

# NHMRC Report

## June 2011

*Working to build a healthy Australia*

*Professor Warwick Anderson*

*Chief Executive Officer*





# NHMRC Research Support



- In 2011 NHMRC supports:
  - 2131 Project Grants
  - 61 Program Grants
  - 405 NHMRC Fellowships:
    - *69 Senior Principal Research Fellows*
    - *88 Principal Research Fellows*
    - *247 Senior Research Fellows*
  - 276 Career Development Award Fellowships:
    - *170 Biomedical*
    - *43 Clinical*
    - *9 Industry*
    - *54 Population health*
  - 355 Early Career Fellowships in Australia
  - 212 Early Career Fellowships overseas.



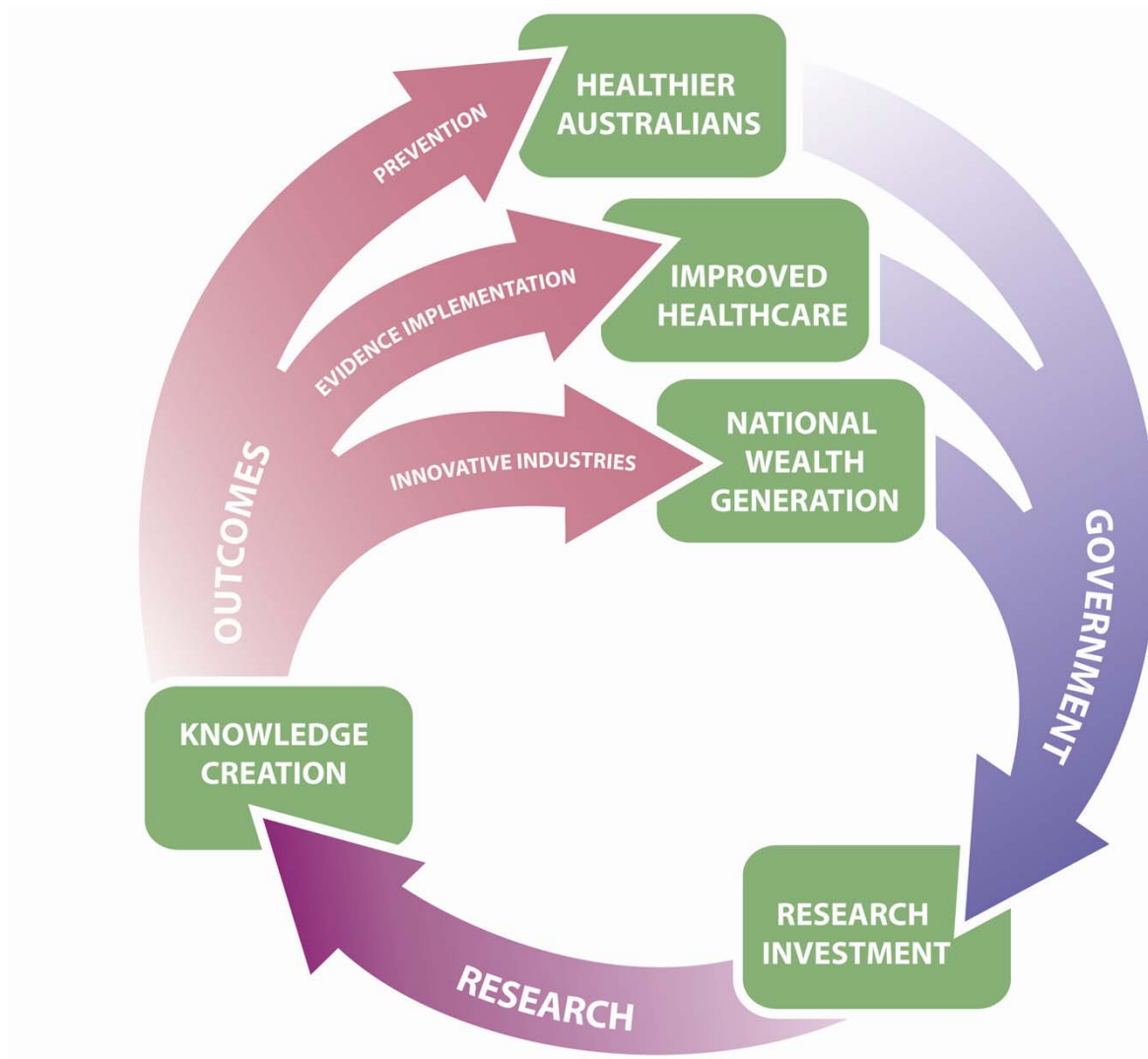
# NHMRC Research Support



- **And grants at:**
  - 85 research institutions,
    - At which researchers collaborated with **at least** 168 health and medical research bodies throughout Australia including:
      - **68 hospitals**
      - **28 clinical or community organizations**
      - **41 research institutes**
      - **27 universities**



# The Virtuous Cycle





# NHMRC



- 75<sup>th</sup> anniversary in 2011
  - “Research for a healthy future” symposium (29<sup>th</sup> November – 1<sup>st</sup> December 2011)
  - 1936 – *“research must be actively pursued and as fast as new knowledge is acquired it must be applied” (Health Minister, first Council meeting, Hobart 1936)*
- In 2006, NHMRC Act amended and NHMRC became an independent Statutory Agency within the Health and Ageing Portfolio



# NHMRC Objectives

## *Defined from the NHMRC Act (1992)*

### **Objective 1**

Raise the standard of individual and public health throughout Australia

### **Objective 2**

Foster the development of consistent standards between the various states and territories

### **Objective 3**

Foster medical research and training and public health research and training

### **Objective 4**

Foster consideration of ethical issues relating to health

## *NHMRC Strategic Plan 2010 - 2012*

### **Objective 5**

Build a better NHMRC



# NHMRC Strategic Plan

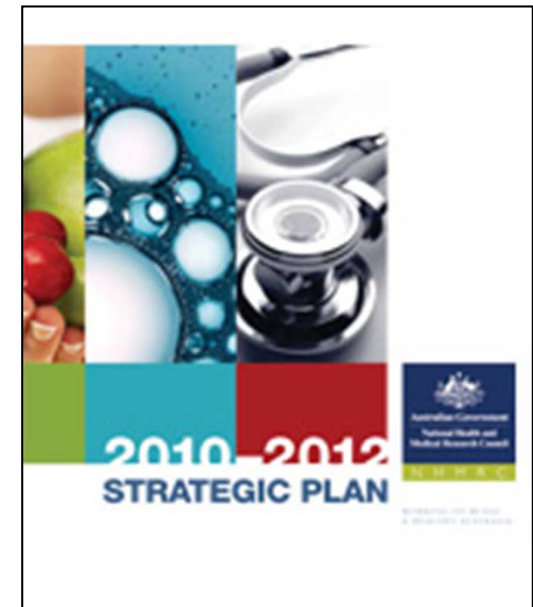


The *NHMRC Act (1992)* requires the CEO to provide a Strategic Plan each triennium

Includes an assessment of the major health issues likely to arise, and how he/she will handle these.

