



I. AUSTRALIAN HEALTH & MEDICAL RESEARCH FUNDING SUMMARY

Extracts from: “Trends in health and medical research funding” (Research Australia)

<http://www.thankyouday.org/content/documents/Trends%20and%20statistics%202009.pdf>

(see also xcel spread sheet)

- Australia has 0.3% of world’s population and 3% of OECD’s medical research publications
- Strong public support: 72% of people think that government should continue increasing funding
- In 2005, Australians ranked Health & Medical Research, along with education, as the most important factors in Australia’s future
- Average return on investment \$2.71 for every dollar (range \$51c - \$6.01)

- **Health budget:**
 - ❖ Government spending on Health R&D is 1.3% of the total Health and Aging budget (Australia 2nd compared to USA, 3.25%);
- **GDP:**
 - ❖ Total Commonwealth Health & Medical Research funding is 0.11-0.12% of GDP over last 6 years
 - ❖ Total NH&MRC funding is 0.04-0.06% of GDP over last 6 years
- **OECD:**
 - ❖ 2006: Commonwealth Health & Medical Research funding is high by OECD standards (4-5th), but half that of US. Australia spends ~\$37 per capita; USA ~\$99 per capita)
- **National Health & Medical Research Council (NHMRC):**
 - ❖ NHMRC funding doubled over last decade from \$177m - \$632m (“The Virtuous Cycle”, Wills Review, 1999; “Sustaining the Virtuous Cycle, Grant Review, 2004)
 - ❖ If 1.3% share of Health and Aging budget is maintained, NHMRC funding should reach \$890m in 2014-15.
 - ❖ Universities and research Institutes are the most significant performers of publically-funded Health & Medical Research & the largest recipients of NHMRC funding
 - ❖ NHMRC supports researchers directly through Fellowships, Scholarships, Project & Program grants
 - ❖ Current workforce supported by NHMRC is ~7,500 (approx 20% are part-time)
- **Australian Private Sector Health & Medical Research Funding:**
 - ❖ Over 2000-2005, the business share of total Health R&D funding grew from 25% to 29%, while Commonwealth share grew less (46-48%) over the same period
 - ❖ Business share dollar values: 2003-2004, \$434m; 2004-2005, \$537m; 2006-2007, \$762m
- **Australian Philanthropic Health & Medical Research Funding:**
 - ❖ Philanthropic giving in Australia is low by International standards, especially compared to USA
 - ❖ Australian Philanthropy contributed \$216m to HMR in 2001 (12% of total HMR expenditure). Contrast with UK where Philanthropy contribute ~1/3rd of total funding
 - ❖ Average yearly donations to medical research are low (\$77) compared to arts/culture (\$220), international aid (\$234), religious/spiritual organisations (\$529)
 - ❖ However, giving to health & medical research is widespread, receiving 4th highest proportion (10%) of philanthropic dollars compared to international aid (13%), community/welfare (13%) and religious/spiritual (36%)

- **NHMRC Total and Neuroscience/Clinical Neuroscience funding:**

<http://www.nhmrc.gov.au/grants/dataset/rmis/index.htm>

Year	Total NHMRC funding	Neuroscience	Clinical Neuroscience	Neuroscience + Clinical Neuroscience	% of Total NHMRC funding
2005	\$411,476,000	\$28,591,000	\$16,383,225	\$44,976,556	10.93%
2006	\$451,352,000	\$26,515,000	\$16,234,649	\$42,751,562	9.47%
2007	\$533,961,000	\$31,029,000	\$16,620,777	\$47,651,801	8.92%
2008	\$625,510,000	\$36,171,000	\$16,694,197	\$52,867,374	8.45%
2009	\$707,089,000	\$40,273,000	\$18,038,531	\$58,313,343	8.25%

➤ **Australian Research Council (ARC) Total and Neuroscience funding:**

http://www.arc.gov.au/xls/WebData_Trends.xls

Year	Total ARC funding	Neuroscience	% of Total ARC
2005	\$467,868,000	\$12,474,000	2.12%
2006	\$600,778,000	\$ 6,273,000	1.32%
2007	\$475,595,000	\$ 2,383,000	0.51%
2008	\$462,834,000	\$ 3,457,000	0.70%
2009	\$490,581,000	Not available	-

➤ **Health and Medical Research Workforce Issues:**

<http://www.asmr.org.au/workforce09.pdf> (2009 data)

- ❖ Medical Research Institutes and University Departments have 39,037 total staff, of which 23,411 are research staff and 15,023 (38%) of total staff hold a PhD
- ❖ 58% female and 42% male
- ❖ Largest cohort is 30-39 and female, second largest cohort is 40-49 and male
- ❖ It is estimated that, between 2010-2019, 6,520 members of medical research workforce over 40 in 2009 would leave workforce by 2019 and that 4000 would hold a PhD.
- ❖ In addition to replacing the 4000 retirees, and *additional* 1,700 PhD completions are required for Australia to maintain medical research capacity as a proportion of the population of work force age in 2019 (i.e. taking projected population growth into account)
- ❖ Australia has a low rate of PhD completions in the workforce (8 / 100,000) compared to comparable OECD nations (US: 11/100,000; 28% higher; Germany: 20/100,000; 150% higher; Switzerland 28 / 100,000; 250% higher)
- ❖ If Australia were to reach the level of PhD graduates in the health and medical research work force in US, Germany and Switzerland, it would require respectively an *additional* 5,700, 22,800 or 38,000 PhDs at a cost of \$0.75b, \$3b or \$5.3b.

