Australian Government

Department of Education, Science and Training

National survey of research commercialisation 2003 and 2004

Selected measures of commercialisation activity in universities and publicly funded research agencies

August 2007

Department of Education, Science and Training

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Foreword

The creation, dissemination and application of knowledge will increasingly be a distinguishing factor of strong economies and robust societies in the 21st century. Through initiatives such as the $8.3 billion *Backing Australia's Ability* packages, the Australian Government has established a policy and programme framework that strengthens and supports publicly funded research institutions to actively engage with the national innovation system and to position themselves as a dynamic part of the knowledge economy.

The National Survey of Research Commercialisation allows us to track our progress in translating research outputs into marketable products and services, and helps to demonstrate the value that research is making to the economy and to the broader community.

The survey results for 2003 and 2004 show that Australia's publicly funded research institutions are actively engaged with industry and the community and their capacity to successfully commercialise research outputs continues to improve.

Australian Government policy recognises the importance of strengthening the breadth and diversity of relationships between researchers, industry and the community, including the commercialisation of intellectual property.

Supporting these relationships will reward innovative research. Encouraging institutions to build on their own strengths and unique situations will help to create more diversity, to drive both improved knowledge generation and application, and to reap broader benefits for all Australians. Hence, in addition to measuring the resources for commercialisation, intellectual property activity and start-up company activity, this survey now also measures research contracts and consultancies along with commercial and entrepreneurial skills development.

Although the survey was not designed to capture all commercialisation activity and associated outcomes, it does reveal a general increase in the number and value of commercial outputs as well as substantial flow-on benefits to the broader economy through the licensing of technologies. This adds to the findings of economic evaluations of *Backing Australia's Ability* and the Cooperative Research Centres programme, which demonstrate that publicly funded research enhances the economy's overall performance and boosts Australians' living standards.

I extend my thanks to all who have contributed to this report.

The Hon Julie Bishop MP
Minister for Education, Science and Training

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Abbreviations

ABS	Australian Bureau of Statistics
AIMS	Australian Institute of Marine Science
ANSTO	Australian Nuclear Science and Technology Organisation
ARC	Australian Research Council
AUTM	Association of University Technology Managers (USA)
CCST	Coordination Committee on Science and Technology
CRCs	Cooperative Research Centres
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DEST	Department of Education, Science and Training
DITR	Department of Industry, Tourism and Resources
FTE	Full-time equivalent (staff)
IP	Intellectual property
IPO	Initial public offering
LOAs	Licences, options and assignments
MDQ	Management Data Questionnaire
MRIs	Medical research institutes
NHMRC	National Health and Medical Research Council
NSRC	National Survey of Research Commercialisation
PFRA	Publicly funded research agency (ANSTO, AIMS, CSIRO)
PMSEIC	Prime Minister's Science, Engineering and Innovation Council
R&D	Research and development
RDC	Rural Research and Development Corporation
UK	United Kingdom
US	United States

Disclaimer

Section 1

Key findings

1 Key findings

Overall, the trend data now available shows an increase in research commercialisation activity and outcomes flowing from Australia's universities, publicly funded research institutions and medical research institutes. This activity creates significant income for the institutions, however the greatest benefits are realised through the productive application of publicly funded research in the broader economy and community. The effective management of publicly funded intellectual property (IP) is important not only to generate institutional income but as part of the commitment by institutions to collaborations with industry partners.

In 2004 institutions reported income from licenses, options and assignments (LOAs) of over $59 million, contracts and consultancies with end-users worth almost $900 million, and equity holdings valued at almost $185 million (see table 1 and section 5). Although determining the level of sales resulting from licensed technologies is difficult, institutions estimated these returns were in the order of $3 billion in 2003 and $4 billion in 2004 (see section 5). In 2004 the cost to institutions of conducting research commercialisation activities, including staffing and associated administration costs, was almost $70 million (see table 1 and section 5).

Most commercialisation indicators have increased over the period 2000 to 2004. Across all institutions the total number of:

- invention disclosures increased by 77%;
- patents and plant breeder rights issued worldwide increased by 79%;
- LOAs yielding income per year increased by 36%;
- start-up companies operational at the end of each year nearly tripled, with the value of institutional equity in start ups increasing by 41%; and
- commercialisation staff increased by 74%.

Two exceptions were the number of LOAs executed and the number of start-up companies formed, both of which have decreased. These results indicate that institutions are becoming increasingly strategic in their approach to these activities as the number of LOAs yielding income and the number of start-ups still operational increased over the same period. Adjusted gross income from LOAs fell significantly, however the figures are influenced by a single large transaction in 2000 (see table 2 and section 5).

A large proportion of IP and LOA activity is carried out by a relatively small number of institutions, which include the Commonwealth Scientific and Industrial Research Organisation and a selection of universities. These same institutions account for much of the income generation collected in this survey (see section 5).

In contrast the majority of institutions are active in both research contracts and consultancies and commercialisation skills development and transfer activities, suggesting these broader activities are significant mechanisms for knowledge transfer. The large number of contract and consultancy agreements entered into (around 14,000 per year in 2003 and 2004) indicates a high level of connectedness between research institutions and the broader innovation system. Around a third of these agreements represented 'repeat business' for institutions (see table 1 and section 5).

International Comparisons

Comparisons to the United States (US), Canada and the United Kingdom (UK), after adjusting for research expenditure and purchasing power parity, found that Australian institutions generally:

- devote more human resources to commercialisation activities;
- execute more LOAs than the UK although fewer than the US and Canada;
- generate more LOA income than the UK, around the same as Canada, and less than the US; and
- create more new start-up companies than the US although less than Canada and the UK (see table 3 and section 6).

Cooperative Research Centres

Cooperative Research Centres remain important contributors to research commercialisation and knowledge transfer activities maintaining over 2,100 Australian and overseas patents and generating income of almost $10 million from LOAs in 2004-05 (see section 7).

Section 2

Summary tables

2 Summary tables

Table 1: Summary of selected NSRC survey metrics for 2003 and 2004[a]

		2003					2004				
		CSIRO	Other PFRAs	Universities	MRIs	Total	CSIRO	Other PFRAs	Universities	MRIs	Total
Number of institutions responding		1	3	38	27	69	1	3	39	27	70
Resourcing for commercialisation											
Dedicated and other commercialisation staff	FTE	196	26	228	23	**473**	199	23	241	24	**487**
Commercialisation staff costs	$'000	24,200	3,269	22,277	2,554	**52,299**	26,400	3,272	24,116	2,633	**56,421**
Other commercialisation costs	$'000	4,605	667	5,346	2,730	**13,349**	4,551	861	5,292	2,412	**13,116**
Intellectual Property activity											
Invention disclosures	No.	22	43	652	95	**812**	-	35	791	135	**961**
Patent and plant breeder rights issued											
- In Australia	No.	25	16	96	14	**151**	30	21	130	8	**189**
- In the USA	No.	37	9	83	5	**134**	39	12	144	9	**204**
- Elsewhere	No.	255	56	238	9	**557**	168	57	256	12	**492**
- Total	No.	317	81	417	28	**842**	237	90	530	29	**885**
Patent and plant breeder rights holdings											
- Patents pending	No.	1,777	174	2,947	312	**5,210**	1,865	169	3,150	384	**5,568**
- Patents issued (cumulative)	No.	2,194	148	1,509	304	**4,154**	2,203	140	1,619	309	**4,270**
- Total held	No.	3,971	322	4,455	864	**9,612**	4,068	309	4,768	693	**9,838**
Patent and plant breeder rights culled or lapsed	No.	559	37	147	22	**765**	530	56	213	42	**841**
Licensing activity											
LOAs executed	No.	146	12	249	27	**434**	50	18	294	21	**383**
LOAs active	No.	594	76	758	93	**1,521**	383	81	941	99	**1,504**
LOAs yielding income	No.	249	6	330	47	**632**	226	9	385	45	**665**
Adjusted gross income from licences in 2004 prices	$'000	14,414	441	38,413	11,504	**64,772**	17,491	1,025	32,251	8,286	**59,053**
Start-up company activity											
Start-ups formed	No.	7	2	33	8	**50**	2	-	25	4	**31**
Capital raising – total	$'000	22,390	-	77,271	9,574	**109,234**	2,874	-	147,929	16,443	**167,247**
Start-up companies operational dependent on licensing/ assignment of technologies	No.	15	2	185	26	**228**	17	2	204	32	**255**
Start-up companies with institutional equity held	No.	7	1	149	25	**182**	9	1	168	28	**206**
Value of all equity holdings	$'000	17,612	-	129,741	4,251	**151,605**	10,547	-	161,631	12,779	**184,956**
Research contracts and consultancy activity											
Contracts & consultancy agreements entered into	No.	2,375	644	10,899	350	**14,267**	2,111	452	11,536	360	**14,459**
Total gross contracted value	$'000	207,506	7,942	631,440	59,005	**905,893**	207,041	10,801	627,924	52,769	**898,535**
Proportion of total number that were 'repeat business'	%	35.5%	-	36.4%	36.9%	**34.6%**	40.0%	-	30.2%	37.7%	**30.8%**
Skills development and transfer activity											
Participants in research commercialisation and entrepreneurship training courses	No.	54	92	2,530	78	**2,754**	148	58	2,943	108	**3,257**
Research postgraduates employed in start-up companies	No.	-	-	57	49	**106**	-	-	79	26	**105**

(a) This data is subject to notes in the body of the report and appendix 4.

Table 2: Summary of NSRC metrics for surveys 2000–2004 (data from 59 institutions)

	2000	2001	2002	2003	2004
Resourcing for commercialisation					
Dedicated commercialisation staff (FTE)	160	203	253	293	279
Intellectual Property activity					
Invention disclosures	532	714	684	812	961
New Australian and United States patent and plant breeder rights applications filed	576	477	514	539	590
Patents and plant breeder rights issued worldwide[a]	496	274	286	830	873
Licensing activity					
LOAs executed	403	352	432	433	380
LOAs yielding income	489	604	620	622	664
Adjusted gross income from LOAs in 2004 prices[b] ($'000)	112,870	76,493	75,928	66,456	58,295
Start-up company activity					
Start-up companies formed	46	61	53	46	24
Start-up companies operational at the end of the year	85	113	124	228	251
Start-up companies operational at the end of the year with institutional equity	66	82	91	165	185
Proportion of companies in which equity was held at the end of the year (%)	78%	73%	73%	72%	74%
Value of equity holdings in constant 2004 prices ($'000)	130,089	125,254	107,203	155,652	183,822

(a) There is a discontinuity in the data for total patents issued worldwide due to changes in reporting by the Commonwealth Science and Industrial Research Organisation (CSIRO). Between 2000 and 2002 CSIRO only reported patent families and was not reporting applications and issues for each patent. The method of counting patents and applications for 2003 and 2004 is more internationally comparable.

(b) Adjusted gross income is LOA income after payments to other institutions and commercial entities. In 2000, a single transaction reported by the University of Melbourne comprised $50 million of total LOA income reported.

Table 3: Selected commercialisation metrics for Australia, USA, Canada and UK[a] institutions 2000–2004

	2000	2001	2002	2003	2004
Resourcing for commercialisation					
Average no. of licensing FTEs per institution					
- Australia	4.5	4.7	4.7	4.7	4.5
- USA	3.3	3.7	4.1	4.0	4.2
- Canada	3.2	3.3	3.4	3.8	4.4
- United Kingdom	-	2.4	2.8	4.7	4.8
Intellectual property activity					
Invention disclosures received per $US100 million research expenditure					
- Australia	26	22	22	20	23
- USA	43	42	41	40	41
- Canada	57	41	45	45	40
- United Kingdom	-	31	39	37	45
US Patents issued per $US100 million research expenditure					
- Australia	5	2	2	3	5
- USA	13	12	10	10	9
- Canada	9	7	7	6	5
- United Kingdom	-	-	-	2	2
Licensing activity					
LOAs executed per $US100 million research expenditure					
- Australia	19	11	13	11	9
- USA	14	12	12	12	12
- Canada	19	15	14	16	17
- United Kingdom	-	8	11	10	22
LOAs yielding income per $US100 million research expenditure					
- Australia	23	18	18	16	16
- USA	30	30	29	28	28
- Canada	29	29	28	31	31
- United Kingdom	-	9	11	13	34
LOA income per $US100 million research expenditure ($'000)					
- Australia	3,536	1,614	1,572	1,181	1,031
- USA	4,404	3,436	3,532	3,401	3,357
- Canada	1,719	2,315	1,564	1,566	1,333
- United Kingdom	-	571	643	848	1,005
Start-up company activity					
Start-up companies formed per $US100 million of research expenditure					
- Australia	1.7	1.9	2.2	1.2	0.7
- USA	1.4	1.4	1.1	1.0	1.1
- Canada	3.8	3.0	1.9	2.0	1.4
- United Kingdom	-	3.8	2.8	2.6	3.6

(a) United Kingdom data was unavailable for 2000

Table 4: Summary of selected Cooperative Research Centre (CRC) commercialisation metrics 2003–04 and 2004–05 derived from responses to the CRC Programme's Management Data Questionnaire

		2003–04	2004–05
Number of CRCs responding		57	57
Resourcing for commercialisation			
Commercialisation administration cost	$'000	53,716	62,753
Intellectual property activity			
Patents and plant breeder rights issued			
- In Australia	No.	76	68
- Overseas	No.	15	22
Patents and plant breeder rights holdings			
- Patents maintained in Australia	No.	1,777	1,865
- Patents maintained overseas	No.	354	286
Licensing activity			
LOAs contracted	No.	139	155
Income from licences	$'000	8,822	9,777
Start-up company activity			
Start-up companies formed	No.	22	12
Capital raising – total	$'000	2,344	1,992
Research contracts and consultancy activity			
Contracts and consultancy agreements generating income	No.	488	629
Training and professional development activity			
Number of professional training courses	No.	235	282

Section 3

Introduction

Introduction

The National Survey of Research Commercialisation (NSRC) collects data and information on commercialisation activity in Australian publicly funded research institutions including the Commonwealth Scientific and Industrial Research Organisation (CSIRO), other publicly funded research institutions, universities, and medical research institutes (MRIs). The survey was first conducted for the year 2000[1], and again for 2001 and 2002[2].

The NSRC is not intended to capture all the publicly funded research commercialisation activity in Australia. Rather it provides insights into the major areas of activity as reported by the institutions performing the majority of work in this area. Quantitative information on commercialisation performance is provided in relation to a number of specific indicators, and qualitative information in the form of commercialisation case studies (see separate volume).

The NSRC was originally based only on the United States Association of University Technology Managers licensing survey. In accordance with the recommendations of the Coordination Committee on Science and Technology (CCST) Working Group on Metrics of Commercialisation report[3], the NSRC for 2003 and 2004:

- adopted a broader definition of 'research commercialisation' that included research contracts and consultancies and skills development and transfer
- maintained pre-existing core indicators, including resources for commercialisation, intellectual property activity and start-up company activity
- wherever possible, drew upon reliable third party data to reduce respondent burden and enhance data comparability, including inclusion of data for the Cooperative Research Centres (CRCs) from the CRCs management data questionnaire (MDQ) for 2003 to 2004 and 2004 to 2005.

1 Australian Research Council et al, 2002, National Survey of Research Commercialisation: Year 2000, www.arc.gov.au/pdf/AURC003.pdf

2 *Department of Education Science and Training. 2004. National Survey of Research Commercialisation: Years 2001 and 2002. Canberra: Department of Education, Science and Training. Available at* www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/commercialisation/nsrc.htm

3 Coordination Committee on Science and Technology. 2005. *Metrics for Research Commercialisation: A Report to the Coordination Committee on Science and Technology.* Canberra: Department of Education, Science and Training. p.12. Available at: http://www.dest.gov.au/sectors/science_innovation/science_agencies_committees/coordination_committee_on_science_and_technology.htm#CCST_Working_Group_on_Metrics_of_Commercialisation

Section 4

Methodology

Methodology

This report involves four different data sets: NSRC data for years 2003 and 2004, NSRC time series data 2000 to 2004, international comparisons data, and data for the CRCs.

NSRC data for years 2003 and 2004

The NSRC for 2003 and 2004 aimed to achieve a balance between gathering relevant data, including data that will be useful to institutions, and minimising reporting burden. 70 institutions responded in 2003 and 2004 (see appendix 1).

79 institutions were approached to take part:

- 4 publicly funded research institutions — all responded.
- 39 universities — 38 responded for 2003, 39 for 2004.
- 36 medical research institutes — 27 responded, a 75 per cent response rate.

30 questions were included covering research expenditure, intellectual property, start-up companies, commercialisation case studies, research contracts and consultancies, and skills development and transfer. The survey questionnaire and explanatory notes are included at appendices 2 and 3. The NSRC dataset for 2003 and 2004 is provided in appendix 4[3a]. A list of start up companies reported for 2003 and 2004 is provided at appendix 5.

The questionnaire was hosted online and a comprehensive process of data checking and validation was undertaken. Responses were checked for internal consistency and where possible with external sources of related information, with institutions invited to clarify or amend their responses. However data presented has not been audited and is presented as reported.

The reporting period covers the calendar years 2003 and 2004 or financial years 2003/04 and 2004/05 depending on the institution's normal reporting period. All dollar values in this data are as reported for the relevant year.

NSRC time series 2000 to 2004

A time series from 2000 to 2004 is presented for a smaller set of 59 institutions. More information on the construction of the time series, including a list of the institutions included and the data tables is available at appendix 6.

Due to the difference in the sample sizes, values for 2003 and 2004 are not comparable between the NSRC 2003 and 2004 data and the time series. Time series data is slightly lower.

The following parameters were applied when constructing the time series.

- All dollar values presented are expressed in constant 2004 prices using the chain-volume price index applied to Gross Domestic Product in the Australian System of National Accounts.
- Only metrics that have remained consistent over the period were included.
- Institutions that responded to all years of the survey from 2000 to 2004 were included.

3a ABS data from its Surveys of Research & Experimental Development was used for determining Research & Experimental development expenditure by institution. Where 2003 ABS data was not available, ABS data for 2004 has been used to enable comparisons.

- Some institutions that did not take part in one year's survey but that exhibited an overall response rate to questions in all years equal or greater than 70 per cent were included. This includes six institutions that were not covered in the 2000 survey but were active in commercialisation in later years[4].

The 59 institutions included in the time series account for almost all of the commercialisation activity reported by all institutions that participated in the 2003 and 2004 survey. In 2004 the average coverage of data for the 16 key metrics captured in the 2000 to 2004 time series dataset is 97.8 per cent of that in the full sample surveyed for the NSRC for 2003 and 2004.

International comparisons

The report also presents the commercialisation activity of Australian, United States, Canadian and United Kingdom research institutions against a small number of comparable indicators over the period 2000 to 2004. The methodology applied to international data is described in detail in the country comparisons section of this report.

Cooperative research centres (CRCs)

For 2001 and 2002, CRCs were included as respondents to the NSRC. For the 2003 and 2004 survey it was decided that CRC commercialisation information would be obtained through CRC annual reporting and the CRC Management Data Questionnaire (MDQ). The questionnaire is a monitoring and evaluation instrument developed by DEST specifically for the CRC Programme.

The MDQ is not fully consistent with all of the metrics used in the NSRC, but there is sufficient commonality for reporting data in relation to a number of metrics. To reduce the risk of double counting or under-reporting against a number of the metrics, CRC's data are not aggregated with NSRC data.

Timeframe to realise commercial outcomes

In interpreting the data in this report, it is important to understand that research commercialisation is:

- **complex** — usually non-linear, involving multiple phases, processes and participants;
- **broad** — can be carried out through a number of different mechanisms, ranging from intellectual property patenting and licensing, through open publication and dissemination, to the movement of skilled and knowledgeable people;
- **multi-faceted** — involving a range and often substantial complementary investments in product development, production, marketing and distribution;
- **risky** — a significant proportion of early investments may not bear direct economic returns; and
- **time consuming** — there can be significant delays between the investment phase and the generation of economic returns.

4 This means that the 59 institutions covered in the time series is greater than the number actually surveyed in 2000. This does not bias the results because the institutions added in 2000 are not very active in research commercialisation in the earlier years.

Given the time taken for most products to reach market, the time for technologies licensed or assigned to generate income may be extensive (up to 10 years[5]). It is therefore important to see the path to commercialisation as a long-term journey.

The commercialisation metrics included in this report are intended to indicate progress along that pathway in terms of the relationships between inputs, outputs and outcomes and expected final results.

5 References to this include:
- Shipp, S. 2004. "The Advanced Technology Program: Measuring Behaviour Additionality Effects of Government Financing of R&D."
- *OECD Workshop on Measuring the Behavioural Additionality Effects of Government Financing of Business R&D.* OECD: Manchester.
- *Economic Impact Study of the CRC Programme,* a report prepared for the Australian Government Department of Education, Science and Training by Insight Economics Pty Ltd, October 2006. This report built on the findings of *The Economic Impact of Cooperative Research Centres in Australia - Delivering benefits for Australia,* a report for the Cooperative Research Centres Association Inc by The Allen Consulting Group, 2005.

Section 5

Results

5 Results

The results presented below are for the NSRC for 2003 and 2004 and NSRC time series data (2000-2004) where available.

Intellectual Property activity

Invention disclosures

An invention disclosure occurs when a device, material, or method that is novel and useful is made known to research management within the institution. This is usually the first step in enabling the evaluation of commercial potential, before deciding to secure intellectual property ownership rights.

Procedures for recording invention disclosures vary from institution to institution. While in some instances a disclosure might be recorded early in the evaluation process, in other instances disclosures are not recorded until sufficient investigation is undertaken to confirm that the technology is indeed novel and has commercial potential. Importantly, a number of institutions covered in the survey (such as CSIRO) do not commence the commercialisation process with the invention disclosure mechanism, preferring instead to proceed directly to the patent application process.

As a result, care should be taken in comparing the absolute number of disclosures between institutions.

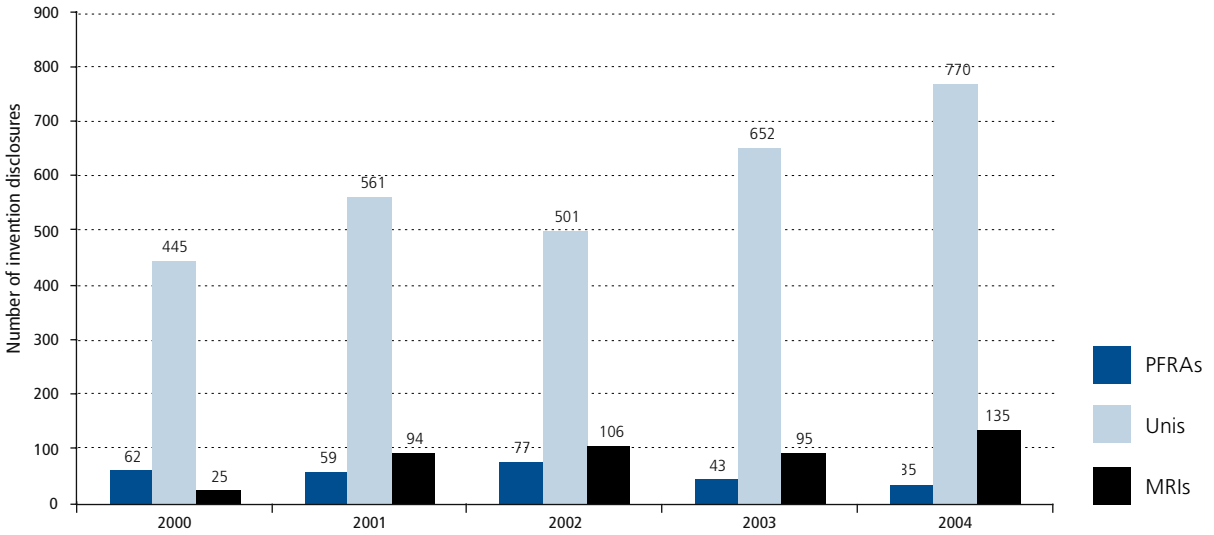
Key points

- The number of invention disclosures increased from 812 in 2003 to 961 in 2004 (table 5).
- The time series data shows that between 2000 and 2004 the overall number of disclosures increased by 77%, with the greatest increase seen in the university sector (figure 1).

Table 5: Invention disclosures in 2003 and 2004 (number)

	2003					2004				
	CSIRO	Other PFRAs	Universities	MRIs	Total	CSIRO	Other PFRAs	Universities	MRIs	Total
Number of institutions responding	1	3	35	25	64	1	3	37	27	67
Invention disclosures received	22	43	652	95	812	-	35	791	135	961

Figure 1: Number of invention disclosures by sector 2000–2004 (data from 59 institutions)



Patent and Plant Breeder Rights: Applications, Issues and Holdings

Patents and plant breeder rights establish legally enforceable protection of rights over intellectual property associated with inventions. They provide surety and security of ownership as a basis for any investment in commercialising the inventions. The number of patent and plant breeder rights applications and the number issued indicate the level of production of new knowledge that has the potential for commercial application.

Before proceeding to patent application in Australia or elsewhere, many institutions either take out provisional patents, or seek protection through the Patent Cooperation Treaty (PCT) arrangements[6]. Innovation patents are a protection option in Australia, designed to protect inventions that are not sufficiently inventive to meet the inventive threshold required for standard patents.

6 The Patent Cooperation Treaty is an international treaty, administered by the World Intellectual Property Organization, between more than 125 countries. The PCT makes it possible to seek patent protection for an invention simultaneously in each of a large number of countries by filing a single international patent application instead of filing several separate national or regional patent applications.

