited number of reviewers available in some research areas results in real or perceived conflicts of interest. Special emphasis panels to review applications with multidisciplinary research, specialised areas of research, or where major conflicts of interest occur, are not routinely used (except for indigenous research).

- There is a lack of an adequate IT information management system which would facilitate peer review, interactions between applicants, assessors, reviewers and administrative staff.
- The absence of strong IT infrastructure, as well as relying entirely on face to face meetings reduces flexibility in assessing non-standard, multi-disciplinary or highly specialised area applications (which can not be assessed using standing panels and processes). The implementation of such review platforms would permit the utilisation of the best reviewers nationally or internationally.
- In part because there is only competition per year, the time from submission to grant notification is very long – of the order of nine months<sup>9</sup>.

Other international agencies carrying out successful peer reviews:

- Have permanent staff with strong scientific backgrounds which manage peer review funding and evaluation.
- Use state-of-the-art IT information management systems to accomplish successful grant application, review and notification steps, and to provide analytical capabilities and flexible management processes.
- Use fully electronic application and peer review processes.
- Accept applications for submission and review many times during the year. Under these conditions, rebuttal/response by the applicant may be unnecessary since the applicant can re-submit an amended application at the next opportunity.
- Review applications in a small specialist panel when the complexity or specificity of the science requires it.
- Allow for applications to work with modular budgets (eg in \$25K increments), simplifying justification and analysis of the budget.
- Use international reviewers to add specialised expertise and minimise conflict of interest.
- Offer a smaller range of funding mechanisms.

NHMRC has a responsibility to build an up-to-date peer review system with robust structures and processes. The IRP suggests that a senior NHMRC individual look at best

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<sup>9</sup> The IRP recognised that controlling the length of the cycle time is not completely within the NHMRC's power as there is a delay at the end of the review process before the grants are announced by the Government.

practices globally and locally (e.g. ARC), and choose features of different agencies that will ensure timely, transparent and fair processes.

**Recommendation 11:**

That NHMRC examine and adapt the best features from other national and international peer review policies and processes to address perceived deficiencies in the current application and review processes. Qualities they should be incorporated include a more streamlined and simplified application and review process with consistency from year to year, transparent selection of review panels and reviewers and integral use of IT.

**Recommendation 12:**

That an increased proportion of NHMRC staff should have a strong scientific background to enable internal staff to take ownership of the peer review process and drive analysis and evaluation.

**Recommendation 13:**

That high priority should be given to funding, developing and implementing a state-of-the-art IT system to handle all aspects of the application and review process, increasing efficiency for applicants and providing a considerably accelerated process for the NHMRC. Ideally this system should draw from and adapt a system already being used successfully by other funding agencies, whether in Australia or overseas.

**Recommendation 14:**

That NHMRC consider establishing *ad hoc* Specialist Review Panels to assess multi-disciplinary and complex trans-disciplinary and emerging technology applications and where apparent or perceived conflicts of interest exist.

**Recommendation 15:**

That once Recommendation 13 has been implemented, NHMRC consider the option of calling for applications in at least two rounds per year. If this approach is adopted, the NHMRC should analyse whether the applicant response/rebuttal process has any impact on funding decisions and, if not, whether it should be abolished.

## **6.6 Building a Better NHMRC**

The Strategic Plan 2007-2009 has as its fifth Objective: To Build a Better NHMRC. The IRP strongly endorses this Objective. With the establishment of the NHMRC as a separate Statutory Agency in 2006, its broader mandate from Parliament, and an increased budget, the NHMRC now needs to seek external advice to develop an internal organisational structure, human resources strategy, and IT capability, that will allow it to achieve Objective 5.

During the Review, the IRP was informed that, in the process of becoming a statutory authority, there had been considerable staff turnover and change with a number of longstanding staff having departed and a number of new staff being recruited. It will take time for the new staff to understand the complexities of the NHMRC policies and practices, particularly if they lack the requisite background in policy and research funding. In addition, in many areas there appeared to be a lack of staff with the depth of qualifications and expertise needed to provide high level program management and policy and analytical advice to Committees and the CEO. The new NHMRC urgently needs to address this situation.

The Strategic Plan 2007-2009 identifies as a key strategy improvement of NHMRC's internal expertise and capacity by strengthening NHMRC's internal scientific capacity. Dedicated scientific and research competent staff in the research funding area should maximise efficiency and effectiveness and facilitate conversion of research findings into health outcomes. As discussed in the previous section on Peer Review Mechanisms and Processes, NHMRC needs a cadre of permanent staff with strong scientific backgrounds across a range of fields and health disciplines.