## For this triennium:

- Indigenous health and well-being*
- Building a self improving health system*
- Ageing and health*
- Chronic disease*
- Mental Health*
- Genomic medicine and frontier technologies*
- Planning for emerging infectious disease threats*
- Examining alternative therapy claims*
- Global health*
- Health consequences of climate change*



**NB:** These are not necessarily research priorities

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# Objective 4: Consideration of Ethical Issues



1. Promote ethical standards in patient care and public health
  - *A national framework*
  - *Community discussion on ethical issues in patient care*
  - *Ethical guidelines related to major health issues*
2. Promote ethical standards and review of animal and human research
  - *Guidance for HRECs and AECs*
  - *Community discussion on ethical issues in human and animal research*
  - ***A national system for single ethical review of multi-centre research***
  - ***Improved scheme for registering HRECs***
3. Responsible conduct and governance of research
  - ***National programs to promote research integrity***
  - ***Administering Institutions policy development***
  - *Regulation of human embryos in research*



# Objective 5: Build a better NHMRC



1. Recruit research background staff
2. Establish our own systems, especially Research Grant Management System (RGMS)
3. Further improve peer review
4. Grow international collaborations



# Objective 3: Research and Training



1. NHMRC Strategy for Health and Medical Research
2. National Strategy for Health and Medical Research  
(required by NHMRC Act)



# NHMRC Strategy for Health and Medical Research



- *Creating knowledge* – by investing in research most likely to yield new knowledge through independent research initiated by talented, well trained researchers
- *Translating knowledge* – by supporting funding schemes that help ensure research findings flow into improved policy and practice
- *Building capacity to undertake research* – by supporting, renewing and widening Australia's pool of talented new researchers, from early training through to their most productive years
- *Being a good international citizen* – contributing to the development of health knowledge worldwide and improving health in our region
- *Evolving peer review* – seeking to achieve the highest quality decision making



# NHMRC's Support for Research



## CREATING KNOWLEDGE

- *Project Grants*
- *Program Grants*
- *Targeted Calls for Research*

## BUILDING AUSTRALIA'S HEALTH AND MEDICAL RESEARCH CAPACITY

- **Researchers**
  - *Research Fellowships – biomedical, clinical, public health*
  - *Career Development Awards – biomedical, clinical, public health*
  - *Training Fellowships – biomedical, clinical, public health*
  - *Practitioner Fellowships*
  - *Scholarships*
- **Facilities**
  - *National Health Research Enabling Capabilities Scheme (formerly Enabling Grants)*
  - *Equipment Grants*

## TRANSLATING KNOWLEDGE

- *Development awards*
- *Partnership Projects for Better Health*
- *Centres of Clinical Research Excellence*
- *Centres of Research Excellence in Population Health Research, & Health Services Research.*

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# Project Grants 2010 Funding Round Outcome



	# Apps	# Funded	# Fundable but not Funded	# Not Recommended for Funding	% Funded
New Investigator	349	55	90	204	15.8%
Standard	2877	701	1398	778	24.4%
<b>TOTAL</b>	<b>3226</b>	<b>756</b>	<b>1488</b>	<b>982</b>	<b>23.4%</b>

**Total Funding Commitment is \$414,735,588**



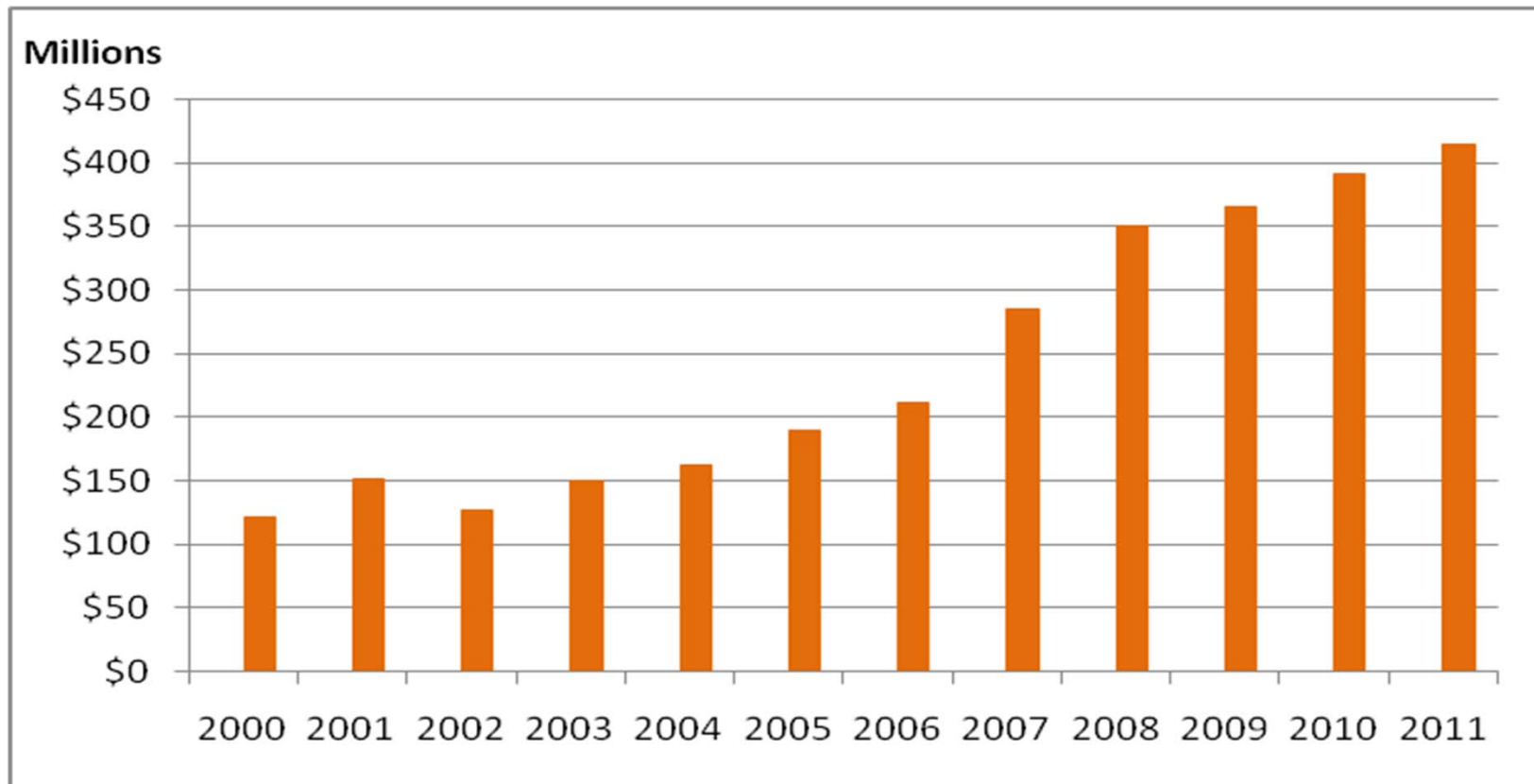
# Project Grants 2009 and 2010 Funding Rounds – by Broad Research Area



Broad Research Area	2009			2010		
	No. Apps	No. Funded	% Funded	No. Apps	No. Funded	% Funded
Basic Science	1436	377	26.3%	1553	424	27.3%
Clinical Medicine and Science	1064	197	18.5%	1181	233	19.7%
Health Services	127	24	18.9%	138	24	17.4%
Public Health	357	85	23.8%	354	75	21.2%
<b>TOTAL</b>	<b>2984</b>	<b>683</b>	<b>22.9%</b>	<b>3226</b>	<b>756</b>	<b>23.4%</b>



