

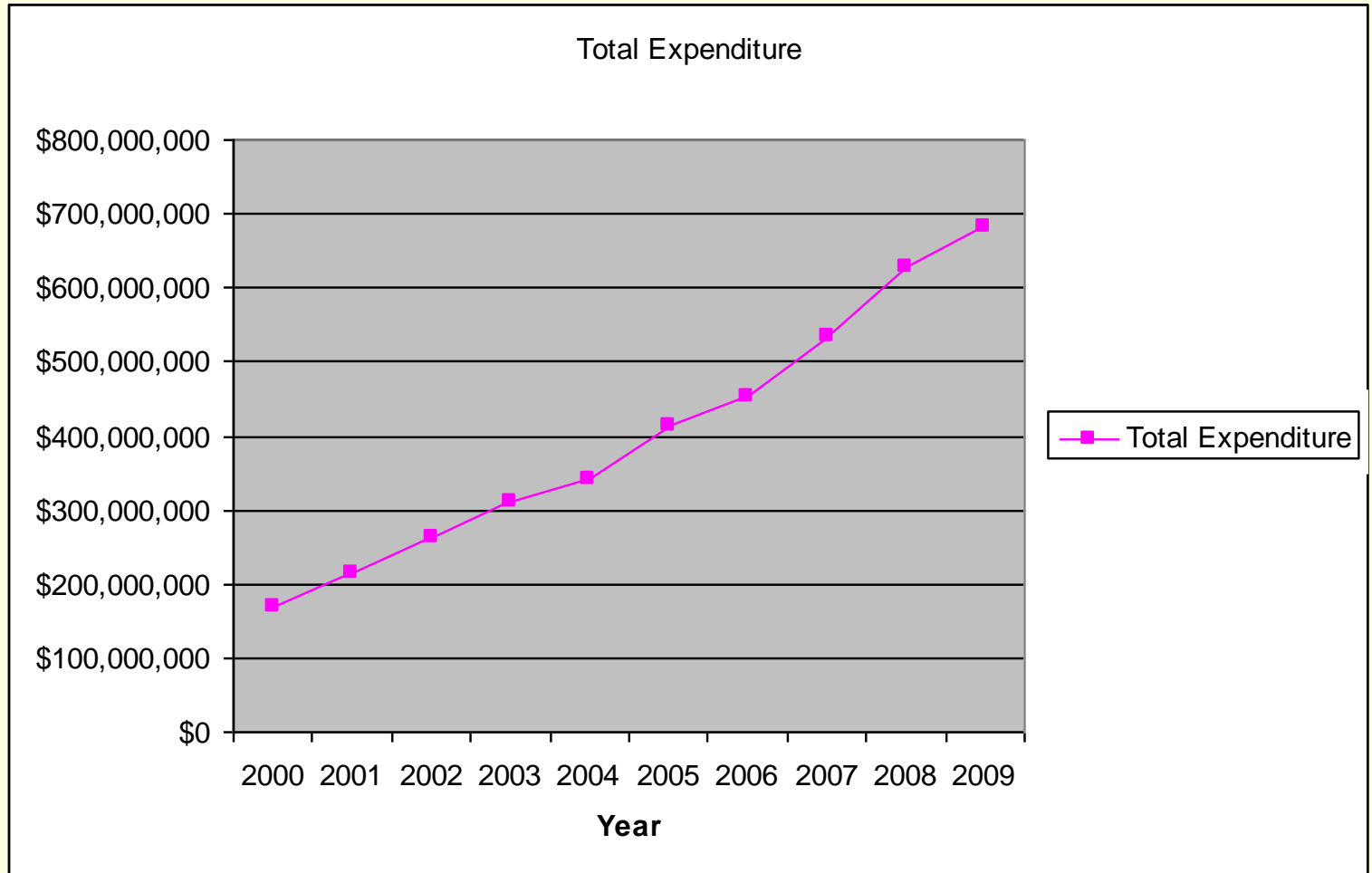
Medical research: increasing opportunities for careers

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Current status of medical research:

- Funding for medical research has increased many fold since the mid 1990's in the US, Japan and Europe
- In Australia the Wills Report (1998) provided the foundation for a remarkable expansion of funding for NHMRC.
- The commitment of NHMRC funds has risen from \$162,012,274 in 2000 to \$848,742,599 in 2009 (a 5 fold increase) – Expenditure has increased 4 fold over this period.