In addition, the Strategic Plan highlights the intention to improve communications with government, health professionals and the community. Importantly, the NHMRC is well positioned in its interactions with DoHA to provide a very strong link between research and health outcomes in Australia. The independence of the NHMRC and its close alignment with the Commonwealth health portfolio are two of the strongest features of the NHMRC. Similarly, the incorporation of the NICS into the NHMRC provides an important opportunity to strengthen ties with the clinical community. The Policy to Practice Program, and others like this, will provide new opportunities to reach out both to the broadened research community and to policy makers. All of these new activities require strong staff support.

Further, the IRP noted that presently there are few NHMRC staff who have the background or capacity to develop links with commercial companies and to engage with the private sector and the health care systems, including State Departments of Health. This will be necessary in order to fulfil Strategic Objective 4 Increased Investment (The

Virtuous Cycle). Ensuring the further development of links with DoHA and such other stakeholders must be an important focus for appropriate expert NHMRC staff.

Now that the NHMRC is a statutory authority, with a large budget requiring multi-year forward projections, NHMRC also needs a planning and forecasting process that is at the centre of mission-appropriate budgeting, financial planning and projection capability within the organisation.

**Recommendation 16:**

That NHMRC seek external advice to assist it in planning and building an organisational structure which is appropriate for fulfilling its strategic objectives and for making best use of its expert advisory structures. As noted at various places in this document, the IRP noted in particular the need for high level and appropriately qualified staff in at least the following areas:

1. Dedicated staff to strengthen NHMRC's internal scientific capacity to ensure exemplary implementation of the NHMRC peer review and policy functions, as well as performing many critical activities which currently rely significantly on member of the biomedical community serving on NHMRC Grant Review Panels and other subcommittees.
2. Senior staff to aid the budgeting and strategic planning processes through expertise in financial planning and analysis and forward projections.
3. Senior staff able to direct processes of information collection and analysis of international and local trends in all areas of NHMRC's operations, leading to high level policy advice supporting the CEO, Council and committees across all areas of NHMRC's brief.
4. Senior staff leading efforts to build partnerships with other research agencies, industry and stakeholders, including State and Federal health care agencies.
5. Senior staff to deliver on the NHMRC's new knowledge translation mandate.

**Note:** We have previously referred to the need for an improved IT system, to handle all aspects of the application and review process, under section 5 Recommendation 13. A state-of-the-art IT system is also required for general activities of the NHMRC, as suggested in the following recommendation.

**Recommendation 17:**

That NHMRC strengthen its general infrastructure, particularly business systems, IT and communications capabilities. The enhanced system should integrate not only with the assessment application process but also seamlessly with systems supporting data collection and analysis and facilitate planning and reporting processes.

**Recommendation 18:**

That this report be made public and that the health and medical research community, as well as other stakeholders, be invited to provide comment both on the report and proposed follow-up actions.

## **7. CONSIDERATION OF RECOMMENDATIONS OF PREVIOUS REVIEWS**

This current review follows on from two previous reviews of the health and medical research sector, the 1999 Wills Review and the 2004 Grant Report.<sup>10, 11</sup> Both of these reviews were intended to be more comprehensive than the current activity, and the Grant Report, in particular, had a different focus. Comparisons of the recommendations from those reviews with the comments contained in this report highlight both advances made by NHMRC and those areas where much remains to be done.

From the **Wills Review**, the following recommendations are mirrored and proposed for further development in the current report (headings and numbers reflect the chapters and numbering of recommendations in the Wills Review):

### **An effective health and medical research sector built on high impact fundamental research, world class workforce and infrastructure**

**2.1.2** – Where appropriate encourage large multi-disciplinary investigator-driven projects, research programs and networks.

**2.1.3** – Continuously review the grant allocation system to ensure that the best and most relevant and independent peers review each others applications against internationally recognised criteria and fund world-class high impact research; develop bilateral agreements with other countries to cooperate in peer review and use electronic communications to make greater use of international peers; adopt grant assessment criteria that are internationally recognised.

**2.3** – Build capacity for quality research involving health practitioners of all kinds; ensure broad representation of research backgrounds on grant assessment panels including clinical, public health and health services expertise.

### **Priority-driven research that contributes directly to population health and evidence-based health care**

**1.1** – Establish consultative priority-setting program, managed through an enhanced NHMRC, to establish priorities across the full array of health issues;

**3.1.2** – develop technical capabilities within the Office of the NHMRC to support the synthesis and analytical components of priority setting.

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<sup>10</sup> Peter J Wills AM et al. The Virtuous Cycle- Working Together for Health and Medical Research. Health and Medical Research Strategic Review, 1999.

<sup>11</sup> John Grant et al, Sustaining the Virtuous Cycle for a Healthy, Competitive Australia, Investment Review of Health and Medical Research, 2004.