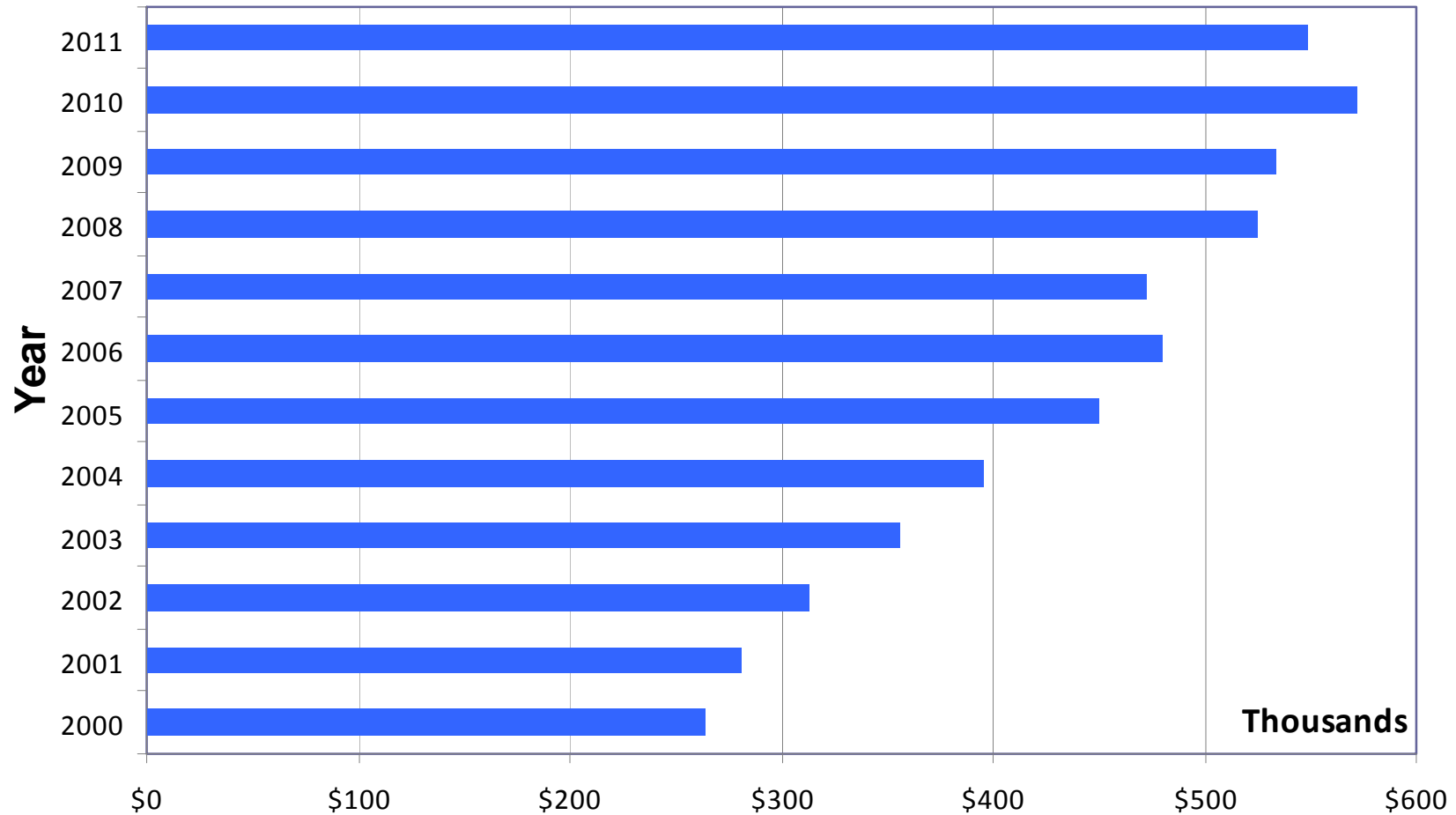
# Project Grants Total Annual Commitment 2000-2011



Commitment of funds for research commencing in each calendar year.



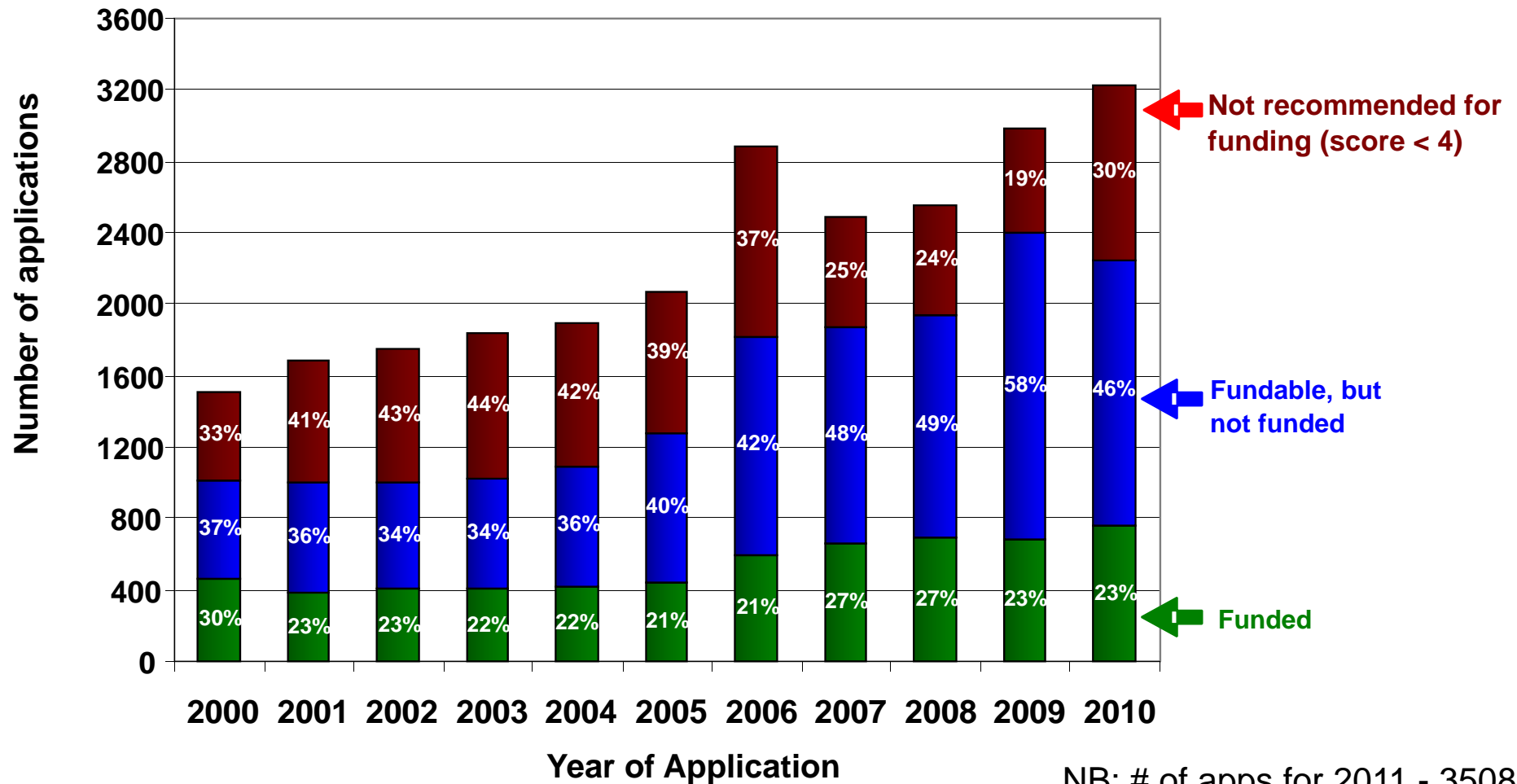
# NHMRC Project Grants Average Size



For grants commencing in each calendar year.