Key points

- The university sector produces the majority of applications, issues and holdings, followed by the publicly funded research institutions and the MRIs. A small number of institutions account for the majority of activity. In 2003 and 2004, around 40% of institutions reported no patent applications (table 9).
- In 2003 and 2004 more than half the total new applications filed were for provisional patents, with the remaining half split fairly evenly between patent cooperation treaty patents and other patents (table 6).
- In 2003 and 2004 the majority (over 60%) of total applications were filed outside of Australia and the US. Around one quarter were filed in Australia, and around 13% were filed in the US (table 7).
- However these trends were mainly driven by CSIRO activity and patterns of application filings were irregular across the three sectors:
  - None of the respondents filed predominantly in the US.
  - Universities filed predominantly in Australia.
  - CSIRO filed predominantly elsewhere.
  - MRIs filed roughly equally in Australia, the US and elsewhere.
- The number of patents and plant breeder rights issued increased from 842 in 2003 to 885 in 2004, mainly due to increases by the university sector (table 8).
- The total stock of patents held at the end of 2004 was 9,838 (9,612 at the end of 2003) (table 9).
- Time series data shows that over the period 2000 to 2004, the number of new Australian and US applications remained relatively stable (figure 2), however the number of patents and plant breeder rights issued worldwide increased 79% over the period (figure 3).

Table 6: New applications for provisional, PCT, innovation and other patents plant breeder rights applications filed in 2003 and 2004 (number)

	2003					2004				
	CSIRO	Other PFRAs	Universities	MRIs	Total	CSIRO	Other PFRAs	Universities	MRIs	Total
Number of institutions responding	1	3	38	25	67	1	3	39	26	69
Provisional patents	104	29	241	56	430	119	18	264	49	450
PCT patents	66	5	75	20	166	60	1	92	16	169
Innovation patents	-	-	-	1	1	-	-	1	-	1
Othera	15	0	124	9	148	17	0	197	25	239
Total	**185**	**34**	**440**	**86**	**745**	**196**	**19**	**554**	**90**	**859**

(a) 'Other' refers to other types of applications as distinct from those in the table such as National Phase Applications.

Table 7: Location of total and new patent and/or plant breeder rights applications filed in 2003 and 2004 (number)

		2003					2004				
		CSIRO	Other PFRAs	Universities	MRIs	Total	CSIRO	Other PFRAs	Universities	MRIs	Total
Number of institutions responding		1	3	38	25	67	1	3	39	27	70
Filed in Australia	Total	445	35	391	67	938	302	38	424	65	829
	New	105	16	292	47	460	123	18	294	37	472
Filed in the US	Total	289	8	109	52	458	295	8	117	59	479
	New	14		42	25	81	29		63	27	119
Filed elsewhere	Total	1,783	70	289	73	2,215	2,044	81	249	77	2,451
	New	421		76	12	509	345		120	11	476
Total filed	**Total**	**2,517**	**113**	**789**	**192**	**3,611**	**2,641**	**127**	**790**	**201**	**3,759**
	New[b]	**540**	**16**	**410**	**84**	**1,050**	**497**	**18**	**476**	**75**	**1,066**

(b) Note that the number of new applications filed in table 7 is greater than in table 6 because the same application may be filed in multiple locations.

Table 8: Patent and plant breeder rights issued in 2003 and 2004 (number)

	2003					2004				
	CSIRO	Other PFRAs	Universities	MRIs	Total	CSIRO	Other PFRAs	Universities	MRIs	Total
Number of institutions responding	1	3	37	24	65	1	3	39	25	68
Issued – in Australia	25	16	96	14	151	30	21	130	8	189
Issued – in the US	37	9	83	5	134	39	12	144	9	204
Issued – elsewhere	255	56	238	9	557	168	57	256	12	492
Issued – total	**317**	**81**	**417**	**28**	**842**	**237**	**90**	**530**	**29**	**885**

Table 9: Total patent and/or plant breeder rights held and pending as at the last day of the reporting period (cumulative number)

	2003					2004				
	CSIRO	Other PFRAs	Universities	MRIs	Total	CSIRO	Other PFRAs	Universities	MRIs	Total
Number of institutions responding	1	3	38	24	66	1	3	39	24	67
Number of institutions filing no applications	-	-	10	10	29	-	1	10	15	26
Patents pending	1,777	174	2,947	312	5,210	1,865	169	3,150	384	5,568
Patents issued	2,194	148	1,509	304	4,154	2,203	140	1,618	309	4,270
Held – cumulative total	**3,971**	**322**	**4,455**	**864**	**9,612**	**4,068**	**309**	**4,768**	**693**	**9,838**
Culled or lapsed	559	37	147	22	765	530	56	213	42	841

Figure 2: Number of new Australian and United States patent and/or plant breeder rights applications by sector 2000–2004 (data from 59 institutions)

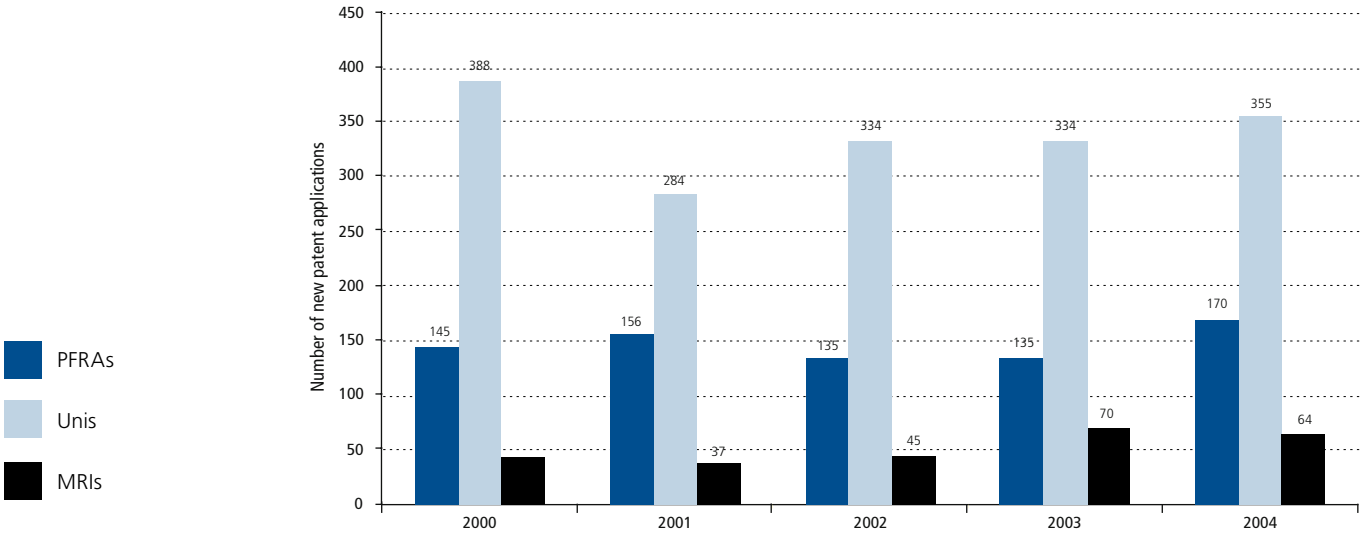
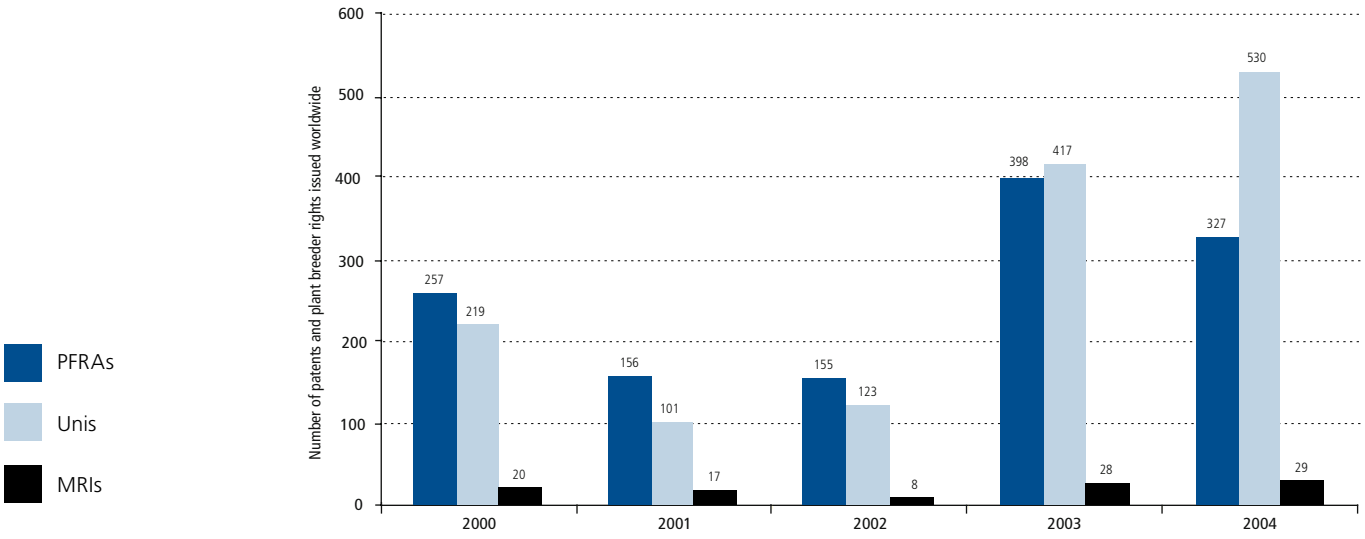


Figure 3: Number of patents and plant breeder rights issued worldwide by sector 2000-2004 (data from 59 institutions)



In figure 3 there is a discontinuity in the data for total patents issued worldwide due to changes in reporting by the Commonwealth Science and Industrial Research Organisation (CSIRO). Between 2000 and 2002 CSIRO only reported patent families and was not reporting applications and issues for each patent. The method of counting patents and applications for 2003 and 2004 is more internationally comparable.

Licences, options and assignments (LOAs)

A license agreement formalises the transfer of technology between two parties where the owner of the technology (the licensor) permits the other party (the licencee) to share the rights to use the technology.

An option agreement grants the potential licensee a time period during which it may evaluate the technology and negotiate the terms of a licence agreement.

An assignment agreement conveys all right, title, and interest in the licensed subject matter, to the named assignee.

The number and value of LOAs is a measure of the value of intellectual property created through research. The gross income of LOAs in the table below is adjusted by excluding the LOA income paid to other institutions or commercial entities and in–kind contributions.

Institutions reported an uncertain level of accuracy in estimating the level of sales resulting from licensed technologies, as many products involve several technologies and attribution becomes difficult. Details of the methodology used can be found in the questionnaire and explanatory notes at appendix 2.

Key points

- Based on running royalties, the estimated level of sales resulting from technologies licensed was $3.1 billion in 2003 and $4 billion in 2004 (table 10).
- The university sector produces the majority of activity in this area, followed by the publicly funded research institutions and the MRIs. A small number of institutions account for the majority of activity. In 2003 and 2004, over 30% of institutions reported no active LOAs (table 10).
- Most LOA agreements involve very small amounts. In 2004, over half of all LOAs were for amounts less than $10,000 (figure 4). By contrast, cashed in equity transactions were considerably fewer in number and larger in value (table 10).
- Time series data shows that over 2000 to 2004:
  - The number of LOAs executed per year has doubled in MRIs and increased by 28% in universities (figure 5). The number of LOAs yielding income pert year has more than doubled in MRIs and increased by 52% in universities (figure 6).
  - However, in the publicly funded research institutions, the number of LOAs executed has decreased by 60% (figure 5) and the number yielding income has remained steady (figure 6).
  - Overall, the number of LOAs executed per year has decreased by 6% (figure 5) and the number yielding income per year has increased by 36% (figure 6).
  - Overall adjusted gross LOA income has decreased by 48% although it should be noted that the 2000 figure included a single transaction that created income of $50m for The University of Melbourne (figure 7).

Table 10: Licences, options and assignments (LOAs): number and income in 2003 and 2004[a]

	2003					2004				
	CSIRO	Other PFRAs	Universities	MRIs	Total	CSIRO	Other PFRAs	Universities	MRIs	Total
Number of institutions responding	1	3	38	26	68	1	3	39	26	69
Number of LOAs executed and active										
Number of institutions reporting no active LOAs	0	1	8	11	20	0	0	8	14	24
LOAs executed	146	12	249	27	434	50	18	294	21	383
LOAs active	594	76	758	93	1,521	383	81	941	99	1,504
LOAs yielding income[b]	249	6	330	47	632	226	9	385	45	665
Proportion of LOAs yielding income	41.9%	7.9%	47.8%	50.5%	41.6%	59.0%	11.1%	40.9%	45.5%	44.2%
Number of income yielding LOAs by type										
Running royalties	157	5	146	19	327	131	6	154	16	307
Cashed in equity	1	-	3	-	4	3	-	2	-	5
Other types	91	1	195	23	310	92	3	246[c]	9	350
LOA income (000s)										
Running royalties	7,699	379	12,233	7,202	27,513	12,452	882	10,709	5,807	29,849
Cashed in equity	3,648	-	7,594	-	11,241	5,212	-	167	700[d]	6,079
Other[e]	4,296	62	24,913[a]	7,673	36,944	2,600	144	23,585	4,017	30,345
Gross income	15,643	441	44,739	14,875	73,698	20,263	1,025	34,460	10,524	66,272
Income reported as paid to other entities	1,229		6,327	3,370	10,926	2,772		2,209	2,237	7,219
Adjusted gross LOA income[f]	14,414	441	38,413	11,504	64,772	17,491	1,025	32,251	8,286	59,053
Estimated level of sales resulting from licensed technologies (000s)										
Estimate based on running royalties	718,000	19,000	2,084,344	304,737	3,126,081	1,330,000	44,000	2,402,599	232,426	4,009,025

(a) Figures in this table do not sum due to differences in the totals and sums of totals provided by a number of participants in the survey.

(b) Includes income yielding LOAs that did not generate income in 2003 and/or 2004.

(c) Includes agreements relating to producing, selling, upgrading and adapting software products. This includes animal genetics software provided by the Agricultural Business Research Institute at the University of New England and sourced from the Animal Genetics Breeding Unit – a joint venture between the University of New England, the Department of Primary Industries and industry partners.

(d) The Macfarlane Burnett Institute reported $700,000 LOA cashed in equity income for 2004 but did not indicate the number of transactions involved.

(e) 'Other' refers to all remaining types of LOA income not covered by running royalties or cashed in equity

(f) Adjusted gross income is LOA income after payments to other institutions and commercial entities.

Figure 4: LOA agreements by income range in 2004 – per cent of agreements

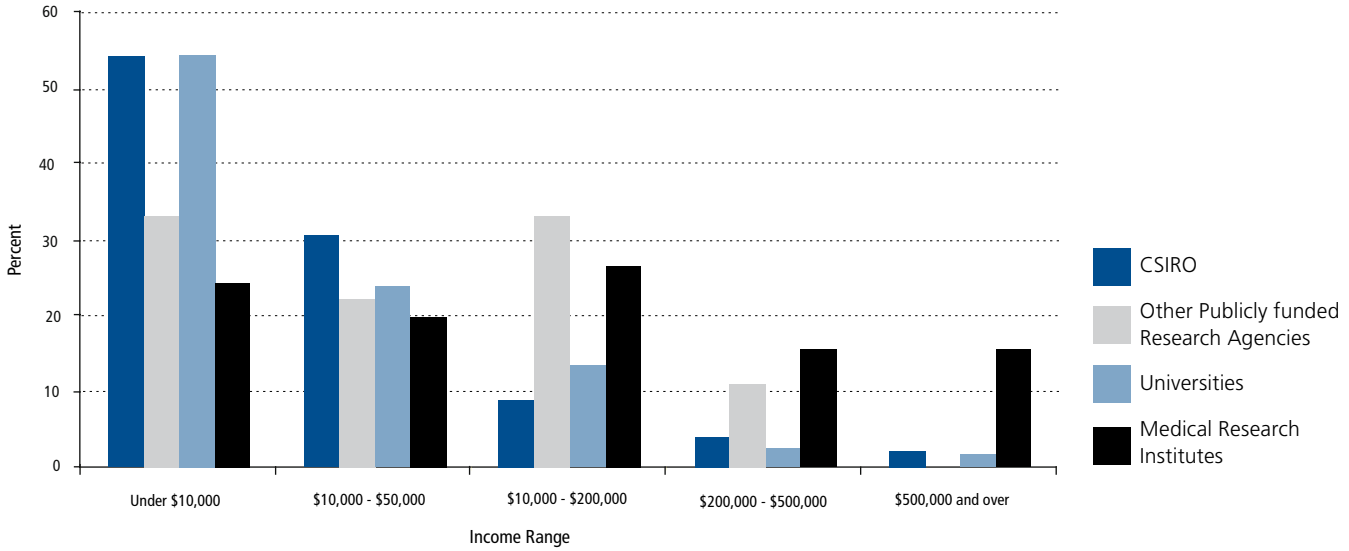


Figure 5: Number of LOAs executed by sector 2000–2004 (data from 59 institutions)

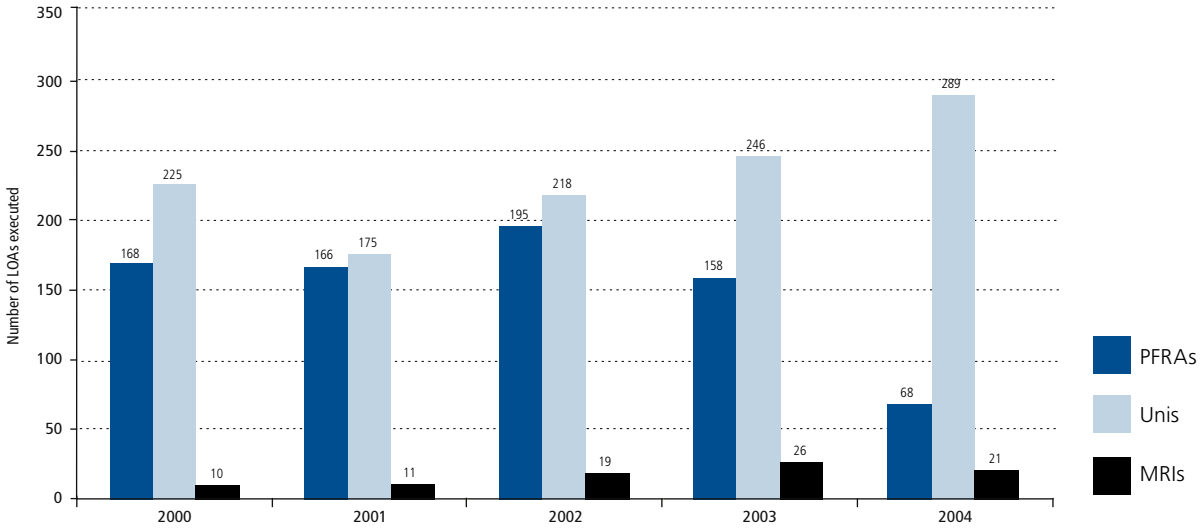


Figure 6: Number of LOAs yielding income by sector 2000–2004 (data from 59 institutions)

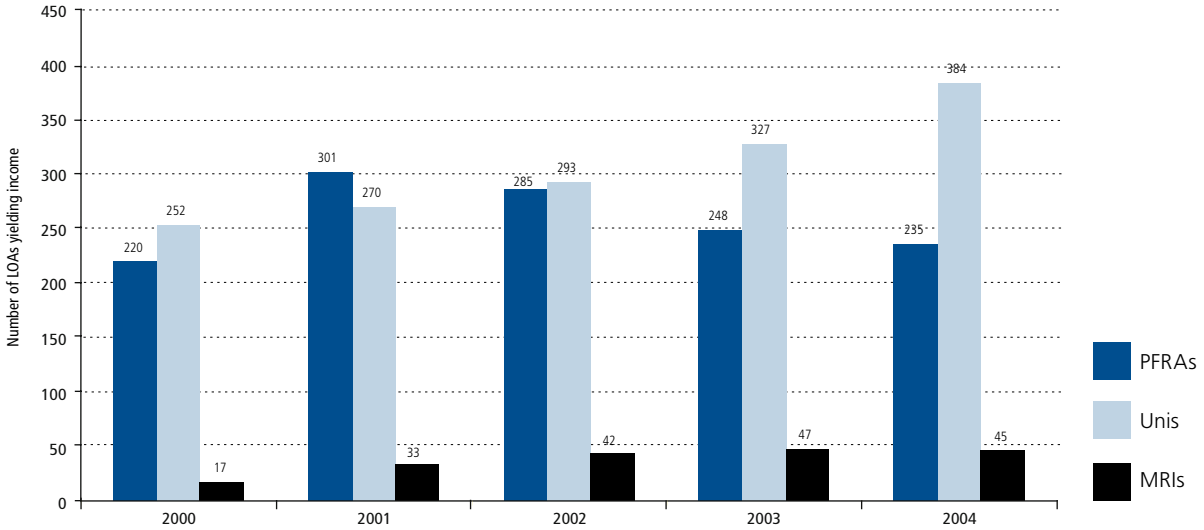
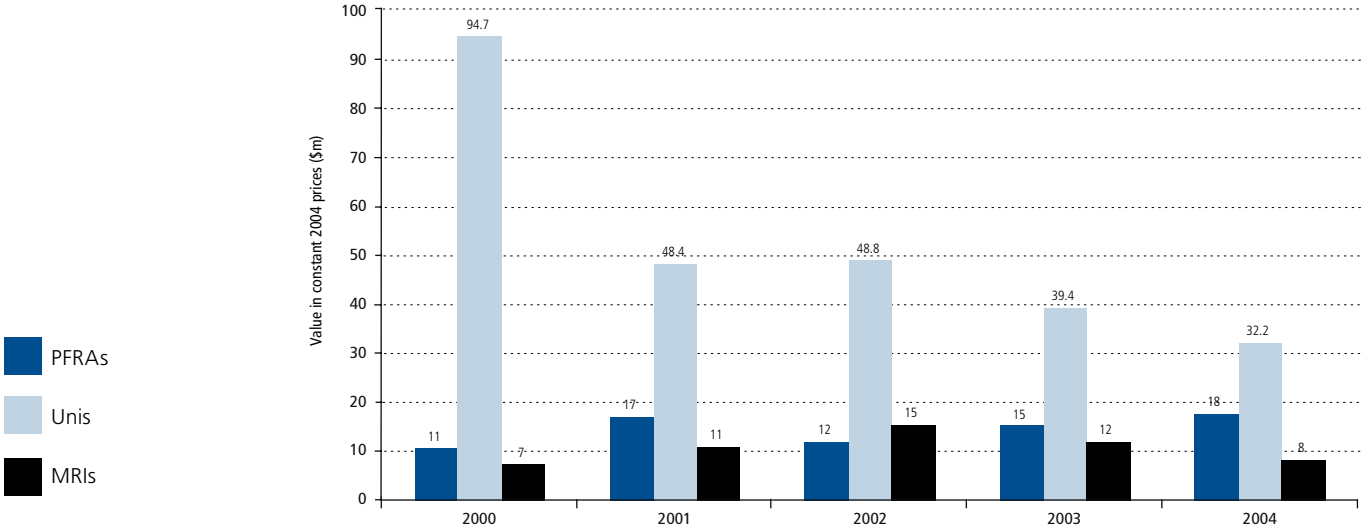


Figure 7: Adjusted gross LOA income net of payments to other institutions by sector 2000–2004 (adjusted to 2004 prices - data from 59 institutions)



In figure 7 the 2000 figure includes a single transaction that created income of $50m for the University of Melbourne. For further information see: Australian Research Council et al, 2002, *National Survey of Research Commercialisation: Year 2000*, www.arc.gov.au/pdf/AURC003.pdf

Start-up company activity

Start-up companies are companies engaged in businesses that were dependent for their formation on licensing or assignment of technology from individual institutions.

The number, capital raising, and value of institutional equity in start up companies, are intermediate measures of the business value generated from intellectual property. Start-up company formation is a significant avenue for commercialisation for Australian research institutions. A list of start-ups formed in 2003 and 2004 is located in appendix 5.

Key points

- Capital raising for research commercialisation activities grew significantly to over $167 million in 2004. Universities were most active in capital raising, achieving $147.9 million in 2004 and $77.3 million in 2003 (table 11).
- In 2003 and 2004, institutions held equity in around 80% of companies dependant on licensing of the institution's technology for their operation. The value of institutional equity holdings rose to almost $185 million in 2004 (table 12).
- The university sector produces the majority of activity in this area however, unlike the trends seen in IP and LOA activity, the MRIs generate more capital and produce more start-ups than the publicly funded research institutions (tables 11 and 12).
- Time series data shows that over 2000 to 2004:
  - The number of new start-up companies formed each year decreased by 48% (figure 8).
  - However, the total number of start-ups operational with institutional equity nearly tripled suggesting good sustainability of new start-ups, and was led primarily by the university sector (figure 9).
  - The value of institutional equity in start-ups increased by 41%, suggesting steady growth of existing companies (figure 10).
- Based on the findings of the previous survey[a] and the commercialisation case studies contained in the companion volume to this report, most of the start-ups have been formed from discoveries and technologies based in the life sciences.