**3.2** – Identify sources and efficiently and rigorously allocate and track funds devoted to priority-driven research.

**3.3** – Build capacity to execute priority-driven research across the broad spectrum of research fields.

**3.4** – Improve mechanisms for integration of research-based knowledge into policy and practice.

### **Public investment in a well managed research sector**

**5.1** – Enhance the organisation and resourcing of the NHMRC.

**5.1.1** – Support the major NHMRC functions with full time senior managers with strong research or health care backgrounds; appoint other senior managers in relation to each of the principal committees of the NHMRC.

**5.2** – Engage and involve the community as stakeholders in the research effort

The structural changes to the NHMRC, the most important recommendation of the Grant Report (2004), were implemented through creation of the NHMRC as a statutory authority. Identification of clear roles for the Council and Principal Committees in relation to the CEO, as recommended in this report, remains to be completed. Some other areas proposed for action in the **Grant Report** where further progress is recommended in this report include:

**3.2** – Improve impact of research influencing policy and practice.

**4.3** – Capture more global industry investment.

**5.2** – Invest in health and medical research priorities

**5.2.2** – Set separate appropriations/investment targets for priority areas.

Given the consistency between previous reports and this current review, the IRP recommends that the NHMRC continue to consider these previous recommendations in conjunction with those made in this report. Further, the IRP is aware of a paper prepared by the previous Research Committee prior to the restructuring of NHMRC, providing practical proposals on the implementation of recommendations from these earlier reviews. This and other such papers which form part of the corporate history of the NHMRC can provide a valuable resource to the organisation as it moves forward.

**Recommendation 19:**

That the NHMRC continue to utilise the wisdom contained in reports from previous reviews of the health and medical research sector, and ensure that both the recommendations from these reviews, and internal papers developed in response to them, form an important resource for NHMRC as it develops and implements its plans in the short and medium term.

## **APPENDICES**

A. List of Abbreviations

B. Biographies of Review Panel

C. People Consulted

D. NHMRC CEO's Statement of Intent 2006 to 2007

E. NHMRC Strategic Plan 2007-2009 Objectives

F. Documents Provided to the Review

## Appendix A: List of Abbreviations

AHEC	Australian Health Ethics Committee
AM	Member in the Order of Australia
ARC	Australian Research Council
CCRE	Centre of Clinical Research Excellence
CEO	Chief Executive Officer
CIHR	Canadian Institutes of Health Research
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSR	Centre for Scientific Review
DEST	Department of Education, Science and Training
DoHA	Department of Health and Ageing
GAG	Grant Advisory Group
GAR	Guidelines Assessment Register
Grant Report	John Grant et al., Sustaining the Virtuous Cycle for a Healthy, Competitive Australia, Investment Review of Health and Medical Research, 2004.
GRP	Grant Review Panel
GYK	Growing Your Knowledge Pty Ltd
HAC	Health Advisory Committee
HREC	Human Research Ethics Committee
IP	Intellectual Property
IRIIS	Independent Research Institute Infrastructure Support Scheme
IRP	Independent Review Panel
IT	Information Technology
MAC	Management Advisory Committee
MORIA	Measure of Research Impact and Achievement
MRC	Medical Research Council
MREA	Medical Research Endowment Account
MRI	Medical Research Institute
NAC	NHMRC Audit Committee
NHC	National Health Committee
NHMRC	National Health and Medical Research Council
NHPA	National Health Priority Area
NIH	National Institutes of Health
NICS	National Institute of Clinical Studies
NRP	National Research Priority
PGWG	Project Grants Working Group
RC	Research Committee
RFCD	Research Fields Courses and Disciplines
R&D	Research and Development
SOE	Statement of Expectations
SOI	Statement of Intent
SP	Spokesperson
SRDC	Strategic Research Development Committee
Uhrig Report	Review of the Corporate Governance of Statutory Authorities and Office Holders, June 2003
UK	United Kingdom
USA	United States of America

Wills Review Peter Wills AM. et al., The Virtuous Cycle - Working Together for Health and Medical Research. Health and Medical Research Strategic Review, 1999.

## **Appendix B: Biographies of Review Panel**

### **Professor Alan Bernstein, Chairman of Independent Review Panel**

*President, Canadian Institutes of Health Research, Ottawa, Canada*

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Between 2000 and 2007 Professor Alan Bernstein served as the inaugural President of the Canadian Institutes of Health Research (CIHR), Canada's lead agency for the support of health research. An internationally respected researcher, mentor and scientific leader, he has made key contributions to our understanding of embryonic development, haematopoiesis and cancer.

Prior to his appointment at CIHR in 2000, he was Director of Research at the Samuel Lunenfeld Research Institute of Mount Sinai Hospital from 1994-2000 and Professor in the Department of Molecular and Medical Genetics at the University of Toronto, where he is a Senior Fellow, Massey College. Previously, Professor Bernstein has received numerous awards, including the McLaughlin Medal of the Royal Society of Canada, the Genetics Society of Canada Award of Excellence, the 2001 Australian Society of Medical Research Medal, and the Order of Canada in 2002. In 2007 he was named Doctor of Laws, honoris causa, Dalhousie University and awarded the Médaille du mérite of the Institut de recherches cliniques de Montréal. Professor Bernstein has recently received the Toronto Biotechnology Initiative Lifetime Achievement Award and the Health Charities Coalition of Canada Award of Distinction.