# Project Grants - Success Rates



NB: # of apps for 2011 - 3508



# Project Grants 2009 Funding Round Success Rate by State



State	# Apps	# Funded	% Funded
VIC	1060	251	23.7%
NSW	814	188	23.1%
QLD	454	99	21.8%
SA	310	74	23.9%
WA	219	39	17.8%
ACT	83	17	20.5%
TAS	28	7	25.0%
NT	17	7	41.2%
<b>Total</b>	<b>2985</b>	<b>682</b>	<b>22.8%</b>



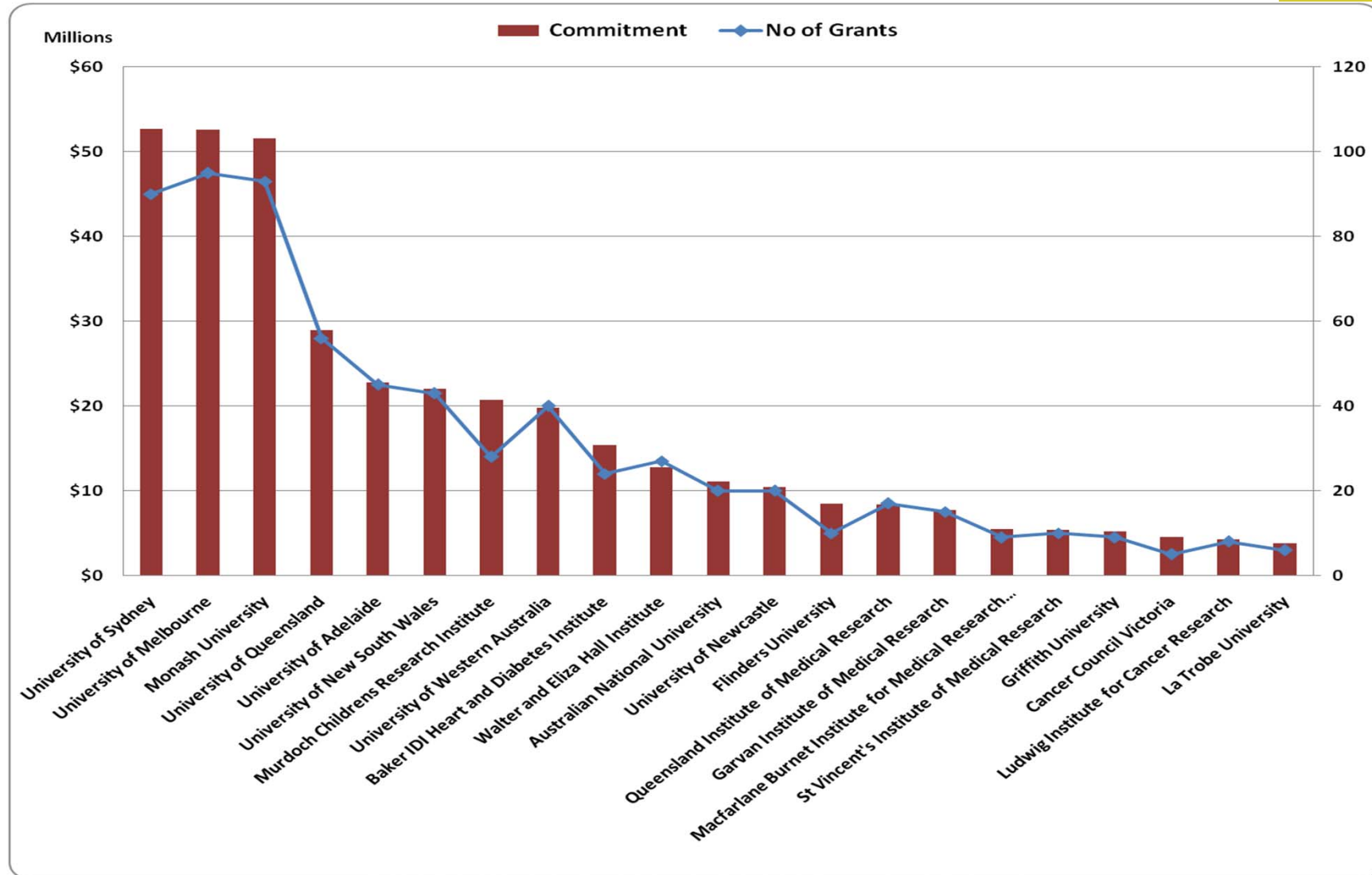
# Project Grants 2010 Funding Round Success Rate by State

State	# Apps	# Funded	% Funded
VIC	1154	331	29%
NSW	928	190	20%
QLD	475	95	20%
SA	307	59	19%
WA	229	51	22%
ACT	85	21	25%
TAS	31	7	23%
NT	17	2	12%
<b>Total</b>	<b>3226</b>	<b>756</b>	<b>23%</b>