(a) Department of Education, Science and Training. 2004. *National Survey of Research Commercialisation: Years 2001 and 2002. Canberra: Department of Education, Science and Training (page 24).* Available at www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/commercialisation/nsrc.htm

Table 11: Capital raising for research commercialisation activities

		2003					2004				
		CSIRO	Other PFRAs	Universities	MRIs	Total	CSIRO	Other PFRAs	Universities	MRIs	Total
Number of institutions responding		1	2	37	22	62	1	2	39	24	66
Initial Public Offerings	No.	-	-	1	1	2	-	-	5	-	5
	$'000	-	-	11,000	2,444	13,444	-	-	74,500	-	74,500
Other	No.	7	-	35	3	45	1	-	41	6	48
		22,390	-	66,271	7,130	95,790	2,875	-	73,429	16,443	92,747
Total Financing	**No.**	**7**	**-**	**36**	**4**	**47**	**1**	**-**	**46**	**6**	**53**
	$'000	**22,390**	**-**	**77,271**	**9,574**	**109,234**	**2,875**	**-**	**147,929**	**16,443**	**167,247**

Table 12: Start-up company formation and equity positions in 2003 and 2004

		2003					2004				
		CSIRO	Other PFRAs	Universities	MRIs	Total	CSIRO	Other PFRAs	Universities	MRIs	Total
Number of institutions responding		1	2	37	22	62	1	2	39	24	66
New start-up companies formed		7	2	33	8	50	2	-	25	4	31
Number of institutions responding		1	2	35	19	57	1	2	36	21	60
Value of all equity holdings	$'000	17,612	-	129,741	4,251	151,605	10,547	-	161,631	12,779	184,956
Number of institutions responding		1	3	37	23	64	1	3	39	24	67
Operational start-up companies which are dependent on licensing/ assignment of technologies	No.	15	2	185	26	228	17	2	204	32	255
Number of institutions responding		1	2	37	22	62	1	2	39	24	65
Start-up companies in which institutions have an equity holding	No.	7	1	149	25	182	9	1	168	28	206
Proportion of companies dependent on technologies with equity holding	%	46.7	50.0	80.5	96.2	79.8	52.9	50.0	82.4	87.5	80.8

Figure 8: Number of new start-up companies formed per year by sector 2000–2004 (data from 59 institutions)

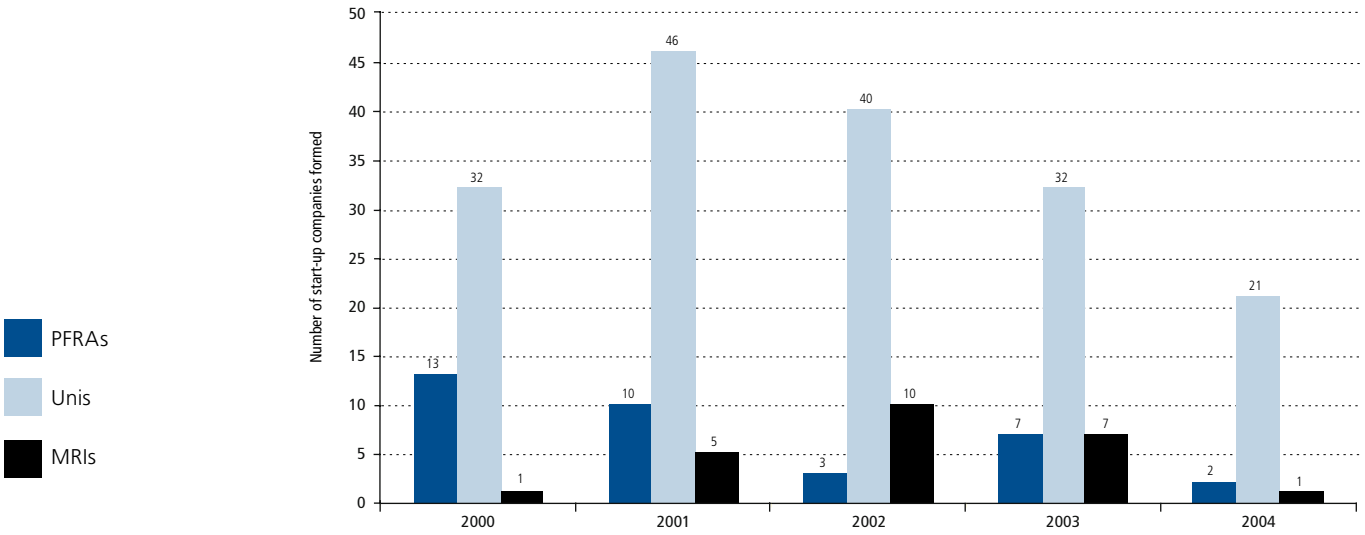


Figure 9: Number of start-up companies operational at years' end with institutional equity stake by sector 2000–2004 (data from 59 institutions)

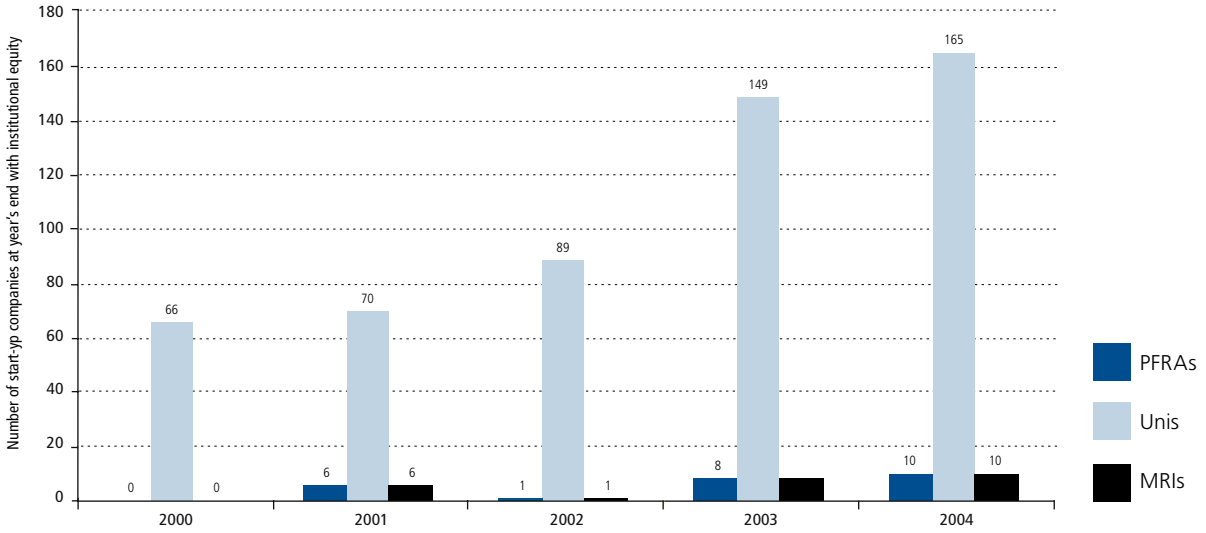
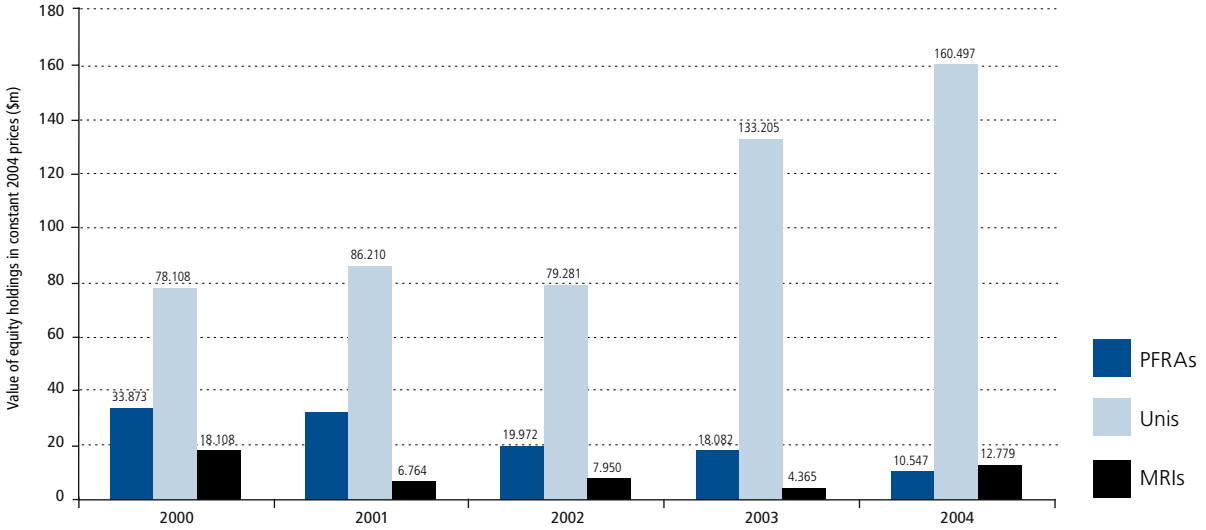


Figure 10: Value of equity holdings in start-up companies by sector 2000–2004 (data from 59 institutions)



Research contracts and consultancy activity

The number and value of research contracts and consultancies indicate the significance of leveraging existing know-how for commercial gain, which is broader than the income received by institutions for the direct commercialisation of their intellectual property. For 2003 and 2004 institutions were asked to identify consultancy agreements and research conducted for external clients as well as the provision of expert advice based on existing research knowledge, skills and capabilities. Income presented includes contracts with partners in grant funded research but does not include funding from the granting agency itself. Income reported may also include public sector contracts won by tender.

Key points

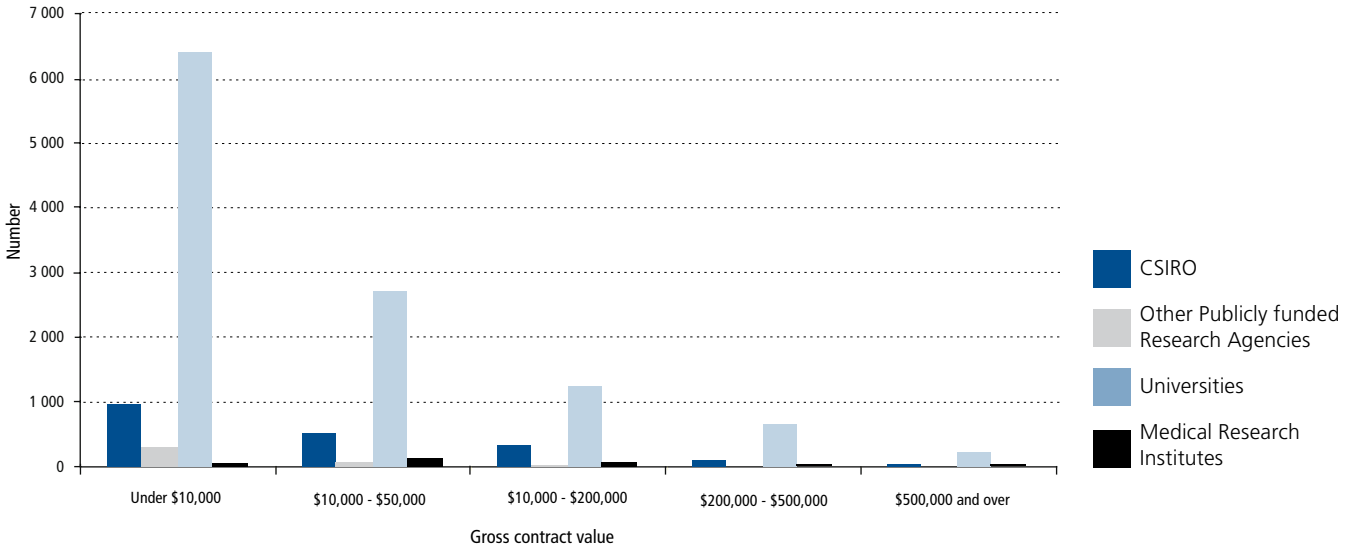
- The value of research contracts and consultancies is substantial at around $900 million per annum with the university sector earning around $630 million per annum (table 13).
- In 2003 and 2004, around 16% of institutions reported that they had no research contracts or consultancies, indicating a high participation rate relative to other commercialisation activities including both IP and LOA activity (table 13).
- Although a number of institutions reported difficulty in identifying repeat business from their records, the results suggest a significant level of external client satisfaction with repeat business of between 30% and 40% per annum (table 13).
- The majority of contracts and consultancies are for amounts less than $10,000 (figure 11).

Table 13: Research contracts and consultancies number and value

	2003					2004				
	CSIRO	Other PFRAs	Universities	MRIs	Total	CSIRO	Other PFRAs	Universities	MRIs	Total
Number of institutions responding	1	2	36	24	64	1	3	37	25	66
Number of institutions reporting no contracts or consultancies	0	1	2	8	11	0	1	1	8	10
Number of contracts and consultancies	2,375	644	10,694	323	14,036	2,111	453	11,425	361	14,350
Value of contracts and consultancies ($'000)	207,506	7,942	631,440	59,005	905,893	207,041	10,801	627,924	52,769	898,535
As proportion of research expenditure	23.6%	2.5%	14.7%	22.4%	15.8%	23.5%	3.5%	14.7%	19.5%	15.6%
Number of contracts and consultancies that were for repeat business	844	-	3,966	129	4,939	844	-	3,479	136	4,459
Proportion repeat business	35.5%	-	37.1%	39.9%	35.2%	40.0%	-	30.5%	37.9%	31.1%
Gross contracted value										
$0–$10,000	787	519	6,246	61	7,613	1,005	328	6,452	72	7,857
$10,000–$50,000	592	109	2,551	121	3,373	550	94	2,751	155	3,550
$50,000–$200,000	508	8	1,157	98	1,771	366	23	1,270	87	1,746
$200,000–$500,000	300	5	564	29	898	119	6	698	28	851
>$500,000	188	3	176	14	381	71	2	254	19	346
Total	**2,375**	**644**	**10,694**	**323**	**14,036**	**2,111**	**453**	**11,425**	**361**	**14,350**

In table 13 the figures by consultancy/contract sub-class were not subject to forced totalling in the survey instrument. For consistency the totals generated by summing the sub-total figures have been used.

Figure 11: Research contracts and consultancies – number by range of contract value



Skills development and transfer activity

Commercialisation and entrepreneurship training courses are an input and activity measure of commercialisation skills development among current and future researchers. The 2003 and 2004 survey, for the first time, sought information on educational, training and development programmes aimed at research staff or higher degree by research students to develop skills and understanding in the research commercialisation processes.

Information was also sought in relation to educational, training and professional development programmes to help users of research better understand research, research findings and the implications of research findings.

Key points

- In 2003 and 2004 around 60% of institutions offered research commercialisation and entrepreneurship training to their research staff and research students, either themselves or through external providers (table 14).
- The number of participants doing training increased from 2003 to 2004 with MRIs training the majority of industry participants (table 14).
- Over 100 research postgraduates per year in 2003 and 2004 were employed in start up companies that were dependent on the institution's technology for their initiation (table 14).

Table 14: Skills development and transfer in 2003 and 2004

		2003					2004				
		CSIRO	Other PFRAs	Universities	MRIs	Total	CSIRO	Other PFRAs	Universities	MRIs	Total
Number of institutions responding		1	3	38	26	68	1	3	39	27	70
Institutions offering in-house and/or external training	No	1	3	27	10	41	1	3	29	10	43
Training offered to researchers and research students											
Institutions offering in-house training	No.	1	2	25	6	34	1	2	27	7	37
In-house training participants	No.	54	57	1,768	38	1,917	148	40	2,244	63	2,495
Institutions offering external training	No.	0	2	18	7	27	0	2	17	6	25
External training participants	No.	-	35	762	40	837	0	18	699	45	762
Training offered to industry to assist in understanding of research findings											
Number of courses	No.	0	0	7	5	12	0	0	6	5	11
Number of participants	No.	-	-	181	854	1,035	-	-	355	990	1,345
Research post graduates employed in start-up companies	No.	0	0	57	49	106	0	0	79	26	105

Institutions reported a wide variety of courses and programmes including:

- IP Australia intellectual property and commercialisation seminars
- seminars and workshops to small business on innovation management, product development and becoming investment-ready
- entrepreneurial business planning offered by graduate schools of management
- Minter Ellison Pty Ltd commercialisation training
- visiting scientist training programmes
- business development internship programmes
- UniQuest research commercialisation workshops for PhD students, postdoctoral fellows and early stage career researchers
- innovation and enterprise leadership programmes run through careers centres
- courses within degree programmes designed to develop commercialisation and entrepreneurship skills of students and graduates (much of this training is provided by people brought in from industry or with whom students are placed as part of their course)
- commercialisation awareness programmes
- Start Your Own Business workshop (Starting Out: Starting Up).

Resources for research commercialisation

The staffing and other resources allocated by institutions to commercialisation activities indicate the capacity of institutions to capture the commercial benefit from their research. Commercialisation staff and administrative costs cover the salaries and other associated costs of staff employed in commercialisation offices as well as the costs of legal and other fees incurred in commercialisation activity. Commercialisation and support staff may be employed within an office dedicated to commercialisation activities, a commercialisation company or within functional units within the institution.

Key points

- In 2003 and 2004 close to 500 full-time equivalent (FTE) staff members were engaged in commercialisation work in each year (table 15).
- In 2003 and 2004 around 16 per cent of institutions indicated they had no staff engaged in a dedicated commercialisation role or as commercialisation support staff (table 15).
- The cost to institutions of conducting research commercialisation activities, including staffing and other costs, was over $65 million in 2003 and almost $70 million in 2004 (table 15).
- The time series data shows that over the period from 2000 to 2004, the level of commercialisation staff increased 74% from 160 to 279, although growth slowed in 2004 due to a reduction in commercialisation staff engaged by CSIRO (figure 12).

Figure 12: Number of dedicated commercialisation staff by sector 2000–2004 (data from 59 institutions)

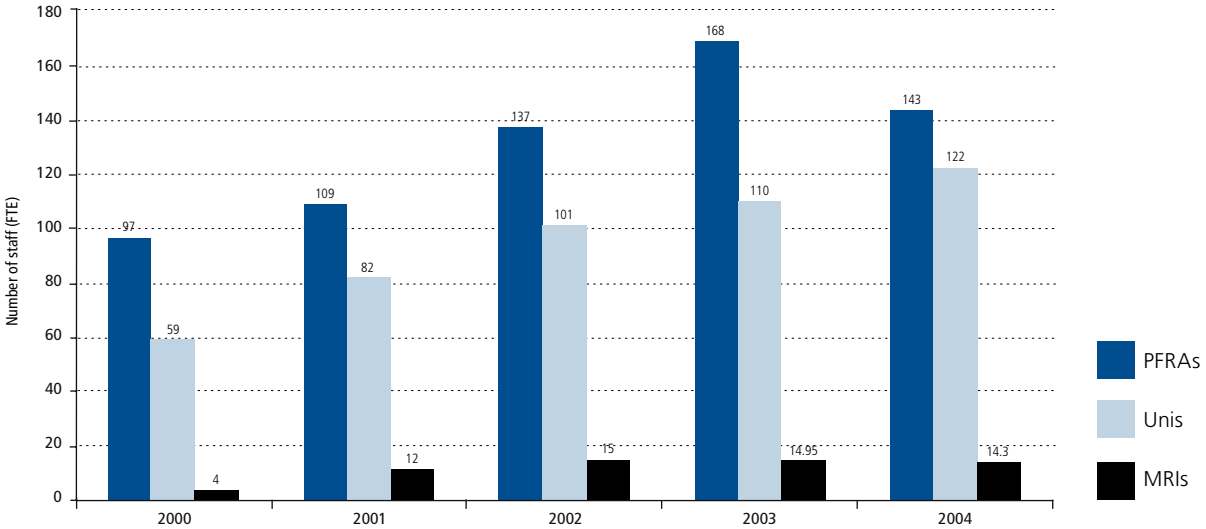


Table 15: Commercialisation staff numbers and staff cost ($'000) in 2003 and 2004

	2003					2004				
	CSIRO	Other PFRAs	Universities	MRIs	Total	CSIRO	Other PFRAs	Universities	MRIs	Total
Number of institutions responding	1	3	38	26	68	1	3	39	27	70
Number of institutions reporting no commercialisation staff	-	-	2	9	11	-	-	3	9	12
Number of dedicated commercialisation staff	154	14	113	16	297	130	13	126	17	286
Number of Other staff[a]	41	12	115	7	175	69	10	115[a]	7	202
Number of commercialisation staff subtotal	**196**	**26**	**228**	**23**	**473**	**199**	**23**	**241**	**24**	**487**
Cost of dedicated commercialisation staff	20,300	1,808	14,271	1,948	38,327	19,500	1,705	16,166	2,024	39,394
Cost of other staff	3,900	1,461	8,006	516	13,883	6,900	1,567	7,950	609	17,026
Cost of commercialisation staff total	**24,200**	**3,268**	**22,277**	**2,554**	**52,299**	**26,400**	**3,272**	**24,116**	**2,633**	**56,420**
External fees and legal costs	5,546	718	6,670	2,908	15,841	5,222	895	7,660	2,744	16,522
Internal fees and legal costs	100		912	100	1,112	100	-	1,087	85	1,272
Revenue from licencees as reimbursements of expenses[b]	1,041	51	2,235	277	3,605	771	34	3,455	417	4,677
Net total other commercialisation costs	**4,605**	**667**	**5,346**	**2,730**	**13,349**	**4,551**	**861**	**5,292**	**2,412**	**13,116**
Total commercialisation staff and other costs	**28,805**	**3,935**	**27,623**	**5,284**	**65,648**	**30,951**	**4,133**	**29,408**	**5,045**	**69,536**

a Includes staff employed in the University of New England Agricultural Business Research Institute (ABRI) who are involved in producing, selling, upgrading and adapting to client requirements animal genetics software products. ABRI staff totalled 47 in 2003 and 49 in 2004. The cost of these staff amounted to $2.6 million in 2003 and $2.8 million in 2004.

b Revenue from licencees as reimbursement of expenses are offset against fees and costs to arrive at the net total other commercialisation costs.

Section 6

Country comparisons

6 Country comparisons

Introduction

This section is included to enable broad comparisons between Australian and overseas performance in commercialisation. Metrics used to undertake the international comparisons are: full-time equivalent staff dedicated to licensing intellectual property (or commercialising research in general) per institution, invention disclosures, patents issued, licences, options and assignments (LOAs) executed, LOA income, and start-up company activity.

Caution must be exercised when interpreting relative performance from the data in this section for a range of reasons. There are substantial scale, structural and systemic differences between the Australian, United States (US), Canadian and United Kingdom (UK) higher education and public research systems, which impact on interactions between research institutions, industry and government. Differences in legislation, industry structure, market characteristics and government policy all impact on the incentives and strategies for research commercialisation in each of these countries.

Overall research expenditure in each country is used to adjust commercialisation activity in the four countries relative to the scale of funding inputs. However due to the time lag involved from research investment to the realisation of commercial outputs, research expenditure is an imperfect but consistent moderator. In addition, fluctuations in research funding and expenditure between countries during the time series period may influence measures of their relative research commercialisation activities. For example, Australia's university sector received substantial increased funding through the Australian Government's Backing Australia's Ability packages, starting in 2001[7].

Methodology

Comparative data is drawn from the:

- National Surveys of Research Commercialisation (NSRC) in Australia in the years 2000 to 2004 – covering publicly funded research institutions, universities and medical research institutes[8].
- US Association of University Technology Managers (AUTM) Licensing Survey for 2004[9].
- The Canadian AUTM Licensing Survey for 2004[10].
- The UK University Commercialisation Survey undertaken by the University Companies Association (UNICO)[11].

Most respondents to these surveys are universities. The US survey included responses from 164 universities and colleges, 33 research institutes and one third party technology

7 A funding overview of the two Backing Australia's Ability packages is available at: http://backingaus.innovation.gov.au/

8 The data reported each year was used rather than time series data presented elsewhere in this report

9 Bostrom, Dana; Stevens, Ashley and Howe, Stuart eds. 2006. *AUTM Licensing Survey, FY 2004: A Survey Summary of Technology Licensing (and Related) Performance for United States Academic and Nonprofit Institutions and Technology Investment Firms*. Northbrook, Illinois.

10 Bostrom, Dana; Stevens, Ashley and Howe, Stuart eds. 2006. *AUTM Canadian Licensing Survey, FY 2004: A Survey Summary of Technology Licensing (and Related) Performance for US and Canadian Academic and Nonprofit Technology Investment Firms*. Northbrook, Illinois.

11 The University Companies Association, UNICO. 2005. *UNICO Survey of University Commercialisation*. London.

investment firm. The Canadian survey included responses from 28 universities and six hospitals and research institutes. The same questionnaire (the AUTM survey) is used in the US and Canada in each year.

The data in these surveys is not intended to capture all the publicly funded research commercialisation activity, rather it provides insights into the major areas of activity as reported by the institutions performing the majority of work in each country.

There are substantial differences in response rates to the surveys, with the NSRC generally having the highest response rates.

Table 16: Respondents and response rates to commercialisation surveys

	2000	2001	2002	2003	2004
Australia (NSRC)					
Number surveyed	65	96	96	79	79
Responses	50	72	77	70	70
Response rate (%)	76.9	75.0	80.2	88.8	88.8
USA (AUTM)					
Number surveyed	344	284	299	304	305
Responses	168	171	189	198	198
Response rate (%)	48.8	60.2	63.2	65.1	64.9
Canada (AUTM)					
Number surveyed	62	51	75	46	46
Responses	22	27	33	38	34
Response rate (%)	35.3	52.9	44.0	50.0	44.7
UK (UNICO)					
Number surveyed	n/a	122	125	148	189
Responses	n/a	81	124	75	106
Response rate (%)	n/a	66.4	99.2	50.7	56.4

The comparative data have been prepared on the basis of the following parameters:

- Not all questions asked in the surveys in each country are directly comparable. For example different definitions of commercialisation staff exist. Only those that are directly comparable have been included in the comparative data.
- For each country, research expenditure and LOA income received expressed in local currency, was converted to $US dollars by dividing that expenditure by the purchasing power parities developed by the Organisation for Economic Cooperation and Development (OECD)[12].
- The Australian research expenditure used was that reported in the current and past NSRC surveys, with institutions that had no commercialisation activity excluded from the analysis.
- The survey from the UK does not report total research expenditure. It was calculated for this report by aggregating the research expenditure reported by each institution in each year.
- Australian totals for 2000 to 2004, exclude data for CRCs. However, if any institution included CRC data in their response that data was included.