In 2008, Professor Bernstein will become the inaugural Executive Director of the Global HIV Vaccine Enterprise.

**Professor Toni Scarpa**

*Director, Center for Scientific Review, National Institutes of Health*

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Department of Health and Human Services, Washington DC, USA

In 2005, Professor Toni Scarpa became the Director of the Center for Scientific Review (CSR) at the National Institutes of Health (NIH). He leads CSR's efforts to better manage the receipt and referral of NIH grant applications and coordinate their review in CSR peer review groups. Professor Scarpa has served as a permanent member of three NIH peer review committees between 1983 and 2003 and peer review committees for the American Heart Association.

Previously, Professor Scarpa was the David and Inez Myers Professor and Chair of the Department of Physiology at Case Western Reserve University in Cleveland. He oversaw the development of a small physiology and biophysics department into one now ranked among the best in the country. His research there was focused on the cellular and molecular mechanisms of ion transport and homeostasis and the metabolic consequences induced by transport. Prior to his position in Cleveland, Professor Scarpa trained at the University of Padua School of Medicine, the Weizmann Institute of Science in Israel, the University of Utrecht in The Netherlands and the University of Bristol in England and continued his research and academic career for 17 years at the University of Pennsylvania.

Professor Scarpa has more than 225 peer-reviewed publications and has edited or co-edited 9 books or special journal supplements. He has been officer or board member of many scientific societies and editorial boards, and served as editor or co-editor for 5 journals.

**Dr Marilyn Sleigh**

*Company Director, InAvanti Life Sciences Consulting and Former Managing Director of EvoGenix Ltd, Sydney, Australia*

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Dr Sleigh is currently a Life Sciences strategic consultant and company director. She recently completed six years as CEO and managing director of biotechnology company EvoGenix Limited. She was the founding CEO of this company which commenced as a spin out from the Cooperative Research Centre for Diagnostics, and led EvoGenix through two rounds of venture capital funding, purchase of a US company, an ASX listing and eventual acquisition by Australian company Peptech Ltd.

Prior to her position at EvoGenix, Dr Sleigh was Dean of the Faculty of Life Sciences and later, the Faculty of Science at the University of New South Wales. Earlier positions were as Director of Research Development at Peptech Limited (an ASX-listed biotechnology and drug development company) and as a researcher and manager with CSIRO.

Other current positions are as non-executive director at Australian Biotechnology and Health Care Fund No 3 (a Sydney-based venture capital investment fund) and at the Australian Business Foundation (an industry policy research group and think tank; subsidiary of Australian Business Limited), and as Chair, ABRS Advisory Committee (ABRS is a section of the Department of Environment responsible for mapping and cataloguing biodiversity). Dr Sleigh has won a number of biotechnology industry awards, is a recipient of the Centenary Medal and a Fellow of the Australian Academy of Technological Sciences and Engineering.

Dr Sleigh has a particular enthusiasm for fostering commercial opportunities from novel science and has held a number of advisory positions in both the public and private sectors working at the boundaries between the government, finance and the scientific community.

## Appendix C: People Consulted

<b>Name</b>	<b>Position</b>	<b>Organisation</b>
Professor Warwick Anderson AM	CEO	NHMRC
Dr Greg Ash	Executive Knowledge and Development Officer	NHMRC
Professor James Best	Chair	NHMRC Research Committee
	Deputy Dean	Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne
Phil Callan	Principal Executive Officer	CEO Unit, NHMRC
Professor Matthew Gillespie	Member	NHMRC Research Committee
	Chair	NHMRC Project Grants Sub-Committee
	Associate Director	St Vincent's Institute of Medical Research
Professor Michael Good	Chair	NHMRC Council
	Director	The Queensland Institute of Medical Research
Professor Robert Graham	Member	NHMRC Research Committee
	Chair	NHMRC Program Grants Sub-Committee
	Executive Director	Victor Chang Cardiac Research Institute
Mrs Elizabeth Grant	Member	NHMRC Research Committee
	Chair	NHMRC Animal Welfare Sub-Committee
Tony Krizan	Executive Director	Program Management, NHMRC
Carey Lonsdale	Acting Executive Director	Research Investment, NHMRC