OTHER REFERENCES & LINKS

Research Australia

<http://researchaustralia.org/ra.aspx>

“The Virtuous Cycle: Health & Medical Research Strategic review”

http://www.thankyouday.org/content/documents/Wills%20Report%20discussion_document%5B1%5D.pdf

“Sustaining the Virtuous Cycle: Investment Review of Health and Medical Research”

<http://www.thankyouday.org/content/documents/Grant%20Review%202004.pdf>

“Health and Medical Research Philanthropy: The 4th dimension of the virtuous cycle” (Research Australia)

<http://researchaustralia.org/content/documents/Philanthropy%20Report%204th%20Dimension%2027.02.06.pdf>

“People make research happen: Planning the Health and medical Research Workforce 2010-2019”

<http://www.asmr.org.au/workforce09.pdf> (Australian Society for Medical Research)

II. NEW ZEALAND HEALTH & MEDICAL RESEARCH FUNDING SUMMARY

ANS Website: Summary Health, Medical Research & Neuroscience Funding in Australia & New Zealand
Sarah Dunlop, Cliff Abraham, March 2010

<http://repp.anu.edu.au/research.php>

- The overall average citation rate for Health Research Council (HRC) funded research was 55% higher than that for other university research and 26% higher than the national average for New Zealand and Australian research, respectively.”

➤ **Health budget**

<http://www.treasury.govt.nz/budget/2009/bps/06.htm> and
<http://www.morst.govt.nz/funding/Budget-2009/#health>

- ❖ 2009-2012: \$1.75bn + Capital allowance:- 2009: \$1.45bn; 2010-2012: \$2.9bn; 2013: \$1.45bn
- ❖ In 2010, Health Research Council budget represents 0.04% (\$71m {# see below} / \$1750bn) of total Health budget

➤ **GDP**

- ❖ NZ Government funding for all research is approximately 0.5% of GDP, a figure that has slowly fallen over the past 15 years.
- ❖ The % GDP figure lags well behind most other OECD countries, being roughly 23% less than the average value

Government-financed gross expenditure on R&D as a percentage of GDP

Source: OECD (2009), Main Science and Technology Indicators, Volume 2009 Issue 1.



Note (1) The 2007/08 OECD figure noted is an estimate based on the 2006/07 OECD figure. No actual 2007/08 OECD figure is available to date.

➤ **OECD**

❖ **2007 Funding of National Health Research Bodies: International Comparisons**

	HRC New Zealand	NHMRC Australia	MRC, NHS United Kingdom	NIH United States
Funding per annum	NZ\$ 42m*	Au\$ 636m*	£ 1256m*	US\$ 28.6b
Funding per capita	NZ\$ 10.2*	NZ\$ 34.6*	NZ\$ 54.3*	NZ\$ 126

*Excluding overheads

➤ **New Zealand Health Research Council (HRC)**

<http://www.morst.govt.nz/funding/Budget-2009/#health>

- ❖ 2009-2012: \$32m boost over 4 years to the current investment of \$63m (~*\$71m in 2010)
- ❖ Does not generally fund senior level fellowships, as does the NHMRC via its Fellowship Scheme

➤ **HRC and funding for Neuroscience research**

- ❖ Large variation due to small overall pool
- ❖ Amount awarded dominated by two large programme groups.

Year	Total HRC funding	Neuroscience	% of Total HRC
2005	\$37,404,000	\$3,418,200	9.1%
2006	\$30,303,600	\$5,373,600	17.7%
2007	\$41,073,000	\$6,065,400	14.8%
2008	\$45,862,800	\$3,176,400	6.9%
2009	\$50,148,000	\$6,004,800	12.0%

N.B., data are estimated direct costs only

➤ **Marsden Fund and funding for Neuroscience research**

<http://www.morst.govt.nz/funding/Budget-2009/#health>

- ❖ The Marsden Fund is New Zealand's premier fund for investing in blue-skies, investigator-initiated research
- ❖ Clinical and public health research is effectively barred from Marsden funding because those disciplines are classified as 'applied research'.
- ❖ Supports basic health research primarily through its Biomedical Sciences panel, to some extent via the Cellular and Molecular Physiology panel, and very little through other panels
- ❖ 2009: \$36M boost over 4 years

Year	Total Marsden funding	Neuroscience	% of Total Marsden
2005	\$21,013,333	\$1,939,200	9.2%
2006	\$20,853,333	\$1,772,267	8.5%
2007	\$23,466,667	\$2,059,200	8.8%
2008	\$28,659,733	\$3,176,400	7.6%
2009	\$34,770,133	\$3,608,533	10.4%

N.B., data are estimated direct costs only

➤ **Other Government funding**

- ❖ Some research with health relevance is funded by the Foundation of Research Science and Technology's investments in other research fields
- ❖ There is also direct government funding of universities (Performance Based Research Fund)
- ❖ For both, direct funding of health research is likely to be only a few million dollars.