12 For a full list of the purchasing power parity factors used see http://www.oecd.org/about/0,2337,en_2649_34357_1_1_1_1_1,00.html

The international comparisons in the NSRC report for 2001 and 2002 may not be directly comparable with the comparisons in this report. The current report:

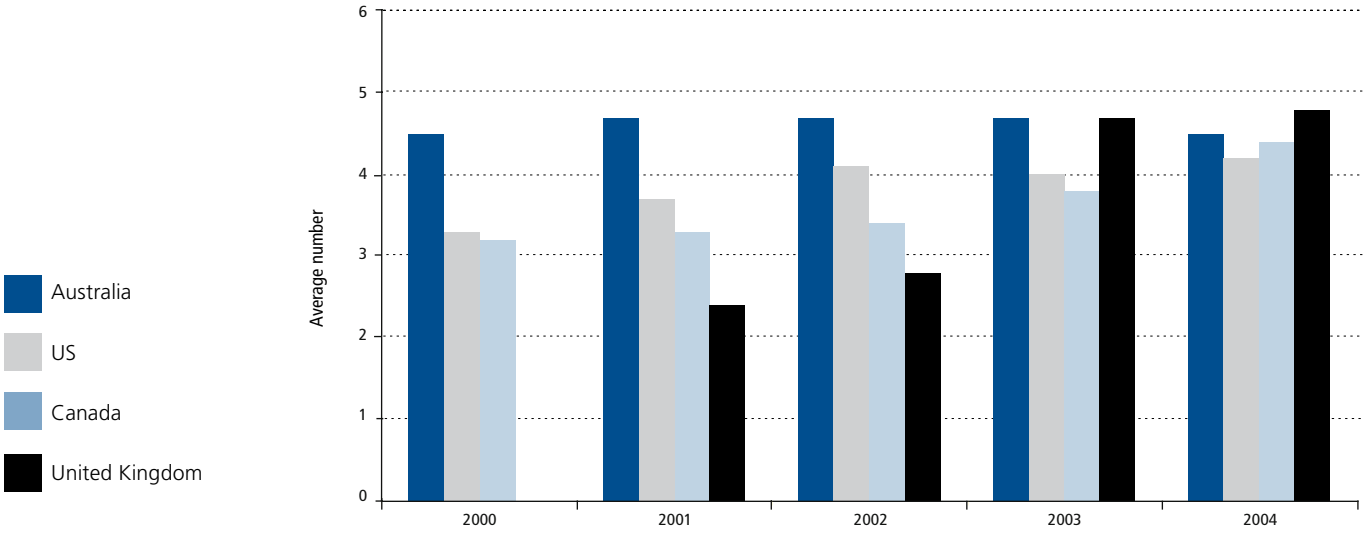
- includes data for all respondents in each country and is not limited to data from universities; and
- does not apply an adjustment factor to normalise the measures to the US and UK response rate.

Results

Key points

- The human resources dedicated to research commercialisation by Australian institutions have remained either above or equal to that of the US, Canada and the UK from 2000 to 2004 (figure 13).
- The number of invention disclosures by Australian institutions has remained lower than the US, Canada and the UK (figure 14) although some Australian institutions (such as CSIRO) do not commence the commercialisation process with the invention disclosure mechanism, preferring instead to proceed directly to the patent application process.
- The number of US patents issued to Australian institutions was generally higher than the UK but lower than the US or Canada (figure 15).
- The number of LOAs executed exhibited a high degree of variation between years and countries. Australia institutions generally executed fewer LOAs than the US and Canadian institutions (except for 2000) but more than the UK (except for 2004) (figure 16).
- The level of Australia's LOA income exceeded that of the UK, was similar to Canada, and lower than the US (figure 17).
- The number of new start-up companies formed by Australian institutions was generally higher than the US but lower than Canada and the UK (figure 18).

Figure 13: International comparison of average commercialisation and licensing staff (FTEs) per institution



In figure 13 staff numbers are licensing full time equivalents (FTEs) only and do not include other staff who may support the commercialisation activities. Data relates only to those institutions who had some commercialisation staff or commercialisation activity in the period.

Figure 14: International comparison of invention disclosures per $US100 million research expenditure

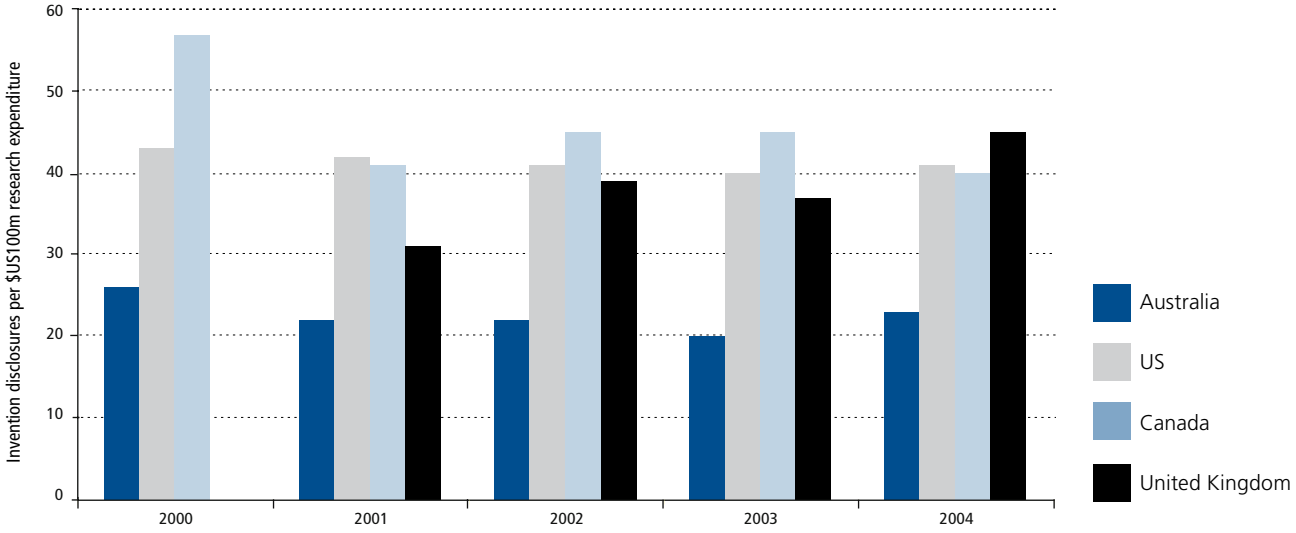
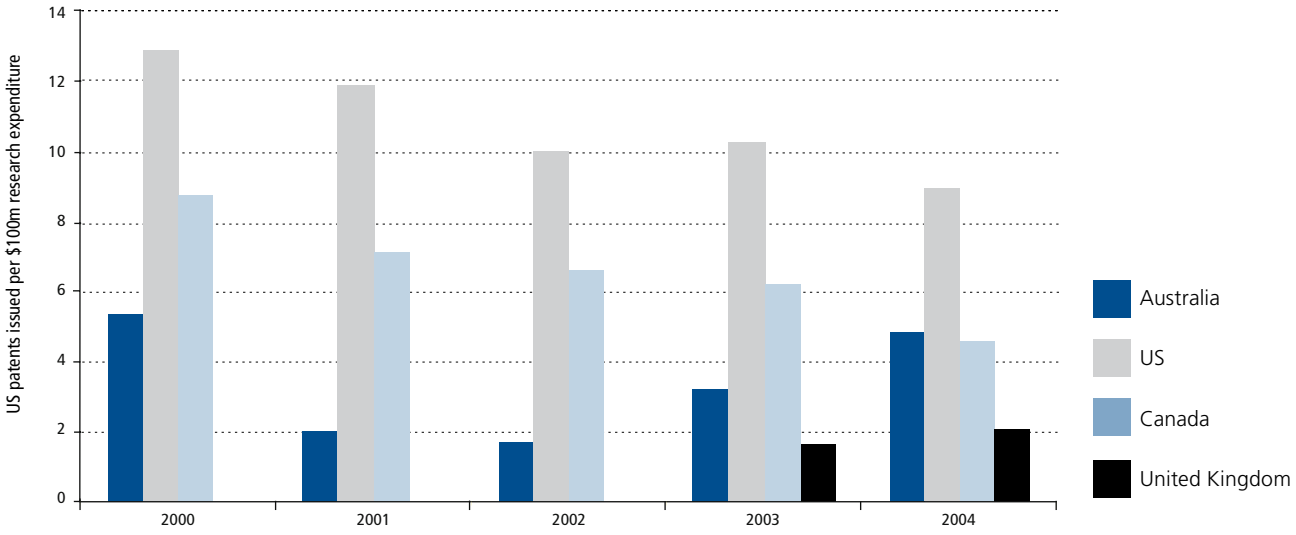


Figure 15: International comparison of US patents issued per $US100 million research expenditure



In figure 15 there is a discontinuity in the Australian data for total patents issued worldwide (see also table 2) that affects this international comparison of total patents issued in the United States, due to changes in reporting by the CSIRO. Between 2000 and 2002 CSIRO only reported patent families and was not reporting applications and issues for each patent. The method of counting patents and applications for 2003 and 2004 is more internationally comparable.

Figure 16: International comparison of LOAs executed per $US100 million research expenditure

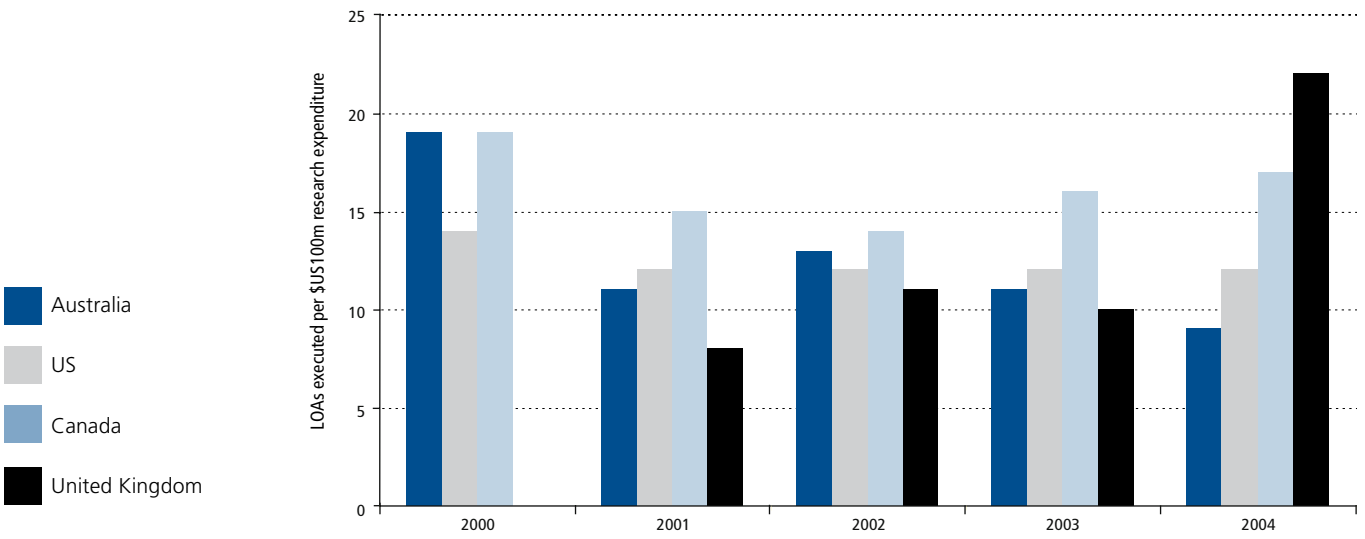
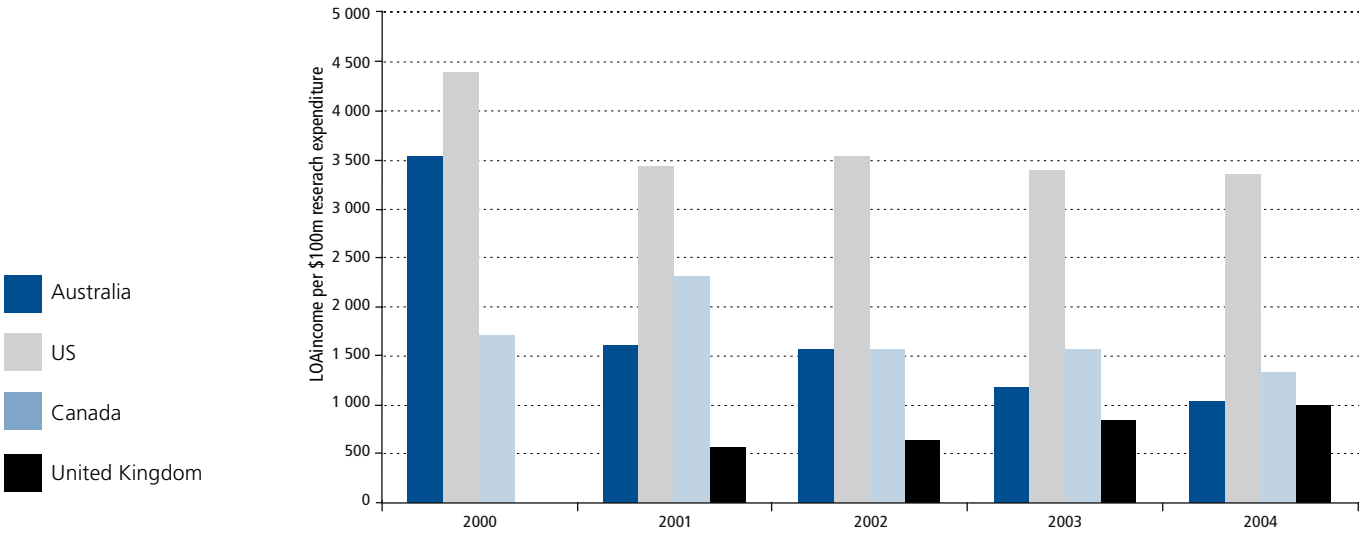
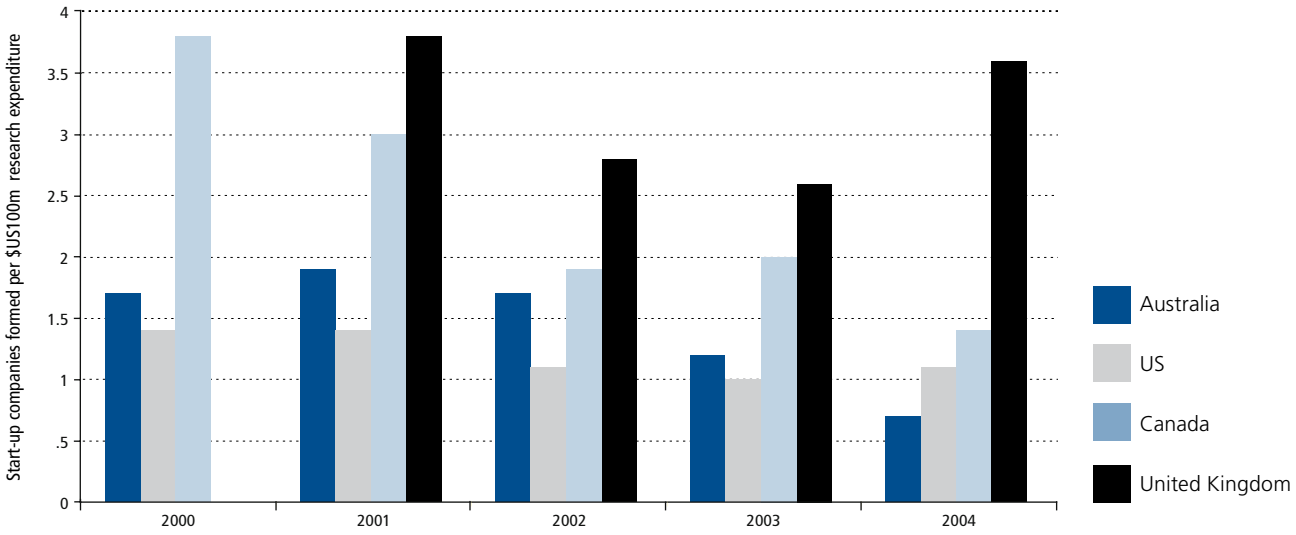


Figure 17: International comparison of LOA income per $US100 million research expenditure



In figure 17 the 2000 figure includes a single transaction that created income of $50m for the University of Melbourne. For further information see: Australian Research Council et al, 2002, National Survey of Research Commercialisation: Year 2000, www.arc.gov.au/pdf/AURC003.pdf

Figure 18: International comparison of start-up companies formed per $US100 million research expenditure



Cooperative Research Centres (CRCs)

7 Cooperative Research Centres (CRCs)

The CRCs Programme was established in 1990 by the Australian Government to bring together researchers and research users. The programme emphasises the importance of collaborative arrangements to maximise the benefits of research through an enhanced process of utilisation, commercialisation and technology transfer.

CRCs operate in six broad fields of research: environment, agriculture and rural-based manufacturing, information and communication technology, mining and energy, medical science and technology, and manufacturing technology.

This section presents data from the CRCs Management Data Questionnaire (MDQ) for 2003–04 and 2004–05. MDQ data was not combined with NSRC data for 2003 and 2004 for analytical purposes as there was potential for outputs shared between CRCs and institutions included in the NSRC to be counted more than once.

All dollar values are as reported for the relevant year.

Key points

- The ratio of commercialisation expenditure to research expenditure in CRCs amounted to 8.2 per cent in 2004–05, compared to 7.5 per cent in 2003–04 (table 17).
- In 2004–05, CRCs maintained a total of 305 patents in Australia and 634 overseas (table 18).
- During 2003–04 and 2004–05 CRCs:
- earned a total of $18.6 million from licences, options and assignments (table 19);
- formed a total of 34 start-up companies, and income of over $3.5 million was earned from start-up companies (table 20); and
- entered into a total of 1117 research contracts with a value of $100.2 million (table 21).

The data in this report complements a recent study commissioned by the Department of Education, Science and Training, which has shown that the Cooperative Research Centres deliver considerable economic benefits. That study found:

"as a result of the research, training and commercialisation and utilisation activities of CRCs selected through rounds one to eight and also those from existing CRCs selected in round nine of the programme, Australia's GDP has been increased by almost $2.7 billion. The return to GDP for each dollar invested in the CRC Programme is $2.16.[13]*"*

13 *Economic Impact Study of the CRC Programme,* a report prepared for the Australian Government Department of Education, Science and Training by Insight Economics Pty Ltd, October 2006. This report built on the findings of *The Economic Impact of Cooperative Research Centres in Australia - Delivering benefits for Australia,* a report for the Cooperative Research Centres Association Inc by The Allen Consulting Group, 2005.

Resourcing for commercialisation

Table 17: CRC research and commercialisation expenditure for 2003–04 and 2004–05

	2003–04		2004–05	
	Commercialisation expenditure	Commercialisation exp. as proportion of research expenditure	Commercialisation expenditure	Commercialisation exp. as proportion of research expenditure
	$'000	%	$'000	%
Manufacturing technology	11,930	14.0	10,818	12.0
Information and communications technology	12,663	17.9	13,253	19.7
Mining and energy	5,666	5.9	10,296	9.3
Agriculture and rural based manufacturing	9,991	7.3	10,964	6.8
Environment	8,494	4.6	9,627	4.4
Medical science and technology	2,486	2.2	7,795	6.6
Total	**53,716**	**7.5**	**62,753**	**8.2**

Intellectual Property activity

Table 18: CRC patenting activity for 2003–04 and 2004–05

	2003–04				2004–05			
	Patents maintained		Patents filed		Patents maintained		Patents filed	
	In Australia	Overseas	In Australia	Overseas	In Australia	Overseas	In Australia	Overseas
	No.	No.	No.	No.	No.	No.	No.	No.
Manufacturing technology	77	98	33		78	91	22	2
Information and communications technology	121	179	18	1	79	219	13	3
Mining	16	54	7	2	23	84	5	1
Agriculture and rural based manufacturing	27	46	5	4	51	51	14	2
Environment	17	82	3	1	33	132	6	6
Medical science and technology	96	151	10	7	41	57	8	8
Total	**354**	**610**	**76**	**15**	**305**	**634**	**68**	**22**

Table 19: Income to CRCs from licences, options and assignments

	2003–04 LOA Income $'000	2004–05 LOA Income $'000
Manufacturing technology	526	677
Information and communications technology	209	7,463
Mining and energy	10	564
Agriculture and rural based manufacturing	70	15
Environment	85	61
Medical science and technology	7,922	997
Total	**8,822**	**9,777**

Start-up company activity

Table 20: CRC new start-up companies formed and income received

	2003–04		2004–05	
	New start-up companies	Income received from start-up companies	New start-up companies	Income received from start-up companies
	No.	$'000	No.	$'000
Manufacturing technology	11	244	7	304
Information and communication technology	8		2	752
Mining and energy		2,100		
Agriculture and rural based manufacturing	1		1	6
Environment	1		1	130
Medical science and technology	1		1	
Total	**22**	**2,344**	**12**	**1,192**

Research contracts and consultancy activity

Table 21: CRC research contracts and consultancies

	2003–04		2004–05	
	No.	$'000	No.	$'000
Manufacturing technology	55	3,334	56	3,298
Information and communication technology	52	5,111	131	5,549
Mining and energy	115	12,595	143	17,237
Agriculture and rural based manufacturing	66	9,830	99	11,116
Environment	177	14,445	189	14,671
Medical science and technology	23	1,922	11	1,111
Total	**488**	**47,237**	**629**	**52,982**

Appendix 1

Survey respondents 2003 and 2004

Appendix 1: Survey respondents 2003 and 2004

Institution	Responded for 2003	Responded for 2004
Publicly funded research agencies		
Commonwealth Scientific and Industrial Research Organisation	Y	Y
Defence Science & Technology Organisation	Y	Y
ANSTO	Y	Y
Australian Institute of Marine Science	Y	Y
Universities		
Australian Catholic University	Y	Y
Charles Sturt University	Y	Y
Macquarie University	Y	Y
Southern Cross University	Y	Y
The University of New England	Y	Y
The University of New South Wales	Y	Y
University of Newcastle	Y	Y
The University of Sydney	Y	Y
University of Technology, Sydney	Y	Y
University of Western Sydney	Y	Y
University of Wollongong	Y	Y
Deakin University	Y	Y
La Trobe University	Y	Y
Monash University	Y	Y
Royal Melbourne Institute of Technology (RMIT)	Y	Y
Swinburne University of Technology	Y	Y
The University of Melbourne	Y	Y
University of Ballarat	Y	Y
Victoria University	Y	Y
Bond University	Y	Y
Central Queensland University	Y	Y
Griffith University	Y	Y
James Cook University	Y	Y
Queensland University of Technology	Y	Y
University of Queensland	Y	Y
University of Southern Queensland	Y	Y
University of the Sunshine Coast	Y	Y
Curtin University of Technology	N	Y
Edith Cowan University	Y	Y
Murdoch University	Y	Y
The University of Western Australia	Y	Y
The University of Notre Dame Australia	Y	Y
Flinders University	Y	Y
The University of Adelaide	Y	Y
University of South Australia	Y	Y
University of Tasmania	Y	Y
Charles Darwin University	Y	Y
Australian National University	Y	Y
University of Canberra	Y	Y
Medical research institutes		

Institution	Responded for 2003	Responded for 2004
ANZAC Research Institute	Y	Y
Baker Heart Research Institute	Y	Y
Bionic Ear Institute	Y	Y
Brain Research Institute	Y	Y
Cancer Council Victoria	Y	Y
Centenary Institute of Cancer Medicine and Cell Biology	Y	Y
Centre for Eye Research Australia	Y	Y
Child Health Research Institute	Y	Y
Children's Medical Research Institute	Y	Y
The George Institute for International Health	Y	Y
The Heart Research Institute	Y	Y
Howard Florey Institute of Experimental Physiology and Medicine	Y	Y
Lions Eye Institute	Y	Y
Ludwig Institute for Cancer Research Melbourne Branch	Y	Y
Macfarlane Burnet Institute	Y	Y
Mental Health Research Institute of Victoria	Y	Y
Murdoch Childrens Research Institute	Y	Y
National Stroke Research Institute	Y	Y
Prince Henry's Institute of Medical Research	Y	Y
Prince of Wales Medical Research Institute	Y	Y
Queensland Cancer Fund	Y	Y
Queensland Institute of Medical Research	Y	Y
Royal Brisbane and Women's Hospital Research Foundation	Y	Y
Telethon Institute for Child Health Research	Y	Y
Victor Chang Cardiac Research Institute	Y	Y
The Walter and Eliza Hall Institute of Medical Research	Y	Y
Woolcock Institute of Medical Research	Y	Y
Austin Research Institute	N	N
Children's Cancer Institute Australia for Medical Research	N	N
Garvan Institute of Medical Research	N	N
Institute for Breathing and Sleep	N	N
Kolling Institute of Medical Research	N	N
Neuroscience Institute of Schizophrenia & Allied Disorders	N	N
St Vincent's Institute of Medical Research	N	N
Westmead Millennium Institute	N	N

Appendix 2

Survey questionnaire 2003 and 2004

Appendix 2: Survey questionnaire 2003 and 2004

Institutions were asked to fill out two questionnaires, one for 2003 and one for 2004. The two questionnaires captured the same information, but for the relevant year.