<b>Name</b>	<b>Position</b>	<b>Organisation</b>
Sheila McAlpine	Acting Director	Grants Management, NHMRC
Professor Kerin O'Dea AO	Member	NHMRC Research Committee
	Chair	NHMRC Research Fellowships Sub-Committee
	Professorial Fellow	Department of Medicine, St Vincent's Hospital, Melbourne
Professor Sally Redman	Member	NHMRC Research Committee
	Director	The Sax Institute, Sydney
	Chair	NHMRC Policy and Practice Focused Research Working Group
Hilary Russell	Chief Operations Officer	Operations Division, NHMRC
Donna Stephenson	Director	Research Program, NHMRC
Professor Margaret Sheil	CEO	Australian Research Council (ARC)

## **Appendix D: NHMRC CEO's Statement of Intent 2006 to 2007**

The Hon Tony Abbott MP  
Minister for Health and Ageing  
Parliament House  
CANBERRA ACT 2601

Dear Minister

### **NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL STATEMENT OF INTENT (2006 – 2007)**

I am pleased to provide you with my *Statement of Intent* for the 2006-07 financial year which sets out my plan for the National Health and Medical Research Council (NHMRC) to achieve the activities outlined in your *Statement of Expectation*.

The announcement in the May Budget for a \$905 million increase in funding towards health and medical research in Australia, including \$670 million directly to the NHMRC, provides a clear indication of the significant expectation the Government has of the NHMRC, and Australia's health and medical research sector.

The Government's decision to establish the NHMRC as an independent statutory agency has provided the NHMRC with an unprecedented opportunity and responsibility. We will expand our support for health and medical research that leads to real health, economic and social benefits through the virtuous cycle. The NHMRC will be the major influence on the future health of Australians through research excellence, strengthened ethical frameworks, and the provision of high quality, valued and relevant health advice to the Australian community.

This *Statement of Intent* will be the primary driver in the development of the NHMRC's ambitious Strategic Plan which will be provided to you before 31 December 2006.

I look forward to working closely with you as we work towards achieving the future vision for the NHMRC. This is an exciting time for the NHMRC.

Yours sincerely  
Professor Warwick Anderson  
Chief Executive Officer

29 September 2006



<b>Minister's Statement of Expectations</b>	<b>NHMRC Statement of Intent</b>
<ul style="list-style-type: none"><li>• Networking with other state and territory jurisdictions to ensure a consistent ethical standard is applied to health and medical research work undertaken throughout Australia.</li></ul>	<p>NHMRC will:</p> <ul style="list-style-type: none"><li>• Undertake structured consideration of jurisdictional health and medical ethical issues through the NHMRC Council agenda; and</li><li>• In consultation with jurisdictions and other stakeholders, develop a plan for coherent and consistent national approaches on larger national research projects including multicentre clinical trials.</li></ul>
<p>Instigate reviews in instances where there is reason to believe that ethical guidelines have been breached in the conduct of health and medical research in Australia.</p>	<p>NHMRC will:</p> <ul style="list-style-type: none"><li>• Promptly investigate breaches of ethical guidelines where the research is funded by the NHMRC;</li><li>• Comment and offer assistance when ethical guidelines are breached in research in other circumstances; and</li><li>• Bring forward for the Minister's consideration, a proposal for a national systematic approach to promote compliance with national research ethics guidelines following a review of existing processes.</li></ul>

<b>Minister's Statement of Expectations</b>	<b>NHMRC Statement of Intent</b>
<b>MANAGEMENT ADVISORY COMMITTEE</b>	
<p>Establish a Management Advisory Committee (MAC), consisting of:</p> <ul style="list-style-type: none"><li>• The Chief Executive Officer (Chair)</li><li>• Chair of Council</li><li>• Council Industry Representative</li><li>• Other Industry Representative</li></ul> <p>With the primary aim of developing a strategic direction, strategic plan and enhancing connections with business through opening up investment opportunities, opening up opportunities for commercialisation of discovery and promoting the direction of philanthropy towards medical and biological research.</p>	<p>The NHMRC has:</p> <ul style="list-style-type: none"><li>• Established the Management Advisory Committee (MAC) and appointed:<ul style="list-style-type: none"><li>- Professor Warwick Anderson (CEO) - Chair;</li><li>- Professor Michael Good (Chair of Council);</li><li>- Dr Colin Sutton (Council member with expertise in business); and</li><li>- Dr Chris Roberts (Chair of the Board of Research Australia and CEO and President of Cochlear Australia).</li></ul></li></ul> <p>To develop and implement the NHMRC's Strategic Plan for 2006-2009, the CEO will seek MAC advice to:</p> <ul style="list-style-type: none"><li>• Increase researcher-business interactions;</li><li>• Increase private sector investment opportunities; and</li><li>• Increase philanthropic support for health and medical research.</li></ul>
<b>COMMERCIALISATION</b>	
<p>Develop and implement a framework for supporting the transition of health and medical research outcomes through to commercialisation, with the express objective of ensuring that Australia's economy benefits more effectively from its investment in such research.</p>	<p>The NHMRC will:</p> <ul style="list-style-type: none"><li>• Develop a framework to increase industry take-up of health and medical research outcomes; and</li><li>• Seek broader views on how to increase commercial development of research by convening a high-level roundtable for industry and investment leaders.</li></ul>