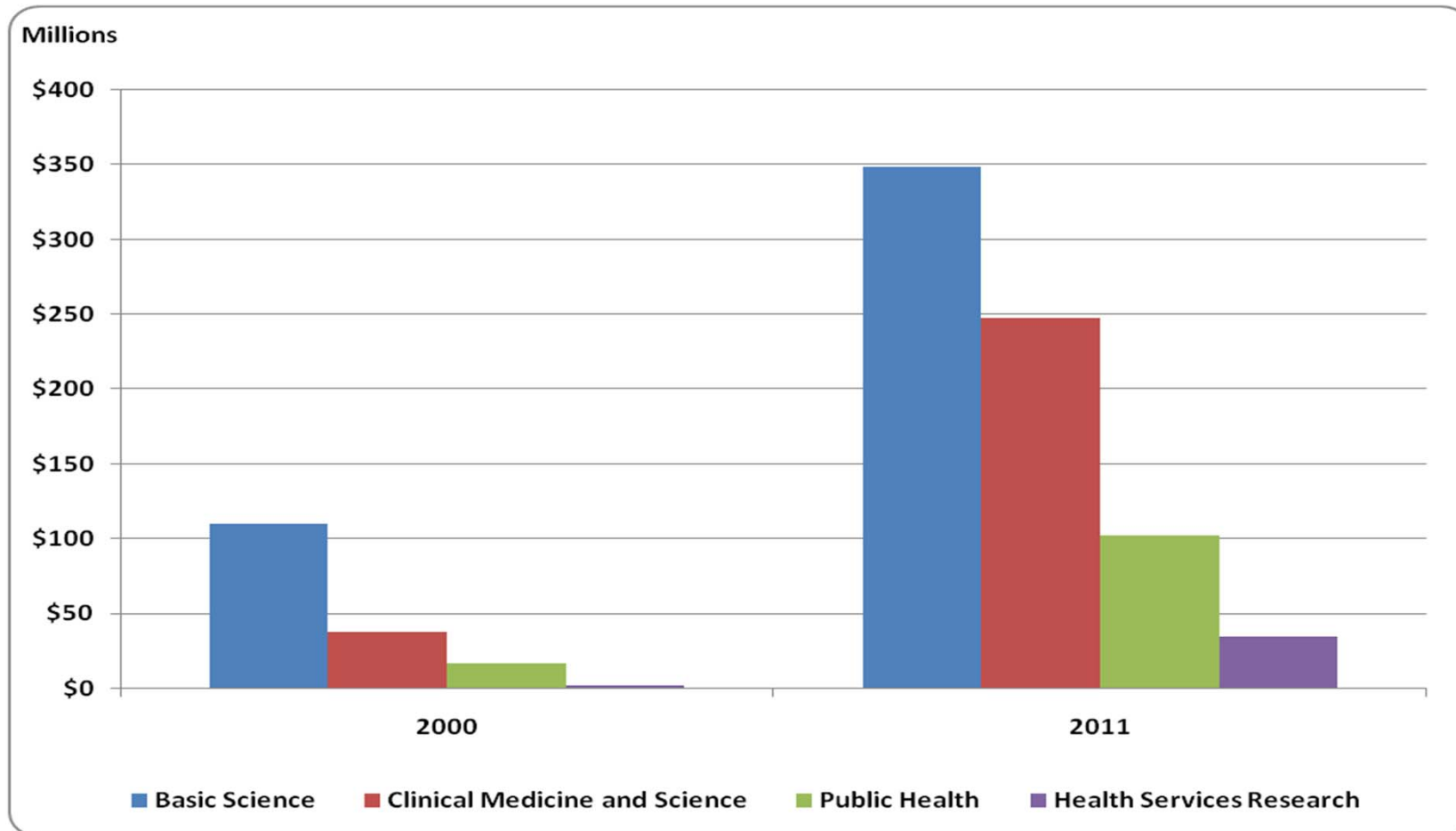
# Project Grants commencing in 2011

by Institution – where funding was >\$3m



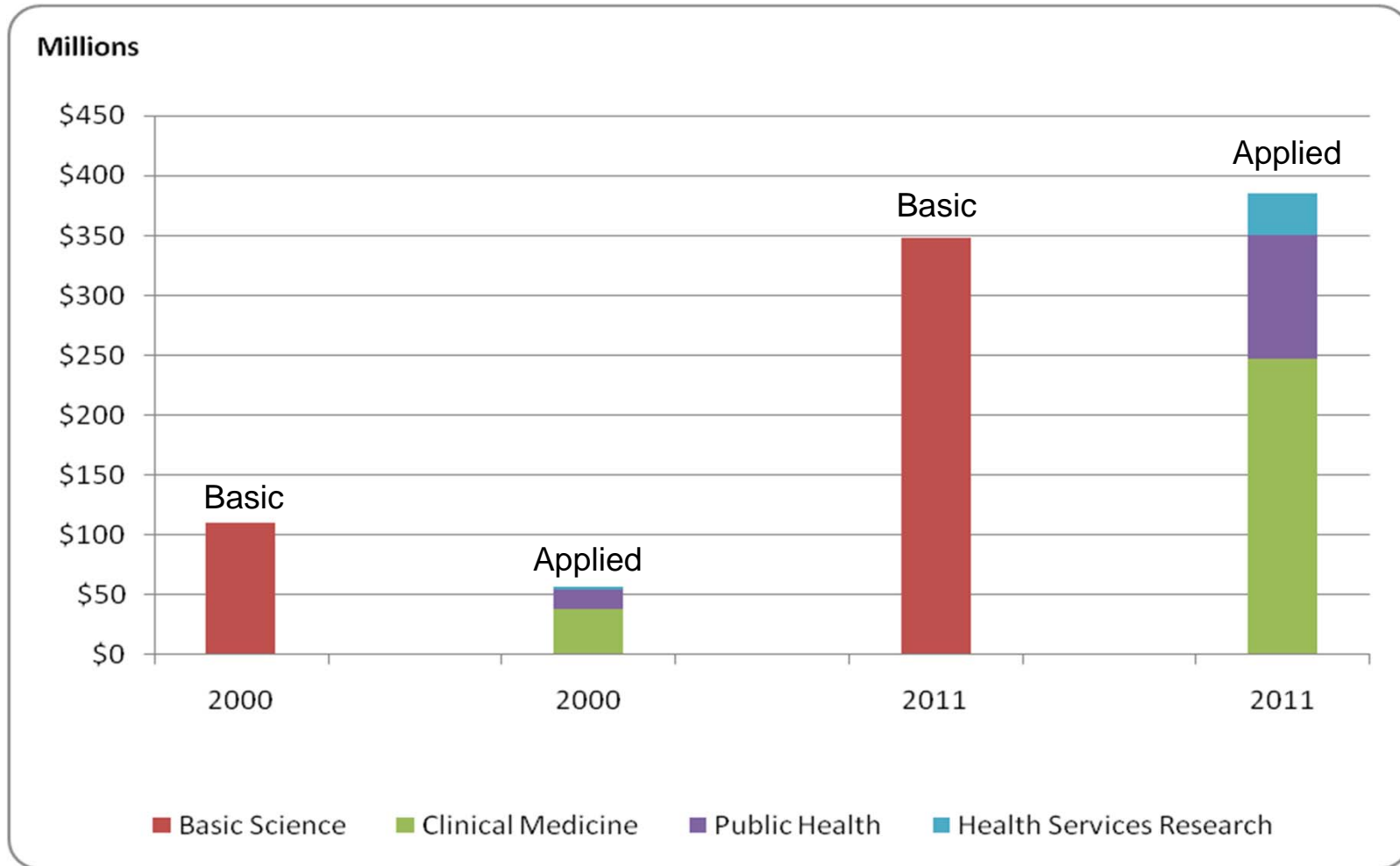


# Percentage of Expenditure by Broad Research Area (2000 and 2011)





# Percentage of Expenditure by Broad Research Area (2000 and 2011)



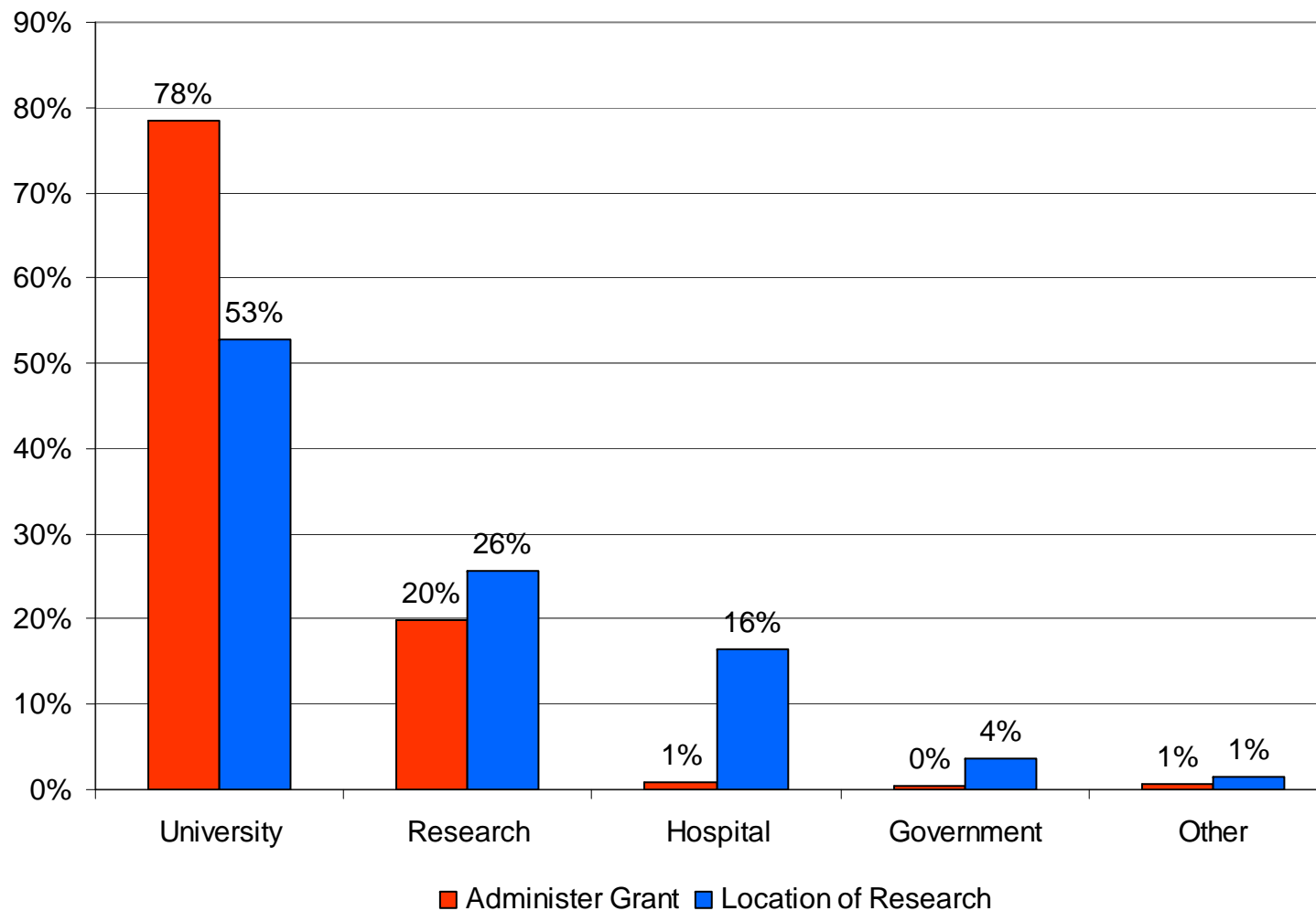
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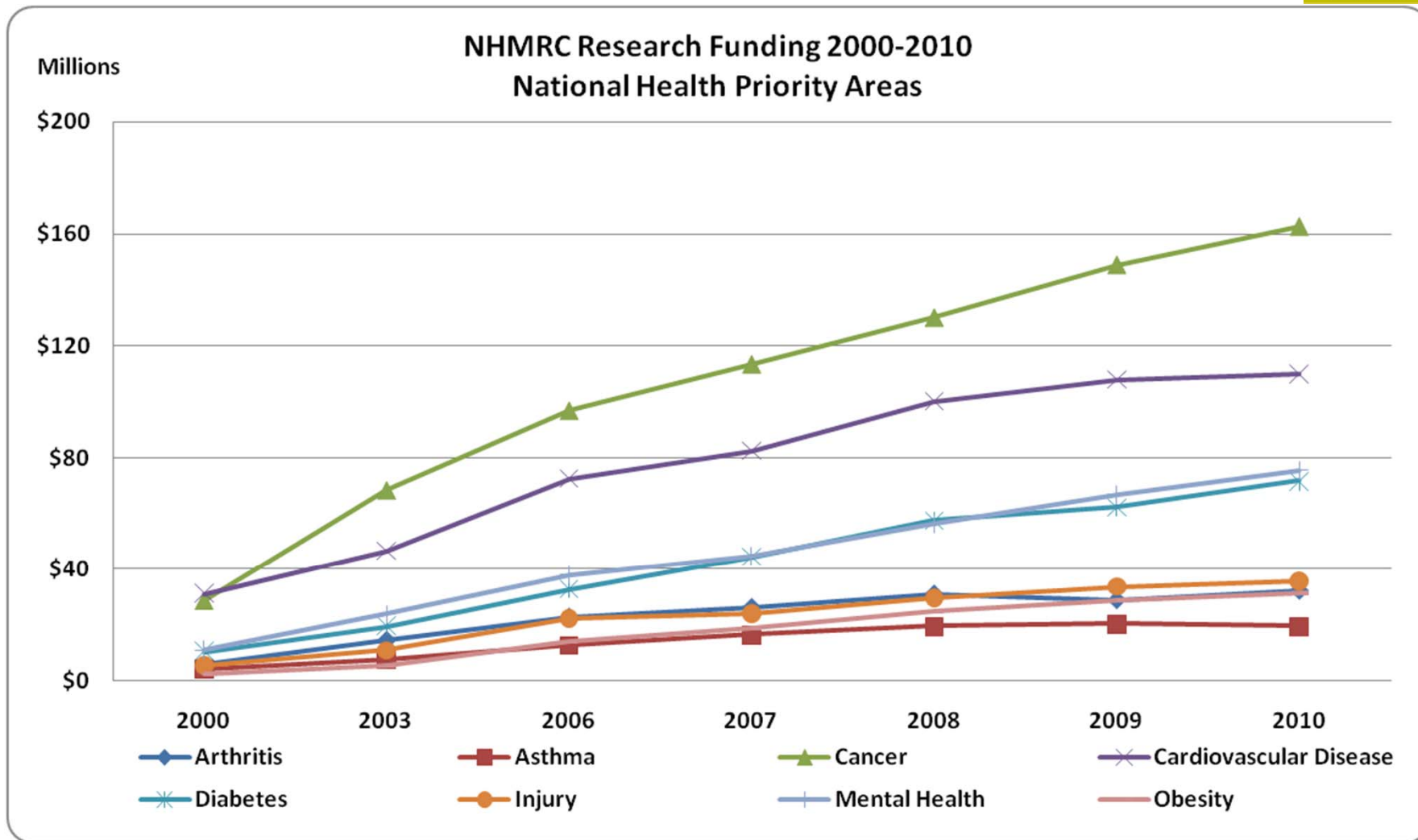


# Where Research is Administered and Conducted





# NHMRC Support for National Health Priority Areas





# Summary of 2010 Funding Recommendations for Research Support

Grant Type	# Apps	# Funded	% Funded	Total Budget (\$m)
Project Grants	3226	757	23.5	\$415.7
Program Grants (from 2012)	15	9	60.0	\$107.0
NHMRC Partnership Projects	52	16	30.8	\$14.3