DEST National Survey of Research Commercialisation – 2003

Please ensure that you have read the Survey Instructions and Explanatory Notes Part 1 and 2 before preparing your responses to this survey.

Part 1: Preliminaries

1. Name of institution: _____

_____

_____

_____

Research Expenditure

2a. What was your institution's research and experimental development expenditure, as reported in the most recent Australian Bureau of Statistics (ABS) survey (i.e.31 December 2004 or 30 June 2005*)?

$ _____

* Note that this reporting period is not related to the reference period for this survey (2003).

2b. Please indicate the end date for the relevant ABS survey reporting period:*

1 31 December 2004

2 30 June 2005

* Note that this reporting period is not related to the reference period for this survey (2003).

Comments relating to question 2:

_____

_____

_____

_____

_____

_____

Part 2: Intellectual Property

This Part is structured to broadly follow the IP commercialisation process, i.e. from resourcing, through invention disclosure, to licensing and spin-out formation. Please see the Explanatory Notes for guidance on activities that are to be included.

Resourcing

3. In 2003, how many full time equivalents (FTEs) were employed in or engaged by your institution in the following roles, and what was the full cost of these resources?

	FTE Number	Full Cost of all FTEs
a. Dedicated commercialisation staff		
b. Other commercialisation support staff		
c. Total		

4. What did your institution spend to secure statutory protection of intellectual property rights (e.g. patents, plant breeder rights, copyright, trade marks and/or registered designs) in 2003?

	Cost in 2003
a. External fees and legal costs	
b. Internal legal advice/services	

5. What amount was received by your institution from licensees as reimbursements of expenses reported in question 4a?

$ _____

6. How many invention disclosures did your institution receive in 2003?

_____

Comments relating to questions 3–6:

_____

_____

_____

_____

_____

Patent and Plant Breeder Rights Application

7. How many patent and/or plant breeder rights applications were filed in 2003?

	Total Applications	New Applications
a. In Australia		
b. In the United States		
c. Elsewhere		
d. Total		

8. How many of the new patent and/or plant breeder rights applications filed in 2003 (as reported in question 7) were for each of the following:

	Number
a. Provisional patents	
b. Patent Cooperation Treaty (PCT) patents	
c. Innovation patents	
d. Other	
e. Total	

Comments relating to questions 7–8:

9. How many patents and/or plant breeder rights were issued to your institution in 2003?

	Number
a. In Australia	
b. In the United States	
c. Elsewhere	
d. Total	

Patent and Plant Breeder Rights Holdings

10. How many patents and/or plant breeder rights did your institution hold as of 31 December 2003?

	Number
a. Patents pending	
b. Patents issued	
c. Total	

11. How many patents and/or plant breeder rights were culled or allowed to lapse from your institution's holdings in 2003?

Comments relating to questions 10–11:

Licences/Options/Assignments (LOAs)

This section refers to LOAs negotiated on full commercial terms only.

12. How many Licences/Options/Assignments (LOAs) did your institution:

	Number
a. Execute during 2003	
b. Have active as of 31 December 2003 (regardless of when they were executed)	

13. How many active LOAs yielded income in 2003?

_____

14. For those active LOAs that yielded income in 2003 (question 13), how many LOAs and how much income for your institution can be attributed to:

	Number	Income
a. Running royalties		$
b. Cashed-in equity		$
c. All other types		$
d. Total		$

15. Please identify the number of LOAs by income in 2003:

	Number
a. Between $0 and $10,000	
b. Between $10,000 and $50,000	
c. Between $50,000 and $200,000	
d. Between $200,000 and $500,000	
e. $500,000 and over	
f. Total	

3.Note: The 'Total' figure should be the same as the Total figure calculated for Income in question 14d.

16. In 2003, how much of the income reported in question 14d was paid to other institutions or commercial entities?

$ _____

17. Based on running royalties (question 14a), what was the estimated level of sales resulting from technologies your institution has licensed in 2003 or before?

$ _____

Comments relating to questions 12–17:

_____

_____

_____

_____

_____

Capital Raising, Initial Public Offerings and Equity

18. Did your institution participate in any capital raising for research commercialisation activities (including Initial Public Offerings – IPOs) in 2003?

	Number	Income
a. IPOs		$
b. Other capital raising activities		$
c. Total final capital raised	(n/a)	$

19. What was the value of all research commercialisation equity holdings as of 31 December 2003?

$ _____

Comments relating to questions 18–19:

Start-up Companies

20. How many start-up companies that were operational as of 31 December 2003 were dependent upon the licensing/assignment of your institution's technology for initiation?

21. In how many of the start-up companies operational at 31 December 2003 identified in question 20 did your institution hold equity?

Comments relating to questions 20–21:

Names and Contact Details of New Start-Up Companies

22. Please provide details for each of the start-up companies that were formed in 2003, to allow for survey follow-up if required. (You can use multiple copies of this page to collect information on more than one company.)

Name of company: _____
Address: _____
Suburb: _____
State: _____
Postcode: _____
Country: _____
Telephone: _____
Fax: _____
Email: _____
ABN: _____
ACN: _____

Comments relating to question 22:

_____
_____
_____
_____

Success Stories

23. Please describe, for as many technologies as you wish to highlight, important licensing milestones that occurred in 2003.

- Sample licence-related milestones could include:
  - the product became available for sale to the public in 2003
  - the product received regulatory approval in 2003
  - the product reached an earned royalty milestone in 2003 (for example $100,000 per year)
  - Other milestones could include successful: pilot testing; scale up of production levels; capital raising; clinical trials; and domestic and overseas sales.
- You can email any supporting documents to Kim Sullivan at ORIMA Research (Kim.sullivan@orima.com). Please clearly mark the number and year of the relevant success story.
- You can use multiple copies of the following page to collect information on more than one success story.

Success Story Number:

Name of product/process/service:

Description of product/process/service:

Significant milestones: [Please circle as many options as apply]

1. Product became available for sale to the public in 2003
2. Product received regulatory approval in 2003
3. Product reached an earned royalty milestone in 2003
4. Other [Please specify]

Licensee (if DEST may use the name in publications):

Licensee (generic description, for example, small biotech firm, large pharmaceutical company etc):

Description of the public benefit and/or economic impact:

What was the main source of funding for the research that underpinned the development of the subject technology: [Please circle as many options as apply]

1. Australian Research Council
2. National Health & Medical Research Council
3. Industry (i.e. private sector)
4. Community (i.e. not-for-profit sector)
5. Commonwealth institutional operating grants
6. State government
7. Other [Please specify]

From which academic/research discipline did the product/process/service primarily originate:

Please provide any relevant links to web pages etc on the internet about this product/process/service:

Comments relating to question 23:

Part 3: Research Contracts & Consultancies

Please see the Explanatory Notes for clarification on the activities covered by Research Contracts and Research Consultancies.

24. For research consultancies and contracts your institution entered into in 2003, please identify the:

a. Number: _____

b. Total gross contracted value: _____

NB: 'Gross contracted value' refers to the full contracted value of the work, regardless of whether any or all payments were made in the reporting year.

25. Of those research consultancies and contracts shown in question 24, please identify the number of research consultancies and contracts according to total gross contracted value:

	Number
a. Between $0 and $10,000	
b. Between $10,000 and $50,000	
c. Between $50,000 and $200,000	
d. Between $200,000 and $500,000	
e. $500,000 and over	
f. Total	

Note: The 'Total' figure should be the same as the Total number provided in question 24a.

26. Of the research consultancies and contracts identified in question 24a, how many were with clients that had previously contracted with your institution for research (i.e. 'repeat business')?

Number: _____ [If not known, please write 'Unknown']

Comments relating to questions 24–26:

_____

_____

_____

_____

_____

Part 4: Skills Development & Transfer

27a. Does your institution offer training to its researchers and/or research students in commercialisation and entrepreneurship:

1. Yes
2. No [Please go to question 28a]

27b. Does this training include in-house training?

1. Yes [How many participants completed in-house training in 2003?] _____
2. No

27c. Does this training include delivery by an external provider?

1. Yes [How many participants completed external training in 2003?] _____
2. No

28a. Does your institution offer training to industry or other organisations to assist them in understanding research findings and/or their implications?

1. Yes
2. No [Please go to question 29]

28b. Please list the courses or programs available:

_____

_____

_____

_____

_____

28c. How many participants completed these training programs in 2003?

_____

29. With reference to the start-up companies in operation as of 31 December 2003 that were dependent upon the licensing/assignment of your institution's technology for initiation (i.e. those identified in response to question 20), how many research postgraduates were employed in those firms during 2003 (FTE)?

Number: _____ [If not known, please write 'Unknown']

Comments relating to questions 27–29:

_____

_____

_____

_____

_____

Part 5: Additional Information

30. Is there any other additional information you wish to provide regarding the research commercialisation activities and performance of your institution?

Part 6: Survey Process

31. Please provide an estimate of the time taken by all employees in your institution to complete this questionnaire. This should include time spent: reading the instructions; obtaining the required information; and recording answers to the questions.

_____ hours, _____ minutes

32. Please provide comments on:

a. Any questions which caused problems:

b. Suggested improvements to this questionnaire:

Appendix 3

Explanatory notes to the survey questionnaire 2003 and 2004

Appendix 3: Explanatory notes to the survey questionnaire 2003 and 2004

EXPLANATORY NOTES
PART 1: GENERAL

Purpose of survey

The National Survey of Research Commercialisation (NSRC) seeks to obtain information on the research commercialisation activities and results of Australian universities as well as selected publicly funded research agencies (PFRAs) and medical research institutes (MRIs). As with previous years, the information gathered through the NSRC is used to inform the development and evaluation of policy relating to the innovation system, while individual institutions and researchers use this information to monitor and compare their own performance and results.

The survey data will be owned by the Commonwealth and published in a written report to be made available on the DEST website. That report will include other information on research commercialisation activities, and is due to be released in late 2006.

The NSRC has previously been conducted for the years 2000, 2001 & 2002. The present survey extends the series by obtaining data for 2003 and 2004. Consistent with the recommendations of the CCST Working Group on Metrics of Commercialisation (available at: http://www.dest.gov.au/NR/rdonlyres/E3170A75-79D5-4737-955E-BE41714948E8/5637/FinalMoCReport15April2005.pdf), this survey is based on a broadened definition of 'research commercialisation', which includes but goes beyond a focus on commercialisation based on intellectual property rights in the form of patents to include research contracts & consultancies, and skills development and transfer.

Reports on previous surveys in this series are available at the following links:

- for the year 2000 (http://www.arc.gov.au/pdf/AURC003.pdf)
- for the years 2001 and 2002 (http://www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/commercialisation/nsrc.htm)

You may wish to refer to these for responding to some questions, especially those in **Part 2: Intellectual Property.**

Using these Explanatory Notes

These Explanatory Notes are divided into two parts. This first part provides general guidance on the survey and matters that relate to all questions. The second part addresses each question, and incorporates definitional information on key terms.

Contact for assistance

Please contact your Institutional Contact Officer (ICO) in the first instance regarding:

- institution wide coordination of the survey response; and
- final submission of the data on behalf of your institution.

For technical assistance or further guidance in completing this survey, please contact:

Kim Sullivan of ORIMA Research

Phone: (02) 6243 3222

Email: kim.sullivan@orima.com

Facsimile: (02) 6243 3220

Postal Address:

ORIMA Research
Reply Paid 5067
LYNEHAM ACT 2602

If making contact by telephone, please call weekdays between 9am and 5pm eastern time.

Please also use these contact details for submitting any additional information via email, facsimile or post.

Survey timing

The survey is being conducted over four weeks, from 27 March to 21 April 2006.

Reporting year

Because of the differing accounting practices among surveyed institutions, it is acceptable to report annual data on either a financial year basis or on a calendar year basis.

The survey website and online questionnaires present the reporting years for your institution on either a calendar or financial year basis (i.e. 2003 and 2004, or 2003–04 and 2004–05), based on how your institution has provided information in past surveys.

If you wish to provide information on a basis other than that currently shown, please refer to the 'Switch to Calendar / Financial Year Reporting' link on the survey website's menu bar. For further assistance please contact Kim Sullivan at ORIMA Research (see above).

'Nil' and 'Not applicable' responses

For questions where you have no activity, we require a response of 'nil' so that it can be differentiated from a missing response.

Also, as not all questions apply to all respondents, a 'not applicable' response is required where appropriate.

Estimates of responses

In instances where you do not have exact data, please provide your best estimate and an explanation of your estimating method in the free text field at the end of the relevant section.

'In-kind' contributions

In instances where you wish to report additional information such as in-kind payments/ contributions, please provide your estimate of the value of such payments/contributions in the free text field at the end of the relevant section.

Fractional responses

Where your institution shares ownership or responsibility for a reporting unit (e.g. a patent or income from a licence) and you are able to identify that proportion, please report on that fraction to the second decimal point (e.g. a one third share would be reported as 0.33). If you are unable to identify the proportion, report it as a whole share.

Specific information on this issue is provided in the notes to relevant questions.

Cooperative Research Centres

Data for Cooperative Research Centres (CRCs) will be obtained through the CRC Programme and reported separately to this survey, to arrive at a total picture for the research system.

Under these arrangements, institutions who are members of CRCs should **not report any research commercialisation information that relates to their participation in the CRC Programme**. This includes costs, staffing, outputs (such as patents or spin-out companies) and revenues (such as licensing income or research consultancies and contracts).

Specific information on this issue is provided in the Explanatory Notes to relevant questions.

Currency

Report in Australian dollars.

Free text fields for comments

Free text fields are provided for comments below selected questions in the survey questionnaires. For each question where a free text field is provided, and where necessary, please use the field to:

- provide comments and qualifications to your answer; and
- explain any difficulties you had with the relevant question.

EXPLANATORY NOTES
PART 2: QUESTIONS & DEFINITIONS

Part 1: Preliminaries

Question 1.

Nil

Research Expenditure

Question 2a.

RESEARCH EXPENDITURE: expenditure on research and experimental development, as defined by the Australian Bureau of Statistics (ABS) in its Surveys of Research & Experimental Development.

Include: The same figure as that reported by your institution in response to the relevant ABS Survey of Research & Experimental Development, i.e.:

- Government and Private Non-Profit Organisations, for the year ending 30 June 2005, cat. no. 8109.0, or
- Higher Education Organisations, for the year ending 31 December 2004, cat. no. 8111.0, or
- Businesses, for the year ending 30 June 2005, cat. no. 8104.0.

If you are unable to identify the relevant figure provided to the ABS, please include in your response all expenditure made by your institution in support of its research activities that are funded by all sources, including the federal government, local government, industry, foundations, and other non-profit organisations. If your institution participates in a CRC, include research expenditure related to your institution's role as a CRC participant.

Exclude: any amount for a Capital Use Charge (which is paid back to the government for accrual accounting purposes) applied in the relevant year. Relevant only to Australian Government organisations.

Question 2b.

END DATE: refers here to the end date for the year you answered for in question 2a, i.e. either 31 December 2004 or 30 June 2005.

Part 2: Intellectual Property

This Part is structured to broadly follow the IP commercialisation process, i.e., from resourcing, through invention disclosure, to licensing and spin-out formation.

INTELLECTUAL PROPERTY COMMERCIALISATION ACTIVITIES: activities associated with the identification, documentation, evaluation, protection, marketing, and licensing of technology (including trademarks but not insignia) and intellectual property management in general. It encompasses activities such as assisting with the negotiation of research agreements, Material Transfer Agreements (MTAs), reporting of inventions to sponsors, and all other duties performed by the office. Inclusions and exclusions are addressed in the Notes for the relevant questions.

Resourcing

Question 3.

DEDICATED COMMERCIALISATION STAFF: person(s) employed in the institution in either full or fractional full time equivalent (FTE) allocation whose duties are specifically involved with commercialisation activities, such as: licensing and patenting processes: licensee solicitation; technology valuation; marketing of technology; licence agreement drafting and negotiation; and start-up activity efforts.

OTHER COMMERCIALISATION SUPPORT STAFF: person(s) employed either as full time or fractional FTEs whose duties and responsibilities are to provide professional, administrative, or staff support of COMMERCIALISATION ACTIVITIES that are not otherwise included in DEDICATED COMMERCIALISATION STAFF. Such duties might include: management; compliance reporting; licence maintenance; negotiation of research agreements; contract management; accounting; MTA activity; and general office activity, including general secretarial/ administrative assistance.

Include: FTEs working on commercialisation through licensing, sale of intellectual property or formation of start-up companies. Note: FTEs reported may or may not have a formal commercialisation or similar job title and may or may not have been in an organisational unit with 'commercialisation' or 'technology transfer' in its title, i.e., a commercialisation office or company.

Exclude: administrative assistance or in-house or external legal counsel, unless they are playing a direct commercialisation role. Do not include people working on contracts for research (other than as part of licensing), course delivery, consulting or other activities.

FULL COST: all the direct and indirect salary and related costs of the staff reported in questions 3a and 3b.

Include: wages; on-costs (including tax, superannuation, leave accruals and all allowances); and administration and infrastructure (including travel, building, office and consumables).

Question 4.

Asks for costs expended for statutory protection of intellectual property.

EXTERNAL FEES AND LEGAL COSTS: the amount spent by your institution in fees for patents, plant breeder rights, copyright, trade marks and/or registered designs.

Include: all fees and costs associated with:

- patent applications;
- securing background IP; and
- external legal fees including: patent and copyright prosecution including patent searches; maintenance; and interference costs; as well as minor litigation expenses that are included in everyday office expenditures (an example of a minor litigation expense might be the cost of an initial letter to a potential infringer written by counsel).

Exclude: direct payment of any of these costs by licensees (see question 5 for patent fee reimbursements from licensees), and legal fees for contract drafting or advice.

INTERNAL LEGAL ADVICE/SERVICES: internal legal expertise applied to: patents; plant breeder rights; copyright; trade marks and/or registered designs.

Include: internal legal costs in patent and copyright prosecution, including patent searches; maintenance; and interference costs; minor litigation expenses that are included in everyday office expenditures (an example of a minor litigation expense might be the cost of an initial letter to a potential infringer written by counsel).

Exclude: legal costs for contract drafting or advice.

Question 5.

PATENT/LEGAL FEES REIMBURSEMENTS: the amount reimbursed by licensees to the institution for EXTERNAL FEES AND LEGAL COSTS (question 4a).

Include: patent fees recovery only, not other licence revenue.

Question 6.

INVENTION DISCLOSURES: **include** the number of disclosures of inventions or discoveries, no matter how comprehensive, that were made in the year requested and are counted by your institution.

Patent and Plant Breeder Rights Applications

Question 7.

TOTAL APPLICATIONS: **include**: provisional applications; provisional applications that are converted to regular applications; new filings (such as PCT and National Phase applications); and, if applicable to Australia, the United States or elsewhere, continuations-in-part (CIPs), continuations, divisionals, and reissues.

NEW APPLICATIONS: **do not include:** continuations; divisionals; reissues; or CIPs. A provisional application filed in the reporting year may be counted as new. If a provisional application is converted in the reporting year to a regular application, then that corresponding regular application should not be counted as new.

Fractional reporting: where your institution (or its commercialisation company) is a party to a joint patent application, please report accordingly, to the second decimal point. For example, if there are three parties to the patent application, then report your institution's share as 0.33.

Exclude: all activity for Cooperative Research Centres where your institution is a participant.

Non-Patent Innovation: Where your institution has elected not to patent an invention or innovation (e.g. because of risks of reverse engineering from patent information), you may use the free-text field for questions 7–8 to report this activity/outcome.

Question 8.

PROVISIONAL PATENTS: a form of patent available through both the United States Patent and Trademark Office (USPTO) and IP Australia as a lower cost first patent filing option.

PATENT COOPERATION TREATY (PCT) PATENTS: a form of patent that offers inventors and industry a simplified and cost-effective route for eventually obtaining national patent protection internationally in any of more than 125 countries. Both applicants and patent offices of PCT member States benefit from early assessments on the relevant state of the art and on the patentability of the inventions, as well as from a centralised international publication system and from simplified formality requirements.

INNOVATION PATENTS: in Australia, these are a protection option that is designed to protect inventions that are not sufficiently inventive to meet the inventive threshold required for standard patents.

OTHER: All other types of patent applications not specified above including national phase applications.

Fractional reporting: where your institution (or its commercialisation company) is a party to a joint patent application, please report accordingly, to the second decimal point. For example, if there are three equal parties to the patent application, then report your institution's share as 0.33.

Exclude: all activity for Cooperative Research Centres where your institution is a participant.

Patents and Plant Breeder Rights Issued (including Renewals)

Question 9.

Include: the number of patents and plant breeder rights issued to your institution in the reporting year or accepted/allowed by patent offices in the reporting year. Also include annuity payment renewals and Plant Breeder Rights applications that have progressed to acceptance or allowance by patent offices.

Fractional reporting: where your institution (or its commercialisation company) is a joint owner of a patent, please report accordingly, to the second decimal point. For example, if your institution has a quarter share in a patent, then report your institution's share as 0.25.

Exclude: all activity for Cooperative Research Centres where your institution is a participant.

Patent and Plant Breeder Rights Holdings

Question 10.

This question is asking for a snapshot of your institution's total patent holdings on the last day of the reporting period, with separate counts for pending and issued.

PATENTS PENDING: **include**: all provisional patents; PCT patents; and national phase filings.

PATENTS ISSUED: **include** patents accepted and allowed by patent offices.

Fractional reporting: where your institution (or its commercialisation company) is a joint owner of a patent, please report accordingly, to the second decimal point. For example, if your institution has a quarter share in a patent, then report your institution's share as 0.25.

Exclude: all activity for Cooperative Research Centres where your institution is a participant.

Question 11.

Include: all provisional patents, PCTs and national phase applications.

CULLED: refers to the active decision to remove a patent from your institution's portfolio before the expiry of the patent term at any stage. **Exclude:** withdrawal of patent applications.

LAPSED: refers to patents your institution allowed to expire without renewal. **Exclude:** withdrawal of patent applications and all provisional patents.

Fractional reporting: where your institution (or its commercialisation company) was a joint owner of a patent, please report accordingly, to the second decimal point. For example, if your institution had a quarter share in a patent, then report your institution's share as 0.25.

Exclude: all activity for Cooperative Research Centres where your institution is a participant.

Licences / Options / Assignments (LOAs)

Question 12.

A LICENCE agreement formalises the transfer of technology between two parties, where the owner of the technology (licensor) permits the other party (licensee) to share the rights to use the technology.

An OPTION agreement grants the potential licensee a time period during which it may evaluate the technology and negotiate the terms of a licence agreement. An option agreement is not constituted by an Option clause in a research agreement that grants rights to future inventions, until an actual invention has occurred that is subject to that Option.

An ASSIGNMENT agreement conveys all right, title and interest in and to the licensed subject matter to the named assignee.

Please note: This includes only LOAs negotiated on full commercial terms, granting access to institutional intellectual property (patented or otherwise) in return for royalties or licence fees.

EXECUTE: Count the number of LOAs that were executed in the year indicated for all technologies. Each agreement, exclusive or non-exclusive, should be counted separately.

ACTIVE: The number of active licences and options, regardless of when they were executed, that had not terminated by the end of the Survey's reporting year.

BACKGROUND INTELLECTUAL PROPERTY: Pre-existing Intellectual Property not created as part of the research project and which is required by the originators for the purposes of exercising their rights with respect to the research project.

Include:

- LOAs generated as a result of competitive research grant projects (e.g. Australian Research Council Linkage Grants and National Health & Medical Research Council Development Grants), including where LOAs are provided to industry participants.
- Licences/assignments to software or biological material end-users of $1,000 or more may be counted per licence, or as one licence, or one-each for each major software or biological material product (at manager's discretion) if the total number of end-user licences would unreasonably skew the institution's data. Licences/assignments for technology protected under or plant breeder's rights may be counted in a similar manner to software or biological material products as described above, at manager's discretion.
- Licences and Assignments to other research institutions, including those provided as inputs to Cooperative Research Centres.
- Granting of licences for the use of background intellectual property.

Exclude:

- Material Transfer Agreements (MTAs).
- LOAs generated as a result of work completed by Cooperative Research Centres. (This information will be obtained separately through the CRC Programme.)

Fractional reporting: where your institution (or its commercialisation company) is a joint owner of a patent, please report accordingly, to the second decimal point. For example, if your institution has a quarter share in a patent, then report your institution's share of the LOA as 0.25.

Question 13.

This question refers to LOAs identified in question 12b.

See notes for question 14 for details of types of income to be included.

Fractional reporting: where your institution (or its commercialisation company) is a joint owner of a patent, please report accordingly, to the second decimal point. For example, if your institution has a quarter share in a patent, then report your institution's share as 0.25.

Exclude: all activity for Cooperative Research Centres where your institution is a participant.

Question 14.

RUNNING ROYALTIES: Royalties earned on the sale of products. Excluded from this number are licence issue fees, payments under options, termination payments, and the amount of annual minimums not supported by sales.

CASHED-IN EQUITY: This includes the amount received from cashing in EQUITY holdings, resulting in a cash transfer to the institution (or its commercialisation company). The amount reported should be reduced by the cost basis, if any,

on which the EQUITY was acquired. Excluded from this amount is any type of analysis or process whereby a value for the EQUITY holdings is determined but a cash transaction does not take place through the sale of these holdings.