Minister's Statement of Expectations	NHMRC Statement of Intent
<b>NATIONAL INSTITUTE OF CLINICAL STUDIES</b>	
Incorporate the National Institute of Clinical Studies (NICS) into the NHMRC.	The NHMRC will merge NICS within the NHMRC and continue NICS' work, creating greater capacity to translate evidence into clinical practice.
<b>COMMITTEES</b>	
Operate all committees (including Council, Principal Committees, Working Groups and the MAC) effectively clearly articulating their aims and objectives for their triennium term of appointment.	<p>The Council and all NHMRC Committees will:</p> <ul style="list-style-type: none"><li>• Operate in accordance with the <i>NHMRC Act 1992</i> and their Terms of Reference.</li></ul> <p>The NHMRC will review all Principal Committee and Working Committee Terms of Reference by the end of 2006 to align the Committees and their priorities with the NHMRC's Strategic Plan and 2006-07 business plan. This will ensure that during this triennium, the NHMRC will:</p> <ul style="list-style-type: none"><li>• Develop a vision for the future of Australian health and medical research to maximize benefits for the country;</li><li>• Develop medical research, public health research, health services research and health policy research;</li><li>• Develop a framework for health and medical research workforce needs and balances; and for a skilled evidence-based health sector workforce;</li><li>• Develop strategic research to provide the evidence required for improved national health policy and practice;</li><li>• Develop mechanisms for achieving economic benefits from health and medical research;</li><li>• Improve governance associated with health and medical research;</li><li>• Scope and conduct an independent review of research funding processes and achievements;</li></ul>

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**COMMITTEES cont'd**

- Provide national guidance on ethical issues associated with health and medical research;
  - Provide advice, including rapid advice, on the major issues in health care delivery, prevention and health promotion according to best available evidence;
  - Consider the highest priority ethical, legal and social issues in human genetics; and
  - Provide advice on opportunities to work with other portfolios with responsibilities that may impact on health to provide the evidence base for decision making.
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<b>Minister's Statement of Expectations</b>	<b>NHMRC Statement of Intent</b>
<p><b>RESEARCH GRANTS</b></p> <p>Administer research grants with a high degree of integrity and probity. Grant processes are to be conducted smoothly and completed within a timely manner. Research grants are to be managed effectively and efficiently with the objective of ensuring to continue Australia's strong international leadership in health and medical research outcomes and innovation.</p>	<p>The NHMRC will:</p> <ul style="list-style-type: none"><li>• Subject research funding processes to international scrutiny through an independent review, to ensure continued world's best practice;</li><li>• Augment the professional administration of research grants;</li><li>• Increase transparency of the grant assessment process for 2007;</li><li>• Increase independent observers in research assessment processes;</li><li>• Finalise and publish timelines for the 2007 grant review process by December 2006; and</li><li>• Seek opportunities to provide further international leadership in health and medical research, and seek opportunities for further involvement in regional activities.</li></ul>

Minister's Statement of Expectations	NHMRC Statement of Intent
<p><b>ADMINISTRATION</b></p> <p>Establish sound administrative practices and principles in accordance with Australian Public Service standards, legislative requirements and best practice principles. The CEO will meet with the Minister (or Minister's representative), as a minimum, on a monthly basis to report against:</p> <ul style="list-style-type: none"><li>• The NHMRC's progress on the above issues;</li><li>• The NHMRC's progress against its business plan;</li><li>• The NHMRC's progress against its strategic plan; and</li><li>• Continuing progress against the recommendations of the Grant and Wills reports.</li></ul>	<p>The CEO will:</p> <ul style="list-style-type: none"><li>• Provide you with monthly reports on:<ul style="list-style-type: none"><li>- Progress on the issues outlined in this <i>Statement of Intent</i>;</li><li>- Our business and Strategic Plan; and</li><li>- Current issues of interest</li></ul></li><li>• Implement and report on progress of the recommendations of the <i>Investment Review of Health and Medical Research</i> including an ongoing assessment of the following three key major issues:<ul style="list-style-type: none"><li>- Policy and Practice Focused Research;</li><li>- Commercialisation; and</li><li>- Building a better NHMRC by restructuring the office and appointing additional research, health-care senior management and research literate staff.</li></ul></li><li>• Enable the NHMRC to respond more rapidly to emerging national health issues; and</li><li>• Increase the openness and transparency of the NHMRC's processes.</li><li>• Acting in accordance with the <i>Public Service Act 1999</i>, the <i>Financial Management and Accountability Act 1997</i>, and the Public Service Code of Conduct, effectively implement and maintain high standards of corporate governance and accountability through:<ul style="list-style-type: none"><li>- Compliance with all relevant government legislation and policy;</li><li>- Maintenance, regular review and promulgation of all policies and guidelines; and</li><li>- Timely presentation of the NHMRC's Annual Report to Parliament.</li></ul></li></ul>

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**Any other issue of which the Minister should be made aware of.**

- The Prime Minister's press release of 23 June 2006 in relation to the Legislation Review ("Lockhart Review"), indicated Government support for recommendations from the Lockhart Review for administrative improvements that will help reduce red tape in the licensing process and provide further support to the regulatory scheme by enhancing the NHMRC guidelines.