Total NHMRC Expenditure 2000 to 2009



Medical Research Infrastructure

(Approved in 2009/2010 Federal Budget)

	State	Value (\$m)	Employment	Completion date
Victorian Life Sciences Computation Initiative	VIC	50	30 researchers	2011
Bio21	VIC	400	500 researchers	complete
Melbourne Neuroscience Project (Parkville and Austin facilities)	VIC	225	500 researchers	2011
Walter and Eliza Hall Institute redevelopment	VIC	150	400 researchers	2012
Translational Research Institute	QLD	342	650 researchers	2012
QIMR building upgrade	QLD	180	500 researchers	2012
Health and medical research institute	SA	200	675 researchers	2012
National Institute for Virology	NSW	120	300 researchers	2010
Westmead Millenium Institute	NSW	89	1050 employees	2012

Total 4,000 to 4,500 new researcher places arising from investment of \$1,756m

Federal infrastructure spending for MRIs in Federal Budget 2009-10

Value
(\$m)

Education Infrastructure Fund

Science and Technology Precinct (Brisbane, QLD)	QLD	75
Smart State Medical Research Centre - QIMR (Brisbane, QLD)	QLD	55
National Centre for Synchrotron Science (Melbourne, VIC)	VIC	37

Health and Hospitals Infrastructure Funds

Ingham Health Research Institute (Liverpool, NSW)	NSW	47
Stage 2 Menzies Centre (Hobart, TAS)	TAS	45
Smart Therapies Institute (Brisbane, QLD) - Atlantic Philanthropies	QLD	40
Hunter Medical Research Institute (Newcastle, NSW)	NSW	35

Better Cancer Care

Lifeshouse at RPA (the new Sydney Cancer Centre)	NSW	100
Garvan St Vincent's Campus Cancer Centre (Sydney, NSW)	NSW	70
Monash Health Research Precinct Translation Facility	VIC	71
Eccles Institute of Neuroscience research, ANU	ACT	60
Population Health Research Network	WA	10

Expenditure from EIF, HHIF & BCC amounts to \$645m, facilities that are also likely to employ science graduates

Research-funded careers;

- Research Assistants BSc (Hons)
employed on Project and Program grants
- Research Officers PhD
Employed on Project and Program grants
- Research Fellows PhD + track record
Employed on Research Fellowships, from
Senior Lecturer to Professorial appointments

Research support positions:

- Researchers require access to high level technology involving newly developed instrumentation operated by dedicated scientists (often with PhD qualifications) – so called ‘enabling technologies’
- Currently the Uni of Adelaide, Uni SA and Hanson Institute are operating ~9 facilities employing ~16 scientists. The AIBLabs network has a total of 16 laboratories offering such services including these 9 labs.

Research outcome positions:

- Research also requires consumables
In any gold rush there is money to be made selling picks, shovels and wheelbarrows
- Companies who are selling molecular biology reagents to researchers require scientists to produce them eg *Geneworks* etc
- Biotech companies are employing science graduates at all levels eg *vivoPharm* etc

How do you pursue a research-funded career?

- To enhance your success in pursuing a research-funded career there are 3 points: track-record, track-record and track-record
- This starts with choosing the best PhD supervisor ie PhD supervisor with the best track-record
- Take a post-doctoral study position with the supervisor with the best track-record
- Take a research officer position with the group with the best track-record

Selecting suitable supervisors:

- The metrics to check on the productivity of potential supervisors are well validated (at I believe they are)
- Track record comprises
 - Research grant income ie NHMRC, ARC
 - Publications including citations (h-index)
 - Research pedigree
- Information available from databases eg Web of Science and from Annual Reports
 - it is up to you to research your future

Summary:

- Career opportunities in medical research have increased over the last 10 years – despite the global financial crisis it is expected that this trend will continue
- Opportunities exist for the ‘brightest minds’ – however these people need support at all levels including education, research staff, core facilities and biotechnology industry
- How long will government investment continue to increase? Further economic outcomes from medical research will continue to encourage this investment