EQUITY is ownership interest in a company (e.g. stock and rights to receiving stock) by your institution or its commercialisation company.

ALL OTHER TYPES: Any remaining types of LOA income not covered by RUNNING ROYALTIES or CASHED-IN EQUITY.

LOA INCOME: includes the gross amount (before deduction of service fees, if any) of: licence issue fees, payments under options, annual minimums, running royalties, termination payments, the amount of equity received when cashed-in, and software and biological material end-user licence fees equal to $1,000 or more, but not research funding, patent expense reimbursement, a valuation of equity not cashed-in, software and biological material end-user licence fees less than $1,000, or trademark licensing royalties from university insignia. LOA income also does not include income received in support of the cost to make and transfer materials under Material Transfer Agreements.

Include: gross cash payments received by your institution.

Exclude: LOA income paid to other institutions or commercial entities (this is reported under question 16); and in-kind contributions. If you wish to identify other forms of income, such as in-kind contributions, these can be reported in the free text field for questions 12-17.

Fractional reporting: where your institution (or its commercialisation company) is a joint owner of a patent, please report accordingly, to the second decimal point. For example, if your institution has a quarter share in a patent, then report your institution's share as 0.25.

Exclude: all activity for Cooperative Research Centres where your institution is a participant.

Question 15.

The total at question 15f should be the same as the figure at question 13.

Please report cash payments only. If you wish to identify other forms of income (e.g. in-kind contributions), these can be reported in the free text field for questions 12-17.

Fractional reporting: where your institution (or its commercialisation company) is a joint owner of a patent, please report accordingly, to the second decimal point. For example, if your institution has a quarter share in a patent, then report your institution's share as 0.25.

Question 16.

LOA income paid to other institutions or commercial entities will be used to help identify the double-count of LOA income reported under this Survey.

Include: cash amounts paid to other institutions under inter-institutional agreements.

Exclude: fees for background IP and expert advice (reported in question 4); and in-kind payments. Please report cash payments only. If you wish to identify other forms of expenditure such as in-kind contributions, these can be reported in the free text field for questions 12-17.

Question 17.

You are asked to use the running royalties identified in question 14a to estimate the level of sales resulting from your institution's licence income in the reporting year. This can be done by, for example:

- using the actual royalty rate applied to the running royalty income received under each royalty agreement, or
- calculating the average royalty rate for the total running royalty income received under all royalty agreements.

Note: In the comments field for questions 12-17, please indicate the method used to calculate the level of sales.

Capital Raising, Initial Public Offerings and Equity

Question 18.

INITIAL PUBLIC OFFERING: refers to when a company first sells its shares to the public.

OTHER CAPITAL RAISING ACTIVITIES: capital raised through activities other than IPO(s), including post-float share offers, private share offers, etc.

TOTAL FINAL CAPITAL RAISED: refers to the total amount of capital raised through the IPO(s) and/or other capital raising activities. Valuations used to arrive at this figure should comply with the International Financial Reporting Standards.

Include: All cases of participation in capital raising processes, including where your institution has driven the capital raising process but not invested in it.

Question 19.

This question asks for the value of current equity holdings as at the end of the reporting period. It is not intended to capture the proceeds of capital investments in companies, or general investments in the share market. Information on start-up companies is sought in questions 20 to 22.

EQUITY: an ownership interest in a company (e.g. stock and/or rights to receiving stock) by your institution or its commercialisation company.

Value, in some cases, may be difficult to determine. As a general principle, please ensure that valuations used to arrive at this figure are consistent with the International Financial Reporting Standards. The following guidelines may assist:

- Value of all equity holdings refers to equity that is related to licensing/ intellectual property assignment activity of the institution.
- If your institution holds equity in a publicly-traded/listed company, use the market price of your institution's holdings on the closing day of the period for which you are reporting.
- If your institution held equity in a private company, use the price established in the most recent transaction as the fair market price. For example, if you formed a company with an investor in 2000 and they put in $3 million for 60 per cent of the company and there have been no more investments since, then your value for all three years (2000–2002) will be $2 million (i.e. the institution's 40 per cent share value). If there have been no transactions, treat value as zero.

Start-up Companies

Question 20.

START-UP COMPANIES: companies or traders as persons engaged in businesses that were partially or entirely dependent upon licensing or assignment of your institution's technology for initiation.

OPERATIONAL: a company is operational when it possesses sufficient financial resources and expends these resources to make progress toward stated business goals. The company must also be diligent in its efforts to achieve these goals.

Include: Start up companies that were created in the five years up to and including the reporting date for the question.

Exclude: Start up companies that were created greater than five years before the reporting period for the question.

Question 21.

EQUITY: an ownership interest in a company (e.g. stock and/or rights to receiving stock) by your institution or its commercialisation company.

Question 22.

You are asked to list and provide details for start-up companies that were formed in the reporting period.

Success Stories

Question 23.

This question asks for product sales-related success stories. To consider your response, it might be useful to review the product stories published in the NSRC Reports mentioned in the 'Purpose of the survey' section at the start of these Explanatory Notes. It is important that the statistical information be combined with qualitative information on the benefits of licensed technologies.

The additional effort to respond to this question is acknowledged and appreciated. As an alternative to filling in the boxes, information can be submitted by attaching additional documentation to an email, or faxing or posting it to the address provided under 'Contact for assistance' near the start of these Explanatory Notes.

Part 3: Research Contracts & Consultancies

This part seeks information relating to research contracts and research consultancy agreements.

RESEARCH CONTRACTS & CONSULTANCIES: **Include:**

- consultancy agreements and contracts for the conduct of research on behalf of clients external to your institution.
- consultancy agreements for the provision of expert advice based on your institution's existing research knowledge, skills and capabilities.
- contracts with partners in grant funded research, but do not include the funding from the granting agency.
- research contracts and consultancies with partners in competitive research grant projects (e.g. Australian Research Council Linkage Grants and National Health & Medical Research Council Development Grants), but not contracts or agreements with the granting agency itself.

RESEARCH includes:

- Creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications.
- Any activity classified as research which is characterised by originality; it should have investigation as a primary objective and should have the potential to produce results that are sufficiently general for humanity's stock of knowledge (theoretical and/or practical) to be recognisably increased. Most higher education research work would qualify as research.
- Pure basic research, strategic basic research, applied research and experimental development.

GROSS CONTRACT VALUE: the full contracted value of the work, regardless of whether any or all payments were made in the reporting year. Where the contract is not for a fixed price but for services at a capped rate, count the capped value of the contract. Please report cash value only; in-kind contributions can be reported in the free text field for questions 24-26.

Question 25.

The total at question 25f should be the same as the figure at question 24a.

Question 26.

Clients who have changed their name or company structure may be counted as previous clients.

Part 4: Skills Development & Transfer

Question 27.

TRAINING IN COMMERCIALISATION AND ENTREPRENEURSHIP: refers to educational, training and development programs aimed at research staff or higher degree by research students that seeks to develop skills in and/or understanding of the research commercialisation process, i.e. translating research outputs into marketable products, processes and services.

Question 28.

TRAINING TO ASSIST IN UNDERSTANDING RESEARCH FINDINGS AND/OR IMPLICATIONS: your institution may run educational, training and/or professional development programs to help users of research to better understand research, research findings and/or the implications of research findings. If this is the case, please provide details.

Question 29.

The count of research postgraduates employed can include persons who graduated from institutions other than the respondent institution.

Part 5: Additional Information

Question 30.

This question provides the opportunity to:

- list any other commercialisation activities your institution undertook not already captured in this questionnaire
- provide information on estimated responses in relevant questions
- provide examples of where your institution's expertise was critical to an enterprise obtaining commercial benefit.

Where you provide additional information for a specific question, please identify that question here.

Part 6: Survey Process

Question 31.

Nil

Question 32.

Nil

Appendix 4

2003 and 2004 unit record data

Appendix 4: 2003 and 2004 unit record data

Notes to tables – 2003 and 2004 data

The data in the tables in this appendix are as provided by the institutions responding to the National Survey of Research Commercialisation for 2003 and 2004.

A number of guidelines were adopted in preparing these tables from the source data.

- Not applicable (N/A) and unknown responses were accepted as valid responses.
- Nil responses were changed to 0 for use in data analysis.

The following general rules were applied to ambiguous data items:

- 'Blank' responses were queried with institutions, however if a response was not forthcoming the response remained "blank".
- 'Blanks' were converted to 0 if, for that institution, a 0 could be derived from responses to other subparts of the question.
- 'Total' fields were converted from zero[14] to blank if all subparts of the question were blank.

In a small number of cases, after consultation with relevant institutions, responses were converted to unknown or nil if this more accurately reflected the institution's situation.

Variations to the general rules included:

- q13 – a blank was converted to 0 if a nil (or 0) response was recorded at q12b
- q14a-c – blanks were converted to 0 if this could be derived from other nil responses at q14 or a nil at q13
- q14d – for this total field, a zero was converted to a blank if the subparts of q14 were blank, unless a 0 was given at q13
- q15a-e – changed to 0 from blank if q13 and 14d were 0
- q15f – total was changed from zero to blank if the subparts of q15 were blank, unless a 0 given at q13
- q16 – changed from 0 to blank (or blank to zero) depending on response to q15f / q14d / q13
- q17 – changed from 0 to blank if q14a was blank (or from blank to zero if q14a was 0)
- q24b – blank was changed to zero if 0 or nil at q24a
- q25a-e – blank changed to zero if 0 or nil at q24a, or if it could be derived from the subparts of q25
- q26 – blanks changed to zero if nil or 0 at q24a
- q27b and c – response changed to 0 (= not selected) if institution said no at q27a.

14 Total fields were an auto-sum, however this could be overridden by the user entering a different total. Where this auto-sum did not operate as intended (perhaps due to institutions' internet settings) the total was derived from responses in sub-parts of the question.

Table 22: Unit record data 2003: resourcing

q1	q2a	q3ai	q3aii	q3bi	q3bii	q3ci	q3cii	q4a	q4b	q5
	Research & experimental development expenditure	Dedicated commercialisation staff	Dedicated commercialisation staff cost	Commercialisation support staff	Commercialisation support staff cost	Commercialisation staff total	Commercialisation total cost	Cost to secure IP protection - external fees and legal costs	Cost to secure IP protection - internal fees and legal costs	Revenue from licences as reimbursements of expenses
	$'000	No.	$'000	No.	$'000	No.	$'000	$'000	$'000	$'000
Commonwealth Scientific and Industrial Research Organisation	880,643	154.4	20,300	41.2	3,900	195.6	24,200	5,546	100	1,041
Defence Science & Technology Organisation	264,981	4	669	1	180	5	849	242	0	7
ANSTO	27,451	9.5	998	4.6	262	14.1	1,260	237	0	11
Australian Institute of Marine Science	19,479	0.55	141	6.45	1,018	7	1,159	238		33
Australian Catholic University	10,397	0	0	0	0	0	0	0	0	0
Charles Sturt University	8,210	1	53	2	74	3	127	8	48	4
Macquarie University	67,422	2	175	2	140	4	315	340	0	132
Southern Cross University	12,143	0	0	1	180	1	180	26	30	0
The University of New England	40,766	2.5	349	48.95[1]	2,588	51.45	2,936	40	55	3
The University of New South Wales	216,142	9	912	11	1,115	20	2,028	959	0	386
University of Newcastle	67,781	2	188	1.9	158	3.9	346	156	0	23
The University of Sydney	331,228	8.3	913	6.1	640	14.4	1,553	983	0	521
University of Technology, Sydney	45,925	2.5	195	0.2	8	2.7	203	147	0	10
University of Western Sydney	48,723	4	340	1	66	5	406	109	Unknown	Unknown
University of Wollongong	59,743	0.2	18	0	0	0.2	18	10	0	0
Deakin University	55,640	1	91	0	0	1	91	0	0	0
La Trobe University	125,346	1	182	0.5	20	1.5	202	33	0	2
Monash University	328,815	11.5	2,499	7.8	880	19.3	3,379	475	135	Unknown
Royal Melbourne Institute of Technology (RMIT)	42,514	2.5	600	0	0	2.5	600	26	72	0
Swinburne University of Technology	27,716	2.8	332	1	58	3.8	390	84	0	1
The University of Melbourne	428,630	5	800	3	200	8	1,000	632	0	445
University of Ballarat	7,614	1	80	1	60	2	140	0	0	0
Victoria University	29,841	1	88	0	0	1	88	20	10	0
Bond University	295	0	0	0	0	0	0	0	0	0
Central Queensland University	11,601	0	0	0.5	30	0.5	30	15	0	0
Griffith University	105,200	2.5	275	1	44	3.5	319	85	0	0
James Cook University	31,971	0.6	56	0	0	0.6	56	8	0	0
Queensland University of Technology	85,306	1	102	0.5	20	1.5	122	383	0	23
University of Queensland	304,506	22.6	3,179	12.4	759	35	3,937	1,302	389	621
University of Southern Queensland	15,355	0	0	0.4	30	0.4	30	140	25	2
University of the Sunshine Coast	1,909	0.4	35	0	0	0.4	35	0	0	0
Curtin University of Technology	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Edith Cowan University	24,300	0.5	47	0	0	0.5	47	51	0	0
Murdoch University	63,143	1.6	138	0.5	19	2.1	156	32	N/A	Unknown

q1	q2a	q3ai	q3aii	q3bi	q3bii	q3ci	q3cii	q4a	q4b	q5
	Research & experimental development expenditure	Dedicated commercialisation staff	Dedicated commercialisation staff cost	Commercialisation support staff	Commercialisation support staff cost	Commercialisation staff total	Commercialisation total cost	Cost to secure IP protection - external fees and legal costs	Cost to secure IP protection - internal fees and legal costs	Revenue from licences as reimbursements of expenses
	$'000	No.	$'000	No.	$'000	No.	$'000	$'000	$'000	$'000
The University of Western Australia	122,074	3	441	1	85	4	526	28	50	14
The University of Notre Dame Australia	0	0	0	0	0	0	0	0	0	0
Flinders University	47,125	4.3	451	2.5	299	6.8	750	110	0	10
The University of Adelaide	128,637	6	499	2.5	116	8.5	616	304	40	33
University of South Australia	64,163	6	598	4	287	10	885	26	59	6
University of Tasmania	77,230	3	173	0	0	3	173	55	0	0
Charles Darwin University	20,469	0.01	1	0	0	0.01	1	0	0	0
Australian National University	317,916	3.7	460	2	110	5.7	570	74	0	0
University of Canberra	3,672	0	0	0.2	22	0.2	22	12	0	0
ANZAC Research Institute	3,800	0	0	0	0	0	0	0	0	0
Baker Heart Research Institute	21,912	2.75	226	0.5	35	3.25	261	122	0	0
Bionic Ear Institute	1,741	0.5	65	0	0	0.5	65	18	0	0
Brain Research Institute	1,870	0	0	0	0	0	0	4	0	0
Cancer Council Victoria	6,785	0	0	0.05	15	0.05	15	0	0	0
Centenary Institute of Cancer Medicine and Cell Biology	9,432	1.5	260	0	0	1.5	260	109		0
Centre for Eye Research Australia		0	0	0	0	0	0	0		0
Child Health Research Institute	3,883	0	0	0	0	0	0	9	0	9
Children's Medical Research Institute	12,200	0	0	0	0	0	0	20		0
The George Institute for International Health	0	0	0	0	0	0	0	10	0	0
The Heart Research Institute	5,311	0	0	0.1	10	0.1	10	85	0	0
Howard Florey Institute of Experimental Physiology and Medicine	19,693	1	85	0	0	1	85	329		258
Lions Eye Institute	2,700	0	0	0	0	0	0	160	0	0
Ludwig Institute for Cancer Research Melbourne Branch	11,397	1.7	161	0.5	20	2.2	181	437	100	0
Macfarlane Burnet Institute	19,987	2.5	250	3.2	170	5.7	420	164		0
Mental Health Research Institute of Victoria	7,394	0	0	0.7	131	0.7	131	52	0	0
Murdoch Childrens Research Institute	33,442	0.4	50	0	0	0.4	50	193	0	0
National Stroke Research Institute	2,350	0.3	18	0	0	0.3	18	0	0	0
Prince Henry's Institute of Medical Research	1,930	0.6	90	0	0	0.6	180	127	0	0
Prince of Wales Medical Research Institute	5,165	0	0	0.7	38	0.7	38	18	0	0
Queensland Cancer Fund										
Queensland Institute of Medical Research	25,550	1	163	0	0	1	163	211		0
Royal Brisbane and Women's Hospital Research Foundation	1,382	0	0	0	0	0	0	0	0	0
Telethon Institute for Child Health Research	15,008	1.2	100	0	0	1.2	100	167	0	10
Victor Chang Cardiac Research Institute	9,564	0	0	0	0	0	0	55	0	0
The Walter and Eliza Hall Institute of Medical Research	37,609	2	389	1.2	97	3.2	486	611	0	0
Woolcock Institute of Medical Research	3,862	1	92	0	0	1	92	6	0	0

Table 23: Unit record data 2003: applications for IP rights

q1	q6	q7ai	q7aii	q7bi	q7bii	q7ci	q7cii	q7di	q7dii	q8a	q8b	q8c	q8d	q8e
	Invention disclosures received	Patent and/or plant breeder rights filed - Aus		Patent and/or plant breeder rights filed - USA		Patent and/or plant breeder rights filed - elsewhere		Patent and/or plant breeder rights filed - total		Applications for - provisional patents	Applications for - PCT patents	Applications for - innovation patents	Applications for - other	Applications for - total
	No.	No.	New No.	Total No.	New No.	Total No.	New No.	Total No.	New No.	New No.	No.	No.	No.	No.
Commonwealth Scientific and Industrial Research Organisation	22	445	105	289	14	1783	421	2517	540	104	66	0	15	185
Defence Science & Technology Organisation	30	10	10	2	0	5	0	17	10	10	0	0	0	10
ANSTO	9	9	4	1	0	12	0	22	4	17	5	0	0	22
Australian Institute of Marine Science	4	16	2	5	0	53	0	74	2	2	0	0	0	2
Australian Catholic University	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Charles Sturt University	5	8	8	0	0	0	0	8	8	7	1	0	0	8
Macquarie University	22	5	4	2	0	3	0	10	4	4	1	0	5	10
Southern Cross University	10	5	3	2	0	2	2	9	5	3	2	0	0	5
The University of New England	1	0	3	0	0	0	0	0	3	2	0	0	1	3
The University of New South Wales	61	59	59	6	3	12	8	77	70	36	10	0	24	70
University of Newcastle	7	10	7	3	0	9	6	22	13	7	6	0	0	13
The University of Sydney	57	19	17	3	3	12.5	12.5	34.5	32.5	14	4.5	0	14	32.5
University of Technology, Sydney	7	9	3	2	2	16	1	27	6	0	8	0	0	8
University of Western Sydney	12	10.5	8.5	1.5	0	7.5	1	19.5	9.5	6	2.5	0	3	11.5
University of Wollongong	4	0	2	0	2	0	0	0	4	4	0	0	0	4
Deakin University	Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0
La Trobe University	5	2.9	0	2.9	0.5	5.5	0	11.3	0.5	0.5	0	0	0	0.5
Monash University	33	57	27	6	0	36	0	99	27	27	19	0	0	46
Royal Melbourne Institute of Technology (RMIT)	6	7	7	0	0	0	0	7	7	7	0	0	0	7
Swinburne University of Technology	39	6	4	5	0	3	0	14	4	4	0	0	0	4
The University of Melbourne	4	26.49	12.83	8.5	0.5	39.5	0.5	74.49	13.83	12.33	0.5	0	1	13.83
University of Ballarat	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Victoria University	4	2	1	0	0	0	0	2	1	1	1	0	0	2
Bond University	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Central Queensland University	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Griffith University	8	9	7	3	1	20	0	32	8	7	0	0	1	8
James Cook University	3	8.5	3.5	0	0	0	0	8.5	3.5	3.5	0	0	0	3.5
Queensland University of Technology	29	17	15	3	1	7	10	27	26	15	0	0	1	16
University of Queensland	153	73	40	45	22	87	29	205	91	31	4	0	56	91
University of Southern Queensland	N/A	4	4	3	3	3	3	10	10	3	3	0	0	6
University of the Sunshine Coast	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Curtin University of Technology	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Edith Cowan University	4	7	4	0	0	0	0	7	4	4	3	0	0	7
Murdoch University	Unknown	7	7	0	0	0	0	7	7	6	1	0	0	7

q1	q6	q7ai	q7aii	q7bi	q7bii	q7ci	q7cii	q7di	q7dii	q8a	q8b	q8c	q8d	q8e
	Invention disclosures received		Patent and/or plant breeder rights filed - Aus		Patent and/or plant breeder rights filed - USA		Patent and/or plant breeder rights filed - elsewhere		Patent and/or plant breeder rights filed - total	Applications for - provisional patents	Applications for - PCT patents	Applications for - innovation patents	Applications for - other	Applications for - total
	No.	No.	New No.	Total No.	New No.	Total No.	New No.	Total No.	New No.	New No.	No.	No.	No.	No.
The University of Western Australia	16	6	4	0	0	0	0	6	4	3	1	0	0	4
The University of Notre Dame Australia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flinders University	13	5	5	1	1	5	0	11	6	4	1	0	1	6
The University of Adelaide	32	16.83	16.83	3	2	3	3	22.83	21.83	9.33	5.5	0	7	21.83
University of South Australia	72	6	3	2	0	6	0	14	3	3	1	0	10	14
University of Tasmania	20	2	1	3	0	2	0	7	1	1	0	0	0	1
Charles Darwin University	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Australian National University	25	3	15	4	1	10	0	17	16	16	0	0	0	16
University of Canberra	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANZAC Research Institute	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baker Heart Research Institute	2	0	5	0	1	0	0	0	6	1	4	0	1	6
Bionic Ear Institute	0	0	0	0	0	2	1	2	1	1	1	0	0	2
Brain Research Institute	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cancer Council Victoria	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Centenary Institute of Cancer Medicine and Cell Biology		0	2	0	0	0	0	0	2	0	2	0	0	2
Centre for Eye Research Australia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Child Health Research Institute	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Children's Medical Research Institute	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
The George Institute for International Health	0	1	1	1	1	1	1	3	3	0	0	1	0	1
The Heart Research Institute	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Howard Florey Institute of Experimental Physiology and Medicine	10	0	5	0	4	0	4	0	13	10	3	0	0	13
Lions Eye Institute	0	2	0	3	0	6	0	11	0	2	3	0	6	11
Ludwig Institute for Cancer Research Melbourne Branch	42	0	0	23	12	0	0	23	12	10	0	0	2	12
Macfarlane Burnet Institute	2	7	4	6	1	23	0	36	5	4	1	0	0	5
Mental Health Research Institute of Victoria	4	1	1	1	0	3	0	5	1	1	0	0	0	1
Murdoch Childrens Research Institute	5	6	3	2	2	0	0	8	5	3	0	0	0	3
National Stroke Research Institute	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Prince Henry's Institute of Medical Research	2	7	2	7	2	7	2	21	6	0	2	0	0	2
Prince of Wales Medical Research Institute	0	1	1	1	0	7	0	9	1	1	0	0	0	1
Queensland Cancer Fund														
Queensland Institute of Medical Research	6	6	6	0	0	3	3	9	9	6	3	0	0	9
Royal Brisbane and Women's Hospital Research Foundation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Telethon Institute for Child Health Research	3	5	3	2	0	2	0	9	3	3	0	0	0	3
Victor Chang Cardiac Research Institute	1	1	1	1	1	1	1	3	3	0	1	0	0	1
The Walter and Eliza Hall Institute of Medical Research	16	30	13	5	1	18	0	53	14	14	0	0	0	14
Woolcock Institute of Medical Research	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 24: Unit record data 2003: IP rights issued and held

q1	q9a Patents and plant breeder rights issued - in Aus	q9b Patents and plant breeder rights issued - in USA	q9c Patents and plant breeder rights issued - elsewhere	q9d Patents and plant breeder rights issued - total	q10a Patents and plant breeder rights held - patents pending	q10b Patents and plant breeder rights held - patents issued	q10c Patents and plant breeder rights held - total	q11 Patents and plant breed rights culled or lapsed
	No.	No.	No.	No.	No.	No.	No.	No.
Commonwealth Scientific and Industrial Research Organisation	25	37	255	317	1,777	2,194	3,971	559
Defence Science & Technology Organisation	2	2	5	9	100	49	149	9
ANSTO	6	0	30	36	49	49	98	28
Australian Institute of Marine Science	8	7	20.5	35.5	25	50	75	0
Australian Catholic University	0	0	0	0	0	0	0	0
Charles Sturt University	8	0	0	8	0	8	8	0
Macquarie University	1	3	7	11	125.8	20	145.8	4
Southern Cross University	0	0	0	0	2	0	2	0
The University of New England	2	0	0	2	0	12	12	7.33
The University of New South Wales	7	6	12	25	271	151	422	0
University of Newcastle	1	0	4	5	49	6	55	4
The University of Sydney	25.45	21.7	61.1	108.25	283.5	134.49	417.99	24
University of Technology, Sydney					74	25	99	3
University of Western Sydney	0.3	0	1.5	1.8	65.1	2.7	67.8	5
University of Wollongong	0	0	0	0	12	0	12	2
Deakin University	0	0	0	0	0	0	0	Unknown
La Trobe University	0	0	0	0	12.8	0	12.8	1
Monash University	1	0	0	1	243	78	321	18
Royal Melbourne Institute of Technology (RMIT)	0	0	0	0	8	9	17	2
Swinburne University of Technology	0	0	0	0	26	25	51	3
The University of Melbourne	7	12.16	22.7	41.86	289.76	399.81	689.57	32.5
University of Ballarat	0	0	0	0	0	0	0	0
Victoria University	0	0	0	0	11	6	17	1
Bond University	0	0	0	0	0	0	0	0
Central Queensland University	1	0	0	1	1	2	3	0
Griffith University	0	0	0	0	0	0	0	1
James Cook University	0	0	0	0	8.5	1	9.5	0
Queensland University of Technology	0	3	1	4	134	28	162	0
University of Queensland	6	10	22	38	953	317	1,270	13
University of Southern Queensland	1	3	3	7	3	9	12	0
University of the Sunshine Coast	0	0	0	0	0	0	0	0
Curtin University of Technology	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Edith Cowan University	0	0	0	0	7	0	7	0
Murdoch University	1	1	2	4	7	4	11	4
The University of Western Australia	0	0	0	0	24	28	52	7

q1	q9a Patents and plant breeder rights issued - in Aus	q9b Patents and plant breeder rights issued - in USA	q9c Patents and plant breeder rights issued - elsewhere	q9d Patents and plant breeder rights issued - total	q10a Patents and plant breeder rights held - patents pending	q10b Patents and plant breeder rights held - patents issued	q10c Patents and plant breeder rights held - total	q11 Patents and plant breed rights culled or lapsed
	No.	No.	No.	No.	No.	No.	No.	No.
The University of Notre Dame Australia	0	0	0	0	0	0	0	0
Flinders University	0	1	5	6	45	38	83	1
The University of Adelaide	27.5	17	77.5	122	117.5	23.5	141	9
University of South Australia	5	3	10	18	23	17	40	1
University of Tasmania	0	0	0	0	7	0	7	1
Charles Darwin University	0	0	0	0	0	0	0	0
Australian National University	2	2	9	13	144	159	303	3
University of Canberra	0	0	0	0	0	5	5	0
ANZAC Research Institute	0	0	0	0	0	0	0	
Baker Heart Research Institute	0	0	0	0	8	5	13	1
Bionic Ear Institute	0	0	0	0	9	4	13	0
Brain Research Institute	0	0	0	0	0	0	0	0
Cancer Council Victoria	0	0	0	0	0	0	0	0
Centenary Institute of Cancer Medicine and Cell Biology	0	0	0	0	5	1	6	0
Centre for Eye Research Australia	0	0	0	0	0	0	0	0
Child Health Research Institute	0	0	0	0	0	9	9	1
Children's Medical Research Institute	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
The George Institute for International Health	0	0	0	0	1	0	1	0
The Heart Research Institute	0	0	0	0	0	6	6	0
Howard Florey Institute of Experimental Physiology and Medicine	2	0	1	3	17	134	151	1
Lions Eye Institute	1	0	0	1	36	12	48	4
Ludwig Institute for Cancer Research Melbourne Branch	1	0	0	1	Unknown	Unknown	248	2
Macfarlane Burnet Institute	2	2	5	9	95	68.5	163.5	2
Mental Health Research Institute of Victoria	0	0	0	0	0	0	0	1
Murdoch Childrens Research Institute	0	0	0	0	8	4	12	1
National Stroke Research Institute	0	0	0	0	0	0	0	0
Prince Henry's Institute of Medical Research	0	0	0	0	7	31	38	0
Prince of Wales Medical Research Institute	1	0	0	1	9	1	10	0
Queensland Cancer Fund								
Queensland Institute of Medical Research	0	0	0	0	13	0	13	8
Royal Brisbane and Women's Hospital Research Foundation	0	0	0	0	0	0	0	0
Telethon Institute for Child Health Research	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Victor Chang Cardiac Research Institute	2	2	2	6	3	0	3	0
The Walter and Eliza Hall Institute of Medical Research	5	1	1	7	101	28	129	1
Woolcock Institute of Medical Research	0	0	0	0	0	0	0	0