The NHMRC will:

- Develop and implement a program for reviewing and enhancing relevant guidelines and providing administrative improvements in the licensing process under the *Research Involving Human Embryos Act 2002*; and
  - Ensure the Minister and the Department of Health and Ageing are briefed on emerging issues which may arise during this reporting period.
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**Appendix E: NHMRC Strategic Plan 2007 – 2009. Strategic Objectives**

**OBJECTIVE 1 – THE BEST AND MOST RELEVANT RESEARCH**

**OBJECTIVE 2 – EVIDENCE BASE FOR HEALTH POLICY AND PRACTICE**

**OBJECTIVE 3 – HIGH ETHICAL STANDARDS**

**OBJECTIVE 4 – INCREASED INVESTMENT (THE VIRTUOUS CYCLE)**

**OBJECTIVE 5 – TO BUILD A BETTER NHMRC**

<b>Objective 1 – The Best and Most Relevant Research</b>	
<b>KEY STRATEGIES</b>	<b>MECHANISMS</b>
Identify and support the best research and researchers.	<ul style="list-style-type: none"> <li>• Systems to develop the best advice on current and emerging health issues relevant to the Australian community.</li> <li>• Processes to rapidly identify evidence gaps.</li> </ul>
Improve research funding processes.	<ul style="list-style-type: none"> <li>• International review.</li> </ul>
Match research outcomes with Australia's needs	<ul style="list-style-type: none"> <li>• A robust <i>Request for Application</i> process targeting major health issues.</li> <li>• Policy and practice focused research initiatives.</li> <li>• Commercialisation development support.</li> </ul>
Increase support for Indigenous health research.	<ul style="list-style-type: none"> <li>• Build Indigenous research capacity and increase research support.</li> </ul>

<b>Objective 2 – Evidence Base for Health Policy and Practice</b>	
<b>KEY STRATEGIES</b>	<b>MECHANISMS</b>
Increase access to best research evidence.	<ul style="list-style-type: none"><li>• Systems to develop the best advice on current and emerging health issues relevant to Australian Community.</li></ul>
Facilitate the utilisation of health advice.	<ul style="list-style-type: none"><li>• Interactions with relevant Australian, State and Territory governments, and non-government organisations.</li></ul>
Promote effective uptake of evidence into practice.	<ul style="list-style-type: none"><li>• Implement the NHMRC's policy and practice plan.</li><li>• Integrate the National Institute for Clinical Studies within the NHMRC.</li><li>• Programs to evaluate uptake methodologies.</li></ul>

<b>Objective 3 – High Ethical Standards</b>	
<b>KEY STRATEGIES</b>	<b>MECHANISMS</b>
Address important ethical issues.	<ul style="list-style-type: none"> <li>• Develop a work plan to address the ethical aspects of NHMRC’s priority health issues.</li> <li>• Address ethical dimensions of relevant current and emerging health issues.</li> </ul>
Drive best practice ethical review of research.	<ul style="list-style-type: none"> <li>• Promote the <i>National Statement on Ethical Conduct in Research Involving Humans</i> and the roles of Humans Research Ethics Committees and Animal Ethics Committees.</li> <li>• Streamline multi-centre research.</li> </ul>
Promote responsible conduct and governance of research.	<ul style="list-style-type: none"> <li>• Promote the Australian Code for the Responsible Conduct of Research, the National Statement on Ethical Conduct in Research Involving Human and the Australian code of practice for the care and use of animals for scientific purposes.</li> </ul>
Ensure compliance with Australian ethical standards.	<ul style="list-style-type: none"> <li>• Propose a national systematic approach to promote compliance with national research ethics guidelines following a review of existing processes.</li> <li>• Investigate alleged breaches in conduct of health and medical research.</li> <li>• Perform our functions under the Research Involving Human Embryos Act 2002 and the Prohibition of Human Cloning Act 2002 with diligence and transparency.</li> </ul>