Development Grants	91	18	19.8	\$7.4
<b>Overall support for Research</b>	<b>3384</b>	<b>800</b>	<b>23.6%</b>	<b>\$544.5</b>
<b>Overall support for People</b>	<b>1459</b>	<b>432</b>	<b>29.6%</b>	<b>\$160.2</b>
<b>TOTAL</b>	<b>4843</b>	<b>1232</b>	<b>25.4%</b>	<b>\$704.7</b>



# Project Grants 2010 funding round



- GRPs conducted at NHMRC headquarters in Canberra
- Greater involvement of NHMRC research staff
- Independent Chairs
- Tighter adherence to the selection criteria
- More consistent approaches to budgets (more to be done)
- Introduction of the "Not for Further Consideration" (NFFC) process



# Project Grants 2011 funding round

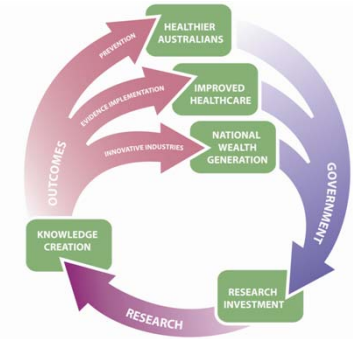


- Assigners Panel reintroduced
- RGMS used for external reviewers names
- Clearer budget advice
- Strengthen briefings