Table 25: Unit record data 2003: licences, options and assignments (LOA) activity

q1	q12a LOAs executed No.	q12b LOAs active No.	q13 LOAs yielding income No.	q14ai No.	q14aii LOA income from running royalties $'000	q14bi No.	q14bii LOA income from cashed in equity $'000	q14ci No.	q14cii LOA income from other types $'000	q14di No.	q14dii LOA income total $'000
Commonwealth Scientific and Industrial Research Organisation	146	594	249	157	7,699	1	3,648	91	4,296	249	15,643
Defence Science & Technology Organisation	12	72	6	5	379	0	0	1	62	6	441
ANSTO	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Australian Institute of Marine Science	0	4	0	0	0	0	0	0	0	0	0
Australian Catholic University	0	0	0	0	0	0	0	0	0	0	0
Charles Sturt University	3	19	16	1	0	0	0	15	445	16	445
Macquarie University	1	16	14	13	2,096	0	0	1	120	14	2,216
Southern Cross University	5	20	0	0	0	0	0	0	0	0	0
The University of New England	17	65	63	17	224	0	0	60	6,450[a]	77	6,674
The University of New South Wales	29	82	37	6	719	0	0	31	940	37	1,660
University of Newcastle	0	3	1	1	43	0	0	0	0	1	43
The University of Sydney	65	142	66	14	213	1	285	51	3,740	66	4,239
University of Technology, Sydney	2	3	3	3	42	0	0	0	0	3	42
University of Western Sydney	3	10	2	0	0	0	0	2	47	2	47
University of Wollongong	2	2	2	0	78	0	0	0	0	0	78
Deakin University	0	0	0	0	0	0	0	0	0	0	0
La Trobe University	2	5	0	0	0	0	0	0	0	0	0
Monash University	2	22	7	6	667	1	6,300	0	0	7	6,967
Royal Melbourne Institute of Technology (RMIT)	1	6	3	2	7	0	0	1	25	3	32
Swinburne University of Technology	1	3	2	2	120	0	0	0	0	2	120
The University of Melbourne	40	27	16	10	4,501	0	0	6	9,306	16	13,806
University of Ballarat	0	0	0	0	0	0	0	0	0	0	0
Victoria University	4	25	3	3	47	0	0	0	0	3	47
Bond University	0	0	0	0	0	0	0	0	0	0	0
Central Queensland University	0	1	1	1	233	0	0	0	0	1	233
Griffith University	3	8	0	0	0	0	0	0	0	0	0
James Cook University	0	6	2	1	10	0	0	1	125	2	135
Queensland University of Technology	2	13	5	5	176	0	0	0	0	5	176
University of Queensland	31	148	36	15	1,626	0	0	22	3,449	37	5,075
University of Southern Queensland	3	6	2	2	2	0	0	0	0	2	2
University of the Sunshine Coast	0	0	0	0	0	0	0	0	0	0	0
Curtin University of Technology	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Edith Cowan University	0	0	0	0	0	0	0	0	0	0	0

q1	q12a	q12b	q13	q14ai	q14aii	q14bi	q14bii	q14ci	q14cii	q14di	q14dii
	LOAs executed	LOAs active	LOAs yielding income		LOA income from running royalties		LOA income from cashed in equity		LOA income from other types		LOA income total
	No.	No.	No.	No.	$'000	No.	$'000	No.	$'000	No.	$'000
Murdoch University	0	1	Unknown		Unknown					Unknown	Unknown
The University of Western Australia	5	33	10	10	42	0	0	0	116	10	159
The University of Notre Dame Australia	0	0	0	0	0	0	0	0	0	0	0
Flinders University	3	8	3	2	269	1	1,009	1	55	4	1,332
The University of Adelaide	15	43	23	21	627	0	0	2	75	23	702
University of South Australia	6	16	6	6	72	0	0	0	0	6	72
University of Tasmania	0	1	0	0	0	0	0	0	0	0	0
Charles Darwin University	0	1	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Australian National University	4	23	7	5	418	0	0	2	20	7	437
University of Canberra	0	0	0	0	0	0	0	0	0	0	0
ANZAC Research Institute	0	0	0	0	0	0	0	0	0	0	0
Baker Heart Research Institute	0	4	2	0	0	0	0	2	167	2	167
Bionic Ear Institute	0	0	0	0	0	0	0	0	0	0	0
Brain Research Institute	0	0	0	0	0	0	0	0	0	0	0
Cancer Council Victoria	0	0	0	0	0	0	0	0	0	0	0
Centenary Institute of Cancer Medicine and Cell Biology	0	1	1	1	6	0	0	0	0	1	6
Centre for Eye Research Australia	0	0	0	0	0	0	0	0	0	0	0
Child Health Research Institute	0	4	1	1	17	0	0	0	0	1	17
Children's Medical Research Institute	0	0	0	0	0	0	0	0	0	0	0
The George Institute for International Health	1	1	0	0	0	0	0	0	0	0	0
The Heart Research Institute	1	3	0	0	0	0	0	0	0	0	0
Howard Florey Institute of Experimental Physiology and Medicine	8	14	14	2	144	0	0	7	838	9	982
Lions Eye Institute	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ludwig Institute for Cancer Research Melbourne Branch	0	11	8	6	4,941	N/A	N/A	8	75	14	5,017
Macfarlane Burnet Institute	3	14	7		44	0	0		2,444		2,488
Mental Health Research Institute of Victoria	0	0	0	0	0	0	0	0	0	0	0
Murdoch Childrens Research Institute	0	2	0	0	0	0	0	0	0	0	0
National Stroke Research Institute	0	0	0	0	0	0	0	0	0	0	0
Prince Henry's Institute of Medical Research	0	2	1	1	51	0	0	0	0	1	51
Prince of Wales Medical Research Institute	0	0	N/A	0	0	0	0	0	0	0	0
Queensland Cancer Fund											
Queensland Institute of Medical Research	1	4	1	0	0	0	0	1	96	1	96
Royal Brisbane and Women's Hospital Research Foundation	0	0	0	0	0	0	0	0	0	0	0
Telethon Institute for Child Health Research	3	13	1	0	0	0	0	1	15	1	15
Victor Chang Cardiac Research Institute	0	2	0	0	0	0	0	0	0	0	0
The Walter and Eliza Hall Institute of Medical Research	10	18	12	8	1,998	0	0	4	4,038	12	6,036
Woolcock Institute of Medical Research	0	0	0	0	0	0	0	0	0	0	0

Table 26: Unit record data 2003: licences, options and assignments (LOA) income

q1	q15a	q15b	q15c	q15d	q15e	q15f	q16	q17
	Income under $10,000	Income $10,000 - $50,000	Income $10,000 - $200,000	Income $200,000 - $500,000	Income $500,000 and over	Total	Income reported paid to other entities	Estimated sales resulting from technologies licensed
	No.	No.	No.	No.	No.	No.	$'000	$'000
Commonwealth Scientific and Industrial Research Organisation	144	63	28	7	7	249	1,229	718,000
Defence Science & Technology Organisation	2	0	4	0	0	6	0	19,000
ANSTO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Australian Institute of Marine Science	0	0	0	0	0	0	0	0
Australian Catholic University	0	0	0	0	0	0	0	0
Charles Sturt University	7	7	2	0	0	16	0	Unknown
Macquarie University	4	4	3	3	0	14	456	41,917
Southern Cross University	0	0	0	0	0	0	0	0
The University of New England	32	15	15	1	0	63	58	1,141
The University of New South Wales	5	27	2	3	0	37	38	106,484
University of Newcastle	0	0	1	0	0	1	23	904
The University of Sydney	49	10	5	1	1	66	115	12,200
University of Technology, Sydney								
University of Western Sydney	1	1	0	0	0	2	0	N/A
University of Wollongong	0	1	1	0	0	2	0	Unknown
Deakin University	0	0	0	0	0	0	0	0
La Trobe University	0	0	0	0	0	0	0	0
Monash University	15	2	3	1	1	22	0	N/A
Royal Melbourne Institute of Technology (RMIT)	2	1	0	0	0	3	0	554
Swinburne University of Technology	0	1	1	0	0	2	0	1,600
The University of Melbourne	4	2	2	2	6	16	5,190	417,000
University of Ballarat	0	0	0	0	0	0	0	0
Victoria University	2	1	0	0	0	3	0	11,000
Bond University	0	0	0	0	0	0	0	0
Central Queensland University	0	0	0	1	0	1	0	150
Griffith University	0	0	0	0	0	0	0	0
James Cook University	1	0	1	0	0	2	0	0
Queensland University of Technology	2	2	1	0	0	5	0	N/A
University of Queensland	12	14	3	4	4	37	351	1,465,847
University of Southern Queensland	2	0	0	0	0	2	0	100
University of the Sunshine Coast	0	0	0	0	0	0	0	0
Curtin University of Technology	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Edith Cowan University	0	0	0	0	0	0	0	0
Murdoch University	1	0	0	0	0	1	0	Unknown

q1	q15a	q15b	q15c	q15d	q15e	q15f	q16	q17
	Income under $10,000	Income $10,000 - $50,000	Income $10,000 - $200,000	Income $200,000 - $500,000	Income $500,000 and over	Total	Income reported paid to other entities	Estimated sales resulting from technologies licensed
	No.	No.	No.	No.	No.	No.	$'000	$'000
The University of Western Australia	4	6	0	0	0	10	0	8,200
The University of Notre Dame Australia	0	0	0	0	0	0	0	0
Flinders University	0	0	1	1	1	3	0	Unknown
The University of Adelaide	10	10	3	0	0	23	94	Unknown
University of South Australia	4	2	0	0	0	6	0	2,223
University of Tasmania	0	0	0	0	0	0	N/A	N/A
Charles Darwin University	1	0	0	0	0	1	0	0
Australian National University	3	1	3	0	0	7	3	15,024
University of Canberra	0	0	0	0	0	0	0	0
ANZAC Research Institute	0	0	0	0	0	0	0	0
Baker Heart Research Institute	0	0	2	0	0	2	0	0
Bionic Ear Institute	0	0	0	0	0	0	0	0
Brain Research Institute	0	0	0	0	0	0	0	0
Cancer Council Victoria	0	0	0	0	0	0	0	0
Centenary Institute of Cancer Medicine and Cell Biology	1	0	0	0	0	1	0	41
Centre for Eye Research Australia	0	0	0	0	0	0	0	0
Child Health Research Institute	0	1	0	0	0	1	0	Unknown
Children's Medical Research Institute	0	0	0	0	0	0	0	0
The George Institute for International Health	0	0	0	0	0	0	0	0
The Heart Research Institute	0	0	0	0	0	0	0	0
Howard Florey Institute of Experimental Physiology and Medicine	0	3	5	1	0	9	0	4,800
Lions Eye Institute	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ludwig Institute for Cancer Research Melbourne Branch	3	2	1	1	1	8	2,468	170,865
Macfarlane Burnet Institute	5	0	0	0	2	7	0	N/A
Mental Health Research Institute of Victoria	0	0	0	0	0	0	0	0
Murdoch Childrens Research Institute	0	0	0	0	0	0	0	0
National Stroke Research Institute	0	0	0	0	0	0	N/A	N/A
Prince Henry's Institute of Medical Research	0	0	1	0	0	1	0	8,901
Prince of Wales Medical Research Institute	0	0	0	0	0	0	N/A	N/A
Queensland Cancer Fund								
Queensland Institute of Medical Research	0	0	1	0	0	1	29	N/A
Royal Brisbane and Women's Hospital Research Foundation	0	0	0	0	0	0	0	0
Telethon Institute for Child Health Research	0	1	0	0	0	1	0	0
Victor Chang Cardiac Research Institute	0	0	0	0	0	0	0	0
The Walter and Eliza Hall Institute of Medical Research	0	5	2	2	3	12	874	120,130
Woolcock Institute of Medical Research	0	0	0	0	0	0	0	0

Table 27: Unit record data 2003: company start-up activity

q1	q18ai	q18aii	q18bi	q18bii	q18ci	q18cii	q19	q20	q21
	Capital raising - IPOs		Capital raising - other		Capital raising - total		Value of all equity holdings	Start-up companies operational dependent on licensing/ assignment of technologies	Start-up companies in which an equity holding
	No.	$'000	No.	$'000	No.	$'000	$'000	No.	No.
Commonwealth Scientific and Industrial Research Organisation	0	0	7	22,390		22,390	17,612	15	7
Defence Science & Technology Organisation	0	0	0	0		0	0	0	0
ANSTO	N/A	N/A	N/A	N/A		N/A	0	0	N/A
Australian Institute of Marine Science	0	0	0	0		0		2	1
Australian Catholic University	0	0	0	0		0	0	0	0
Charles Sturt University	0	0	0	0		0	0	N/A	N/A
Macquarie University	0	0	3	953		953	420	7	4
Southern Cross University	0	0	0	0		0	0	0	0
The University of New England	0	0	1	19		19	5,259	3	2
The University of New South Wales	0	0	1	1,200		1,200	2,243	10	8
University of Newcastle	0	0	1	250		250	212	2	2
The University of Sydney	0	0	1	60		60	13,757	18	15
University of Technology, Sydney	0	0	0	0		0	0	6	3
University of Western Sydney	0	0	1	500		500	Unknown	0	0
University of Wollongong	0	0	0	0		0	0	1	1
Deakin University	0	0	0	0		0	412	1	1
La Trobe University	0	0	0	0		0	130	4	2
Monash University	1	11,000,000	2	4,000		15,000	35,852	20	14
Royal Melbourne Institute of Technology (RMIT)	0	0	0	0		0	103	1	1
Swinburne University of Technology	0	0	1	1,200		1,200	1,350	5	5
The University of Melbourne	0	0	3	1,700		1,700	101	17	5
University of Ballarat	0	0	0	0		0	0	1	1
Victoria University	0	0	0	0		0	130	3	1
Bond University	0	0	0	0		0	0	0	0
Central Queensland University	0	0	0	0		0	300	1	1
Griffith University	0	0	1	3,025		3,025	256	4	4
James Cook University	0	0	0	0		0	432	3	3
Queensland University of Technology	0	0	1	63		63	1,419	3	3
University of Queensland	0	0	15	28,561		28,561	25,882	34	34
University of Southern Queensland	0	0	0	0		0	0	0	0
University of the Sunshine Coast	0	0	0	0		0	0	0	0
Curtin University of Technology	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A
Edith Cowan University	0	0	0	0		0	0	0	2
Murdoch University							Unknown	4	4
The University of Western Australia	0	0	1	150		150	10,900	7	7

q1	q18ai	q18aii	q18bi	q18bii	q18ci	q18cii	q19	q20	q21
	Capital raising - IPOs		Capital raising - other		Capital raising - total		Value of all equity holdings	Start-up companies operational dependent on licensing/ assignment of technologies	Start-up companies in which an equity holding
	No.	$'000	No.	$'000	No.	$'000	$'000	No.	No.
The University of Notre Dame Australia	0	0	0	0		0	0	0	0
Flinders University	0	0	0	0		0	9,512	6	6
The University of Adelaide	0	0	1	5,990		5,990	11,716	7	5
University of South Australia	0	0	1	2,000		2,000	9,100	3	3
University of Tasmania	0	0	0	0		0	0	0	1
Charles Darwin University	0	0	0	0		0	255	1	1
Australian National University	0	0	1	16,600		16,600	Unknown	13	10
University of Canberra	0	0	0	0		0	0	0	0
ANZAC Research Institute	0	0	0	0		0	0	0	0
Baker Heart Research Institute	0	0	0	0		0	0	0	0
Bionic Ear Institute	0	0	0	0		0	0	0	0
Brain Research Institute	0	0	0	0		0	0	0	0
Cancer Council Victoria	0	0	0	0		0	0	0	0
Centenary Institute of Cancer Medicine and Cell Biology								1	1
Centre for Eye Research Australia	0	0	0	0		0	0	0	0
Child Health Research Institute	0	0	0	0		0	0	0	0
Children's Medical Research Institute							0	0	0
The George Institute for International Health	0	0	0	0		0	0	N/A	N/A
The Heart Research Institute	0	0	0	0		0	0	0	N/A
Howard Florey Institute of Experimental Physiology and Medicine	0	0	0	0		0	750	1	1
Lions Eye Institute	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A
Ludwig Institute for Cancer Research Melbourne Branch	N/A	N/A	N/A	N/A		N/A	0	1	0
Macfarlane Burnet Institute		2,444,000		5,000		7,444	Unknown	12	12
Mental Health Research Institute of Victoria	0	0	0	0		0	0	2	0
Murdoch Childrens Research Institute	0	0	0	0		0	1,284	4	4
National Stroke Research Institute	0	0	0	0		0	0	0	0
Prince Henry's Institute of Medical Research	0	0	0	0		0	N/A	1	1
Prince of Wales Medical Research Institute	0	0	0	0		0	N/A	N/A	N/A
Queensland Cancer Fund									
Queensland Institute of Medical Research	0	0	0	0		0	Unknown	0	2
Royal Brisbane and Women's Hospital Research Foundation	0	0	0	0		0	0	0	0
Telethon Institute for Child Health Research	0	0	1	1,880		1,880	1,880	2	2
Victor Chang Cardiac Research Institute	0	0	0	0		0		0	0
The Walter and Eliza Hall Institute of Medical Research	0	0	1	250		250	338	2	2
Woolcock Institute of Medical Research	0	0	0	0		0	0	0	0

Table 28: Unit record data 2003: research contracts and consultancy

q1	q24a	q24b	q25a	q25b	q25c	q25d	q25e	q25f	q26
		Contracts and consultancies entered into	Gross contracted value $0-$10,000	Gross contracted value $10,000 - $50,000	Gross contracted value $50,000-$200,000	Gross contracted value $200,000-$500,000	Gross contracted value >$500,000	Gross contracted value total	Contract and consultancies - repeat business
	No.	$'000	No.	No.	No.	No.	No.	No.	No.
Commonwealth Scientific and Industrial Research Organisation	2,375	207,506	787	592	508	300	188	2,375	844
Defence Science & Technology Organisation	0	0	0	0	0	0	0	0	0
ANSTO	615	3,970	518	94	2	2	0	616	Unknown
Australian Institute of Marine Science	28	3,972	1	15	6	3	3	28	Unknown
Australian Catholic University	69	2,408	21	35	13	0	0	69	Unknown
Charles Sturt University	126	8,780	66	22	24	12	2	126	Unknown
Macquarie University	305	17,191	160	100	35	5	5	305	Unknown
Southern Cross University	54	3,226	8	10	8	7	1	34	
The University of New England	158	11,501	24	65	55	12	2	158	36
The University of New South Wales	3,544	46,565	3,206	199	98	27	14	3,544	2,586
University of Newcastle	554	11,074	387	126	29	8	4	554	Unknown
The University of Sydney	510	38,207	229	156	85	32	8	510	Unknown
University of Technology, Sydney	49	2,768	9	27	11	1	1	49	26
University of Western Sydney	38	586	14	21	3	0	0	38	6
University of Wollongong	172	9,249	94	50	7	18	3	172	Unknown
Deakin University	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
La Trobe University	118	6,881	28	51	32	5	2	118	72
Monash University	468	37,200	233	151	62	16	6	468	234
Royal Melbourne Institute of Technology (RMIT)	316	15,100	184	52	57	18	5	316	35
Swinburne University of Technology	161	2,195	111	42	8	0	0	161	Unknown
The University of Melbourne	198	42,688	15	77	77	15	14	198	131
University of Ballarat	155	8,813	92	41	15	3	4	155	Unknown
Victoria University	72	4,254	19	39	12	1	1	72	25
Bond University	11	847	0	4	6	1	0	11	Unknown
Central Queensland University	40	946	21	16	3	0	0	40	35
Griffith University	275	4,887	210	53	7	3	2	275	Unknown
James Cook University	29	1,722	7	13	7	2	0	29	Unknown
Queensland University of Technology	272	8,806	166	59	36	10	1	272	Unknown
University of Queensland	1,039	88,471	314	448	70	181	26	1,039	Unknown
University of Southern Queensland	Unknown	960	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
University of the Sunshine Coast	19	695	3	7	9	0	0	19	Unknown
Curtin University of Technology	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Edith Cowan University	108	3,298	52	36	19	0	0	107	39
Murdoch University	9	180	4	4	1	0	0	9	Unknown

q1	q24a	q24b	q25a	q25b	q25c	q25d	q25e	q25f	q26
		Contracts and consultancies entered into	Gross contracted value $0-$10,000	Gross contracted value $10,000 - $50,000	Gross contracted value $50,000-$200,000	Gross contracted value $200,000-$500,000	Gross contracted value >$500,000	Gross contracted value total	Contract and consultancies - repeat business
	No.	$'000	No.	No.	No.	No.	No.	No.	No.
The University of Western Australia	236	12,973	44	120	60	10	2	236	Unknown
The University of Notre Dame Australia	0	0	0	0	0	0	0	0	0
Flinders University	104	10,691	38	34	25	2	5	104	55
The University of Adelaide	367	13,176	96	85	30	7	2	Unknown	40
University of South Australia	352	17,047	133	142	58	13	6	352	77
University of Tasmania	173	2,643	84	40	10	2	0	Unknown	Unknown
Charles Darwin University	47	2,672	12	23	9	2	1	47	24
Australian National University	701	189,170	155	173	170	145	58	701	545
University of Canberra	50	3,570	7	30	6	6	1	50	Unknown
ANZAC Research Institute	0	0	0	0	0	0	0	0	0
Baker Heart Research Institute	20	2,706	2	6	8	2	2	20	Unknown
Bionic Ear Institute	1	223	0	0	0	1	0	1	1
Brain Research Institute	25	1,149	7	11	7	0	0	25	Unknown
Cancer Council Victoria	0	0	0	0	0	0	0	0	0
Centenary Institute of Cancer Medicine and Cell Biology	0	0	0	0	0	0	0	0	0
Centre for Eye Research Australia	0	0	0	0	0	0	0	0	0
Child Health Research Institute	2	20	0	2	0	0	0	2	1
Children's Medical Research Institute	0	0	0	0	0	0	0	0	0
The George Institute for International Health	78	25,600	12	15	18	4	2	51	20
The Heart Research Institute	0	0	0	0	0	0	0	0	0
Howard Florey Institute of Experimental Physiology and Medicine	9	982	0	3	5	1	0	9	3
Lions Eye Institute	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ludwig Institute for Cancer Research Melbourne Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Macfarlane Burnet Institute	10	3,567	0	3	4	2	1	10	10
Mental Health Research Institute of Victoria	15	1,288	4	6	3	2	0	15	9
Murdoch Childrens Research Institute	41	3,067	8	17	12	1	3	41	30
National Stroke Research Institute	2	1,049	0	0	0	1	1	2	1
Prince Henry's Institute of Medical Research	21	2,515	4	6	5	6	0	21	Unknown
Prince of Wales Medical Research Institute	5	215	0	4	1	0	0	5	3
Queensland Cancer Fund									
Queensland Institute of Medical Research	24	1,580	6	8	10	0	0	24	13
Royal Brisbane and Women's Hospital Research Foundation	2	480	0	0	1	1	0	2	2
Telethon Institute for Child Health Research	23	10,060	1	6	10	5	1	23	19
Victor Chang Cardiac Research Institute	1	62	0	0	1	0	0	1	0
The Walter and Eliza Hall Institute of Medical Research	5	1,413	1	1	1	0	2	5	5
Woolcock Institute of Medical Research	66	3,030	16	33	12	3	2	66	12