<b>Objective 4 Increased Investment (The Virtuous Cycle)</b>	
<b>KEY STRATEGIES</b>	<b>MECHANISMS</b>
Work with government to support the best investment in health and medical research.	<ul style="list-style-type: none"> <li>Engage with relevant government and non government agencies.</li> </ul>
Encourage industry investment in research and development.	<ul style="list-style-type: none"> <li>Undertake a review to identify where the NHMRC can provide the greatest impact.</li> <li>Seek to promote researcher/industry/business sector interaction.</li> </ul>
Encourage philanthropic investment in health and medical research.	<ul style="list-style-type: none"> <li>Develop and expand relationships with</li> <li>private sector.</li> </ul>
Working in regional and global partnerships.	<ul style="list-style-type: none"> <li>Establish agreements to support multi-national research, and implementation of advice and ethics.</li> </ul>

<b>Objective 5 To Build a Better NHMRC</b>	
<b>KEY STRATEGIES</b>	<b>MECHANISMS</b>
Develop more responsive NHMRC.	<ul style="list-style-type: none"> <li>• Staff profile to better align with NHMRC's new vision.</li> <li>• Implement Investment Review recommendations by recruiting additional staff experienced in health and medical research.</li> <li>• NHMRC Principal Committees to bring to the attention of NHMRC issues of national importance. Engage with relevant government and non government agencies.</li> </ul>
Coordinate internal strategic functions.	<ul style="list-style-type: none"> <li>• Integrate research, advisory, regulatory and ethics functions.</li> </ul>
Improve NHMRC's internal expertise and capacity.	<ul style="list-style-type: none"> <li>• Strengthen NHMRC's internal scientific capacity.</li> </ul>
Communicate effectively.	<ul style="list-style-type: none"> <li>• Improve communications with government, health professionals and the community.</li> </ul>
Improve national and international cooperation and collaboration.	<ul style="list-style-type: none"> <li>• Develop broad ranging national and international multidisciplinary partnerships.</li> </ul>

## **Appendix F: Documents Provided to the Review**

### **NHMRC Public Documents:**

NHMRC Act 1992

Statement of Expectations from Minister Abbott 3 August 2007

NHMRC Statement of Intent 2006-2007

NHMRC Strategic Plan 2007-2009

NHMRC Research Funding Facts Book

A Model Framework for Consumer and Community Participation in Health and Medical Research

### **NHMRC Research Committee Documents:**

Funding Group Characteristics Aims & Selective Criteria (RC Aug 2007: Item 6.1.1 Attachment C2)

NHMRC Funding Schemes (RC Aug 2007: Item 6.1.1 Attachment C)

Australia Fellowship Review Findings & Recommendations RC Aug 2007: Item 6.1.5)

Principles of Peer Review (RC Aug 2007: Item 6.1.2 Attachment A)

Peer Review of Project Grants in 2008 (RC Aug 2007 Item 6.1.3 Attachment A)

Evaluation of Funding Schemes: Reviews and Evaluations Planned for the remainder of 2007 (RC Aug 2007 Item 6.1.4 Attachment A)

Measurement of Research Impact and Achievement (MORIA) Working Group Chair's Report (RC Feb 2006: Item 24 Attachment A)

### **NHMRC Research Funding Applications and Guidelines:**

Assessment Process for Program Grants

Australia Fellowships Procedures

Australia Fellowship Assessments

Changes to NHMRC Project Grants Peer Review Process for 2007

Enabling Grants Procedures

Establishment and Appointment of Enabling Grant Panels

Guide to Assessors of NHMRC Project Grant Applications

MORIA Proof of Principle -Impact of Research - Survey Instrument

NHMRC Project Grants Peer Review Guidelines

## **Appendix F cont'd**

Research Grants Funding Policy 2007

NHMRC Development Grants Funding Policy Commencing 2008

Overview of NHMRC Assessment Process

Project Grants Funding Policy 2008

Project Grant Assessment Step-by-Step Description

Project Grant GRP Procedures v4

Project Grant Model for Committees

Project Grant Round GRPs and RFCDs for 2007

Project grant Peer Review Costs for 2007

Program Grants Funding Policy for Funding commencing 2009

Program Grant Guide for Applicants for Funding commencing Jan 2009

Program Grant Evaluation and Scoring

Research Grants Peer Review Guidelines

Research Investment Management and Evaluation System (RIMES)

Short Descriptions of the Key NHMRC Funding Vehicles

Training Awards Procedures

Training Awards Establishment and Appointment of Committees

Training Awards Assessment Process

### **NHMRC Internal Documents:**

NHMRC Core Data Set Graphs

Strategic Health and Medical Research: An Ongoing Challenge

Report from the Policy and Practice Options Working Group

### **Reviews and Reports**

Wills, Peter J. AM. The Virtuous Cycle - Working Together for Health and Medical Research. Health and Medical Research Strategic Review, 1999.

Grant, John. Sustaining the Virtuous Cycle for a Healthy, Competitive Australia, Investment Review of Health and Medical Research, 2004.

Research Australia. Health and Medical Research Public Opinion Poll, 2006

**International Source Materials**

CIHR International Review Panel Report 2005