# NHMRC Strategy

## *Translating Knowledge*



1. Support partnerships in knowledge translation through:
  - *Partnership Projects for Better Health*
  - *Establishing Partnerships for Better Health and Centres of Research Excellence*
2. Support evidence-based health policy and practice through:
  - *Centres of Clinical, Public Health, and Health Services Research Excellence*
3. Support the uptake of evidence into the clinical setting through:
  - *Practitioner Fellowships for outstanding researchers working to deliver clinical care; Centres of Clinical Research Excellence*
4. Support research translation into commercial development by:
  - *Supporting the Development Grants scheme including reviewing its achievements*
  - *Developing an online portal for business to identify research funding opportunities*



# NHMRC Strategy

## *Building Capacity*



### **Flexible conditions on research grants**

#### **For full-time researchers:**

- *Research Fellowships*
- *Mid Career Fellowships*
- *Early Career Fellowships*
- *Scholarships*
- *Personnel Support Packages on Project and Program Grants*

#### **For researchers in patient care and health policy development:**

- *Practitioner Fellowships*
- *Centres for Research Excellence*
- *Personnel Support Packages on Project and Program Grants*

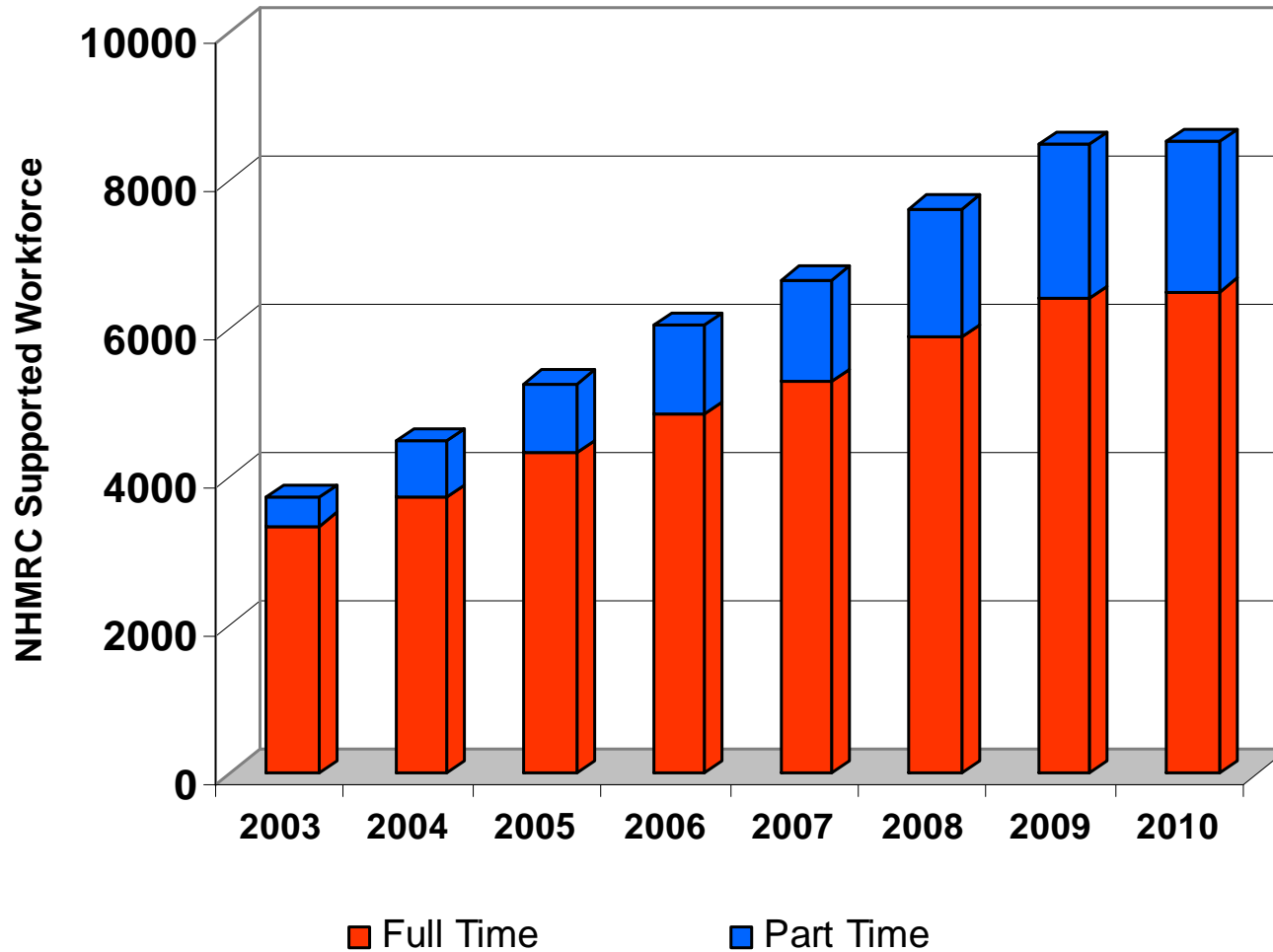
#### **Build Aboriginal and Torres Strait Islander research capacity:**

- *NHMRC Road Map II: A Strategic Framework for Improving the Health of Aboriginal and Torres Strait Islander People through Research*

### **National Health Research Enabling Capabilities Support Scheme**



# NHMRC Supported Research Workforce





# Summary of 2010 Funding Recommendations for Fellowships

Grant Type	# Apps	# Funded	% Funded	Total Budget (\$m)
<b>Overall support for research</b>	<b>3384</b>	<b>800</b>	<b>23.6%</b>	<b>\$544.5</b>
Research Fellowships	219	86	39.3	\$57.4
Career Development Fellowships	428	62	14.5	\$24.1
Early Career Fellowships	473	131	27.7	\$37.2
Postgraduate Scholarships	288	130	45.1	\$10.2
Australia Fellowship	91	6	6.6	\$24.0
Practitioner Fellowships	30	17	56.7	\$7.3
<b>Overall support for People</b>	<b>1459</b>	<b>432</b>	<b>29.6%</b>	<b>\$160.2</b>
<b>TOTAL</b>	<b>4843</b>	<b>1232</b>	<b>25.4%</b>	<b>\$704.7</b>



# NHMRC Strategy

## *Evolving peer Review*



### High quality peer review:

- *Ensures all applications receive the best possible review*
- *Is transparent, with independent observers*
- *Is appropriate to the research approaches involved, including multidisciplinary and interdisciplinary research*
- *Utilises internet-based technologies to improve lodgement of applications, and improves use of international peer reviewers*
- *Participation is recognised and acknowledged*



# Research Grants Management System



- Structure and use
- 2009 issues
- 2011 issues
- Potential uses



# NHMRC Strategy

## *International Commitment*



- Continued international research collaborations such as:
  - *International Cancer Genome Consortium*
  - *Human Frontier Science Program*
  - *Global Alliance for Chronic Disease*
- New collaborations and activities designed to strengthen regional research capacity and improve health in neighbouring countries



# NHMRC & international collaborations



## INTERNATIONAL CANCER GENOME CONSORTIUM

- Goal is to investigate the genomics of up to 50 cancers
- 24 countries will share tissue samples, data and information
- Researchers will analyse up to 5000 samples of each tumour type
- NHMRC will provide \$27.5 million over 5 years to University of Queensland researchers to examine pancreatic and ovarian cancer

## GLOBAL ALLIANCE FOR CHRONIC DISEASE

- The alliance coordinates and supports research activities that address, on a global scale, the prevention and treatment of chronic non-communicable diseases, which account for nearly 60 percent of all deaths globally
- Focus on low and middle-income countries
- The GACD is the first collaboration of major research funding agencies to specifically address chronic non-communicable diseases
- Together, the members of the alliance represent an estimated 80 percent of all public health research funding worldwide.