Table 29: Unit record data 2003: skills development and transfer

q1	q27a	q27b	q27b	q27c	q27c	q28a	q28c	q29
	Training offered in research commercialisation	In-house training provided	In-house training participants	Delivery by an external provider	External training participants	Training offered to industry to assist in understanding research findings	Number of participants who completed training programmes	Research post grad employed in start-up companies
		No.	No.	No.	No		No.	No
Commonwealth Scientific and Industrial Research Organisation	Yes	1	54	2		No		Unknown
Defence Science & Technology Organisation	Yes	1	25	2		No		
ANSTO	Yes	1	32	1	30	No	NA	N/A
Australian Institute of Marine Science	Yes	2		1	5	No		Unknown
Australian Catholic University	No	0		0		No		0
Charles Sturt University	Yes	2		1	11	No		N/A
Macquarie University	Yes	2		1	51	No		Unknown
Southern Cross University	Yes	1	20	2		No		0
The University of New England	Yes	1	80	2		Yes	155	0
The University of New South Wales	Yes	1	320	2		No	NA	3
University of Newcastle	No	0		0		No		Unknown
The University of Sydney	Yes	1	410	1	260	No		0
University of Technology, Sydney	Yes	1	20	1	20	No		3
University of Western Sydney	Yes	1	11	1	21	No	32	Unknown
University of Wollongong	No	0		0		Yes	0	0
Deakin University	Yes	1		1		No		Unknown
La Trobe University	Yes	1		2		Yes	100	Unknown
Monash University	Yes	1	50	1	50	Yes	Unknown	Unknown
Royal Melbourne Institute of Technology (RMIT)	Yes	1	20	2		No		Unknown
Swinburne University of Technology	Yes	1	15	2		Yes	0	0.3
The University of Melbourne	Yes	1	Unknown	1	Unknown	No		Unknown
University of Ballarat	No	0		0		No	0	1
Victoria University	No	0		0		No		0
Bond University	No	0		0		No		0
Central Queensland University	Yes	1	49	1	49	Yes	49	0
Griffith University	Yes	1	10	1	1	No		Unknown
James Cook University	Yes	1	20	2		No		Unknown
Queensland University of Technology	Yes	1	110	1	95	No		Unknown
University of Queensland	Yes	1	133	1	7	No		Unknown
University of Southern Queensland	No	0		0		No		0
University of the Sunshine Coast	No	0		0		No		0
Curtin University of Technology	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Edith Cowan University	No	0		0		No		0
Murdoch University	Yes	1		2		0		Unknown

q1	q27a	q27b	q27b	q27c	q27c	q28a	q28c	q29
	Training offered in research commercialisation	In-house training provided	In-house training participants	Delivery by an external provider	External training participants	Training offered to industry to assist in understanding research findings	Number of participants who completed training programmes	Research post grad employed in start-up companies
		No.	No.	No.	No		No.	No
The University of Western Australia	Yes	1	30	1	30	No		28
The University of Notre Dame Australia	No	0		0		No		0
Flinders University	Yes	1	14	1	14	No		Unknown
The University of Adelaide	Yes	1	128	1	128	No		19
University of South Australia	Yes	1	253	2		No		0
University of Tasmania	Yes	1	75	1	25	No		Unknown
Charles Darwin University	Yes	1	N/A	1	N/A	Yes	N/A	3
Australian National University	Yes	1	N/A	1	N/A	No		Unknown
University of Canberra	No	0		0		No		N/A
ANZAC Research Institute	No	0		0		No		0
Baker Heart Research Institute	No	0		0		No		Unknown
Bionic Ear Institute	Yes	2		1	4	No		N/A
Brain Research Institute	No	0		0		No	N/A	N/A
Cancer Council Victoria	No	0		0		No		0
Centenary Institute of Cancer Medicine and Cell Biology	Yes	1	20	1	2	No		5
Centre for Eye Research Australia	No	0		0		No		0
Child Health Research Institute	No	0		0		No		N/A
Children's Medical Research Institute	No	0		0		No		
The George Institute for International Health	No	0		0		Yes	127	
The Heart Research Institute	Yes	1	5	2		Yes	7	Unknown
Howard Florey Institute of Experimental Physiology and Medicine	Yes	2		1	1	Yes	2 groups	
Lions Eye Institute	No	0		0		No		N/A
Ludwig Institute for Cancer Research Melbourne Branch	Yes	1	N/A	1	30	No	30	Unknown
Macfarlane Burnet Institute	Yes	1	Unknown	1	Unknown	No		25
Mental Health Research Institute of Victoria	No	0		0		No		Unknown
Murdoch Childrens Research Institute	Yes	2		1	2	No		13
National Stroke Research Institute	No	0		0		No	N/A	0
Prince Henry's Institute of Medical Research	Yes	1	1	2		No		Unknown
Prince of Wales Medical Research Institute	No	0		0		No		N/A
Queensland Cancer Fund								
Queensland Institute of Medical Research	No	0		0		Yes	5	0
Royal Brisbane and Women's Hospital Research Foundation	No	0		0		No		0
Telethon Institute for Child Health Research	Yes	2		1	1	No		2
Victor Chang Cardiac Research Institute	No	0		0		No		0
The Walter and Eliza Hall Institute of Medical Research	Yes	1	12	2		No		4
Woolcock Institute of Medical Research	No	0		0		Yes	685	0

Table 30: Unit record data 2004: resourcing

q1	q2a	q3ai	q3aii	q3bi	q3bii	q3ci	q3cii	q4a	q4b	q5
	Research & experimental development expenditure	Dedicated commercialisation staff	Dedicated commercialisation staff cost	Commercialisation support staff	Commercialisation support staff cost	Commercialisation staff total	Commercialisation total cost	Cost to secure IP protection - external fees and legal costs	Cost to secure IP protection - internal fees and legal costs	Revenue from licences as reimbursements of expenses
	$'000	No.	$'000	No.	$'000	No.	$'000	$'000	$'000	$'000
Commonwealth Scientific and Industrial Research Organisation	880,643	130	19,500	69	6,900	199	26,400	5,222	100	771
Defence Science & Technology Organisation	264,981	4	695	1	187	5	883	309	0	23
ANSTO	27,451	8.5	881	3.4	209	11.9	1,090	218	0	7
Australian Institute of Marine Science	19,479	0.5	128	5.85	1,171	6.35	1,299	368		5
Australian Catholic University	10,397	0	0	0	0	0	0	0	0	0
Charles Sturt University	8,210	1	64	2	77	3	142	30	48	15
Macquarie University	67,422	5	486	2	140	7	626	198	60	44
Southern Cross University	12,143	1	250	1	180	2	430	32	30	0
The University of New England	40,766	2.5	356	50.95[2]	2,806	53.45	3,162	25	65	0
The University of New South Wales	216,142	9	817	5	454	14	1,271	1,213	0	644
University of Newcastle	67,781	2	198	1.9	158	3.9	356	183	0	48
The University of Sydney	331,228	9	968	5.8	617	14.8	1,585	902	0	819
University of Technology, Sydney	45,925	2.5	210	0.2	8	2.7	218	97	0	15
University of Western Sydney	48,723	4	356	2	120	6	477	153	Unknown	Unknown
University of Wollongong	59,743	0.4	36	0	0	0.4	36	25	30	0
Deakin University	55,640	1	95	0	0	1	95	0	0	0
La Trobe University	125,346	1	182	0.5	20	1.5	202	61	0	16
Monash University	328,815	12.5	2,588	9	1,012	21.5	3,600	708	164	Unknown
Royal Melbourne Institute of Technology (RMIT)	42,514	2	510	0.2	30	2.2	540	18	75	0
Swinburne University of Technology	27,716	2.5	346	1	60	3.5	406	40	0	1
The University of Melbourne	428,630	6	1,000	3	200	9	1,200	879	0	731
University of Ballarat	7,614	1	80	1	60	2	140	0	0	0
Victoria University	29,841	1	95	0	0	1	95	23	10	0
Bond University	295	0.1	8	0.1	3	0.2	10	0	0	0
Central Queensland University	11,601	0	0	0.5	30	0.5	30	20	0	0
Griffith University	105,200	5	493	2	72	7	565	82	0	2
James Cook University	31,971	0.6	60	0	0	0.6	60	7	0	0
Queensland University of Technology	85,306	1	109	1	53	2	162	255	0	32
University of Queensland	304,506	23.6	3,639	12.3	867	35.9	4,507	1,614	408	750
University of Southern Queensland	15,355	0	0	0.4	35	0.4	35	40	25	20
University of the Sunshine Coast	1,909	0.4	36	0	0	0.4	36	0	0	0
Curtin University of Technology	86,536	1	180	0	0	1	180	201	0	0
Edith Cowan University	25,800	1	93	0.1	16	1.1	109	70	0	0
Murdoch University	63,143	1.4	131	0.5	21	1.9	151	56	N/A	0

q1	q2a	q3ai	q3aii	q3bi	q3bii	q3ci	q3cii	q4a	q4b	q5
	Research & experimental development expenditure	Dedicated commercialisation staff	Dedicated commercialisation staff cost	Commercialisation support staff	Commercialisation support staff cost	Commercialisation staff total	Commercialisation total cost	Cost to secure IP protection - external fees and legal costs	Cost to secure IP protection - internal fees and legal costs	Revenue from licences as reimbursements of expenses
	$'000	No.	$'000	No.	$'000	No.	$'000	$'000	$'000	$'000
The University of Western Australia	122,074	3	442	1	85	4	527	151	55	120
The University of Notre Dame Australia	0	0	0	0	0	0	0	0	0	0
Flinders University	47,125	4.3	442	2.5	283	6.8	725	27	0	0
The University of Adelaide	128,637	7.25	522	2.5	136	9.75	658	424	52	192
University of South Australia	64,163	7	711	4	272	11	983	26	65	7
University of Tasmania	77,230	2	130	0.5		2.5	130	45	0	0
Charles Darwin University	20,469	0.01	1	0	0	0.01	1	0	0	0
Australian National University	317,916	4.7	530	2	110	6.7	640	40	0	0
University of Canberra	3,672	0	0	0.2	25	0.2	25	17	0	0
ANZAC Research Institute	3,600	0	0	0	0	0	0	0	0	0
Baker Heart Research Institute	21,912	2.5	223	0.5	35	3	258	143	0	0
Bionic Ear Institute	1,741	1	175	0	0	1	175	40	0	0
Brain Research Institute	1,870	0	0	0	0	0	0	18	0	0
Cancer Council Victoria	6,785	0	0	0.05	30	0.05	30	0	0	0
Centenary Institute of Cancer Medicine and Cell Biology	9,432	0.5	40	0	0	0.5	40	38		0
Centre for Eye Research Australia		0	0	0	0	0	0	0	0	0
Child Health Research Institute	3,883	0	0	0	0	0	0	0	0	0
Children's Medical Research Institute	12,200	0	0	0	0	0	0	20		0
The George Institute for International Health	0	0.5	100	0	0	0.5	100	50	0	0
The Heart Research Institute	5,311	0	0	0.1	10	0.1	10	27	0	0
Howard Florey Institute of Experimental Physiology and Medicine	19,693	1	86	0	0	1	86	309		261
Lions Eye Institute	2,700	0	0	0	0	0	0	157	0	0
Ludwig Institute for Cancer Research Melbourne Branch	11,397	1.6	145	0.5	20	2.1	165	320	85	31
Macfarlane Burnet Institute	19,987	2.5	250	3.7	250	6.2	500	106		0
Mental Health Research Institute of Victoria	7,394	0	0	0.7	144	0.7	144	24		0
Murdoch Childrens Research Institute	33,442	0.7	80	0	0	0.7	80	139	0	0
National Stroke Research Institute	2,350	0.2	12	0	0	0.2	12	0	0	0
Prince Henry's Institute of Medical Research	1,930	0.6	62	0	0	0.6	62	113	0	0
Prince of Wales Medical Research Institute	5,165	0	0	0.4	18	0.4	18	24	0	0
Queensland Cancer Fund		0	0	0	0	0	0	0	0	0
Queensland Institute of Medical Research	31,900	2	228	0	0	2	228	270		122
Royal Brisbane and Women's Hospital Research Foundation	1,382	0	0	0	0	0	0	0	0	0
Telethon Institute for Child Health Research	15,008	0.2	40	0	0	0.2	40	84	0	3
Victor Chang Cardiac Research Institute	9,564	0	0	0	0	0	0	54		0
The Walter and Eliza Hall Institute of Medical Research	37,609	2.5	491	1.2	102	3.7	593	808	0	0
Woolcock Institute of Medical Research	3,862	1	92	0	0	1	92	0	0	0

Table 31: Unit record data 2004: applications for IP rights

q1	q6	q7ai	q7aii	q7bi	q7bii	q7ci	q7cii	q7di	q7dii	q8a	q8b	q8c	q8d	q8e
	Invention disclosures received	Patent and/or plant breeder rights filed - Aus		Patent and/or plant breeder rights filed - USA		Patent and/or plant breeder rights filed - elsewhere		Patent and/or plant breeder rights filed - total		Applications for - provisional patents	Applications for - PCT patents	Applications for - innovation patents	Applications for - other	Applications for - total
	No.	No.	New No.	Total No.	New No.	Total No.	New No.	Total No.	New No.	New No.	No.	No.	No.	No.
Commonwealth Scientific and Industrial Research Organisation	Unknown	302	123	295	29	2044	345	2641	497	119	60	0	17	196
Defence Science & Technology Organisation	19	13	12	3	0	29	0	45	12	12	0	0	0	12
ANSTO	15	7	6	0	0	0	0	7	6	6	1	0	0	7
Australian Institute of Marine Science	1	18	0	5	0	52	0	75	0	0	0	0	0	0
Australian Catholic University	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Charles Sturt University	6	12	3	0	0	0	0	12	3	11	1	0	0	12
Macquarie University	25	5	2	6	3	3	3	14	8	4	3	0	7	14
Southern Cross University	15	6	5	2	2	2	2	10	9	5	4	0	0	9
The University of New England	4	0	1	0	0	0	0	0	1	1	0	0	0	1
The University of New South Wales	65	65	56	8	8	8	8	81	72	42	6	0	24	72
University of Newcastle	7	13	12	0	0	1	0	14	12	7	5	0	0	12
The University of Sydney	113	30.34	26.34	6.5	6.5	14.5	14.5	51.34	47.34	22.34	5	0	20	47.34
University of Technology, Sydney	28	2	2	1	1	5	5	8	8	3	1	0	0	4
University of Western Sydney	7	2.5	0	2.5	0	14.5	0	19.5	0	0	4.5	0	0	4.5
University of Wollongong	6	5	5	0	1	0	0	5	6	5	1	0	0	6
Deakin University	Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0
La Trobe University	4	3.75	2.75	0.5	0	2	0	6.25	2.75	2.75	0	0	0	2.75
Monash University	37	47	23	11	7	22	0	80	30	30	18	0	0	48
Royal Melbourne Institute of Technology (RMIT)	5	6	6	0	0	0	0	6	6	6	0	0	0	6
Swinburne University of Technology	32	3	3	0	0	0	0	3	3	3	0	0	0	3
The University of Melbourne	6	27.33	13.5	11	2	11.25	0	49.58	15.5	13	0	0	2.5	15.5
University of Ballarat	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Victoria University	2	5	3	3	1	3	1	11	5	3	5	0	3	11
Bond University	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Central Queensland University	2	3	3	0	0	0	0	3	3	2	0	1	0	3
Griffith University	4	8	5	2	0	14	0	24	5	5	0	0	0	5
James Cook University	2	2	0.5	0	0	0	0	2	0.5	0.5	0	0	0	0.5
Queensland University of Technology	16	19	9	4	1	2	0	25	10	10	0	0	0	10
University of Queensland	182	80	49	39	19	111	66	230	134	39	22	0	91	152
University of Southern Queensland	Unknown	4	4	0	0	0	0	4	4	4	0	0	0	4
University of the Sunshine Coast	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Curtin University of Technology	5	4	1	0	0	1	1	5	2	1	1	0	0	2
Edith Cowan University	13	10	3	0	0	0	0	10	3	3	2	0	0	5
Murdoch University	16	7	4	1	1	2	0	10	5	4	3	0	0	7
The University of Western Australia	21	8	3	0	1	0	0	8	4	3	1	0	0	4

q1	q6	q7ai	q7aii	q7bi	q7bii	q7ci	q7cii	q7di	q7dii	q8a	q8b	q8c	q8d	q8e
	Invention disclosures received	Patent and/or plant breeder rights filed - Aus		Patent and/or plant breeder rights filed - USA		Patent and/or plant breeder rights filed - elsewhere		Patent and/or plant breeder rights filed - total		Applications for - provisional patents	Applications for - PCT patents	Applications for - innovation patents	Applications for - other	Applications for - total
	No.	No.	New No.	Total No.	New No.	Total No.	New No.	Total No.	New No.	New No.	No.	No.	No.	No.
The University of Notre Dame Australia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flinders University	13	5	2	3	1	4	0	12	3	0	2	0	1	3
The University of Adelaide	36	27.5	25.5	9	7	19	19	55.5	51.5	13	5.5	0	32.5	51
University of South Australia	56	12	5	4	0	6	0	22	5	5	2	0	15	22
University of Tasmania	33	1	0	0	0	1	0	2	0	0	0	0	0	0
Charles Darwin University	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Australian National University	30	1	16	3	1	3	0	7	17	16	0	0	1	17
University of Canberra	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANZAC Research Institute	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baker Heart Research Institute	9	0	6	1	7	0	2	1	15	9	0	0	6	15
Bionic Ear Institute	0	0	0	1	0	1	0	2	0	0	1	0	1	2
Brain Research Institute	0	2	2	0	0	0	0	2	2	2	0	0	0	2
Cancer Council Victoria	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Centenary Institute of Cancer Medicine and Cell Biology	1	0	1	0	0	0	0	0	1	1	0	0	0	1
Centre for Eye Research Australia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Child Health Research Institute	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Children's Medical Research Institute	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A
The George Institute for International Health	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Heart Research Institute	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Howard Florey Institute of Experimental Physiology and Medicine	8	0	6	0	4	0	4	0	14	5	1	0	0	6
Lions Eye Institute	0	1	0	1	0	6	0	8	0	1	0	0	7	8
Ludwig Institute for Cancer Research Melbourne Branch	65	0	0	23	12	0	0	23	12	5	7	0	11	23
Macfarlane Burnet Institute	5	10	7	1	0	5	0	16	7	7	0	0	0	7
Mental Health Research Institute of Victoria	2	1	0	2	1	3	0	6	1	1	0	0	0	1
Murdoch Childrens Research Institute	6	3	2	0	0	2	2	5	4	2	2	0	0	4
National Stroke Research Institute	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prince Henry's Institute of Medical Research	0	9	0	9	0	9	0	27	0	0	0	0	0	0
Prince of Wales Medical Research Institute	0	2	1	2	0	1	0	5	1	1	0	0	0	1
Queensland Cancer Fund	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Queensland Institute of Medical Research	8	3	3	0	0	3	3	6	6	3	3	0	0	6
Royal Brisbane and Women's Hospital Research Foundation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Telethon Institute for Child Health Research	3	6	3	3	0	0	0	9	3	3	0	0	0	3
Victor Chang Cardiac Research Institute	2	2	0	2	0	2	0	6	0	0	2	0	0	2
The Walter and Eliza Hall Institute of Medical Research	26	26	6	14	3	45	0	85	9	9	0	0	0	9
Woolcock Institute of Medical Research	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 32: Unit record data 2004: IP rights issued and held

q1	q9a	q9b	q9c	q9d	q10a	q10b	q10c	q11
	Patents and plant breeder rights issued - in Aus	Patents and plant breeder rights issued - in USA	Patents and plant breeder rights issued - elsewhere	Patents and plant breeder rights issued - total	Patents and plant breeder rights held - patents pending	Patents and plant breeder rights held - patents issued	Patents and plant breeder rights held - total	Patents and plant breed rights culled or lapsed
	No.	No.	No.	No.	No.	No.	No.	No.
Commonwealth Scientific and Industrial Research Organisation	30	39	168	237	1865	2203	4068	530
Defence Science & Technology Organisation	2	3	9	14	112	63	175	8
ANSTO	11	2	22	35	30	38	68	37
Australian Institute of Marine Science	8	7	25.5	40.5	27	39	66	11
Australian Catholic University	0	0	0	0	0	0	0	0
Charles Sturt University	12	0	0	12	0	12	12	0
Macquarie University	2	1	3	6	138.8	26	164.8	2
Southern Cross University	2	2	2	6	2	3	5	2
The University of New England	1	0	0	1	1	12	13	0
The University of New South Wales	8	8	8	24	272	150	422	0
University of Newcastle	2	1	3	6	43	7	50	7
The University of Sydney	25.9	20.9	62.2	109	273	155.2	428.2	28.7
University of Technology, Sydney	6	4	5	15	68	22	90	6
University of Western Sydney	0	0	1	1	42.1	3.7	45.8	2
University of Wollongong	0	0	0	0	12	0	12	3
Deakin University	0	1	0	1	0	1	1	N/A
La Trobe University	0	0	0	0	17.55	0	17.55	0
Monash University	0	2	5	7	323	66	389	37
Royal Melbourne Institute of Technology (RMIT)	0	0	0	0	7	8	15	6
Swinburne University of Technology	0	0	0	0	16	6	22	32
The University of Melbourne	4.83	5	47.8	57.63	308.42	458.66	767.08	20
University of Ballarat	0	0	0	0	0	0	0	0
Victoria University	1	0	0	1	8	10	18	0
Bond University	0	0	0	0	0	0	0	0
Central Queensland University	2	0	0	2	0	5	5	0
Griffith University	0	0	0	0	0	0	0	0
James Cook University	0	0	0	0	1	0	1	1
Queensland University of Technology	0	2	0	2	159	32	191	0
University of Queensland	13	6	10	29	1023	346	1369	36
University of Southern Queensland	4	0	0	4	1	12	13	0
University of the Sunshine Coast	0	0	0	0	0	0	0	0
Curtin University of Technology	0	0	0	0	4	0	4	2
Edith Cowan University	0	0	0	0	8	0	8	2
Murdoch University	1	0	0	1	7	5	12	3
The University of Western Australia	0	0	0	0	22	28	50	2

q1	q9a	q9b	q9c	q9d	q10a	q10b	q10c	q11
	Patents and plant breeder rights issued - in Aus	Patents and plant breeder rights issued - in USA	Patents and plant breeder rights issued - elsewhere	Patents and plant breeder rights issued - total	Patents and plant breeder rights held - patents pending	Patents and plant breeder rights held - patents issued	Patents and plant breeder rights held - total	Patents and plant breed rights culled or lapsed
	No.	No.	No.	No.	No.	No.	No.	No.
The University of Notre Dame Australia	0	0	0	0	0	0	0	0
Flinders University	3	1	3	7	44	38	82	1
The University of Adelaide	37	84.5	94.5	216	155	38	193	11
University of South Australia	4	5	6	15	35	19	54	1
University of Tasmania	0	0	0	0	7	0	7	0
Charles Darwin University	0	0	0	0	0	0	0	0
Australian National University	1	1	5	7	152	150	302	8
University of Canberra	0	0	0	0	0	5	5	0
ANZAC Research Institute	0	0	0	0	0	0	0	0
Baker Heart Research Institute	0	0	0	0	21	5	26	4
Bionic Ear Institute	0	0	0	0	11	4	15	0
Brain Research Institute	0	0	0	0	0	0	0	0
Cancer Council Victoria	0	0	0	0	0	0	0	0
Centenary Institute of Cancer Medicine and Cell Biology	0	0	0	0	6	1	7	0
Centre for Eye Research Australia	0	0	0	0	0	0	0	0
Child Health Research Institute	0	0	0	0	0	9	9	0
Children's Medical Research Institute	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
The George Institute for International Health	0	0	0	0	1	0	1	0
The Heart Research Institute	0	0	0	0	0	6	6	1
Howard Florey Institute of Experimental Physiology and