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# Innovation & NHMRC funding schemes



## **MARSHALL AND WARREN AWARD (introduced 2010)**

- Awarded to project grant applicants that are considered by the grant review panel to have potentially transformative research ideas
- These are grants that may not normally be funded
- 1<sup>st</sup> award in 2010 to Professor Christopher Parish and Doctor Benjamin Quah
  - on their unique discovery that immune cells responding to a pathogen are able to rapidly transfer their ability to fight the new infection to other immune cells

## **PROJECT GRANTS**

- Innovation is part of the selection criteria
- It can contribute 25% to the overall score

## **PROGRAM GRANTS**

- Innovation is rewarded – with a large one line grant mainly awarded on the record of achievement of the team rather than an exact program of work in detail

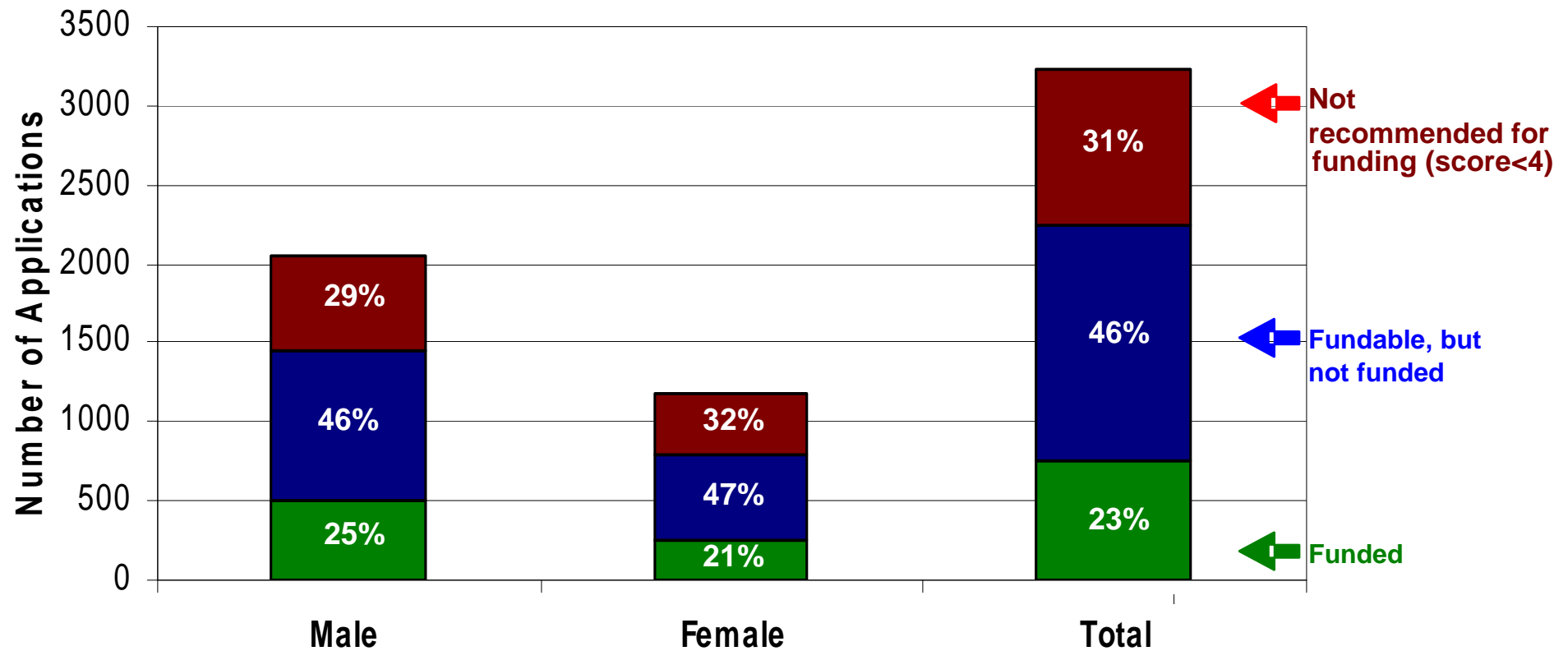
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# Project Grants 2010 Funding Round Gender Outcomes



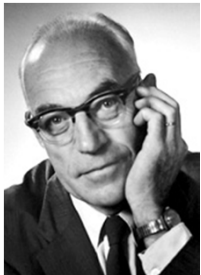


# Australian Nobel Prize Winners – Physiology or Medicine



**1945** – Sir Howard Walter Florey

**1960** – Sir Frank Macfarlane Burnet



**1963** – Sir John Carew Eccles

**1996** - Professor Peter Doherty



**2005** - Professor Barry Marshall and Professor Robin Warren

**2009** – Professor Elizabeth Blackburn





# Health and Medical Researchers Australians of the Year



**1960** – Sir Frank Macfarlane Burnet



**1963** – Sir John Carew Eccles



**2000** – Sir Gustav Nossal



**2003** - Professor Fiona Stanley

**2005** - Professor Fiona Wood



**2006** – Professor Ian Frazer

**2010** – Professor Patrick McGorry





# University of Newcastle – NHMRC expenditure by funding scheme

Funding Scheme	2010	2011
Scholarships	\$60,500	\$25,655
Early Career Fellowships	\$497,420	\$733,305
Career Development Fellowships	\$335,058	\$324,426
Research Fellowships	\$402,249	\$525,672
Practitioner Fellowships	\$73,495	\$74,818
International Exchange Awards	\$55,281	\$74,713
Project Grants	<b>\$10,649,154</b>	<b>\$11,293,758</b>
Development Grants	-	\$181,611
Partnership Grants	\$482,927	\$734,375
International collaborations	\$162,000	-
Targeted Calls	\$720,382	-
Enabling Grants	\$587,000	\$254,500
Infrastructure Grants	-	\$179,328
<b>TOTAL</b>	<b>\$14,025,466</b>	<b>\$14,402,161</b>



# University of Newcastle – NHMRC expenditure by BRA

Broad Research Area	2010		2011	
	Number of active grants	Expenditure	Number of active grants	Expenditure
Basic Science	21	\$2,989,159	34	\$5,201,073
Clinical Medicine and Science	43	\$8,803,848	33	\$6,253,667
Health Services Research	2	\$276,832	4	\$714,840
Not Allocated			1	\$179,328
Public Health	13	\$1,955,628	11	\$2,053,254
<b>Grand Total</b>	<b>79</b>	<b>\$14,025,466</b>	<b>83</b>	<b>\$14,402,161</b>



# University of Newcastle – NHMRC expenditure by CIA gender

CIA Gender	2010		2011	
	Number of active grants	Expenditure	Number of active grants	Expenditure
Female	22	\$2,689,957	24	\$2,875,041
Male	57	\$11,335,508	58	\$11,347,793
Not Allocated			1	\$179,328
<b>Grand Total</b>	<b>79</b>	<b>\$14,025,466</b>	<b>83</b>	<b>\$14,402,161</b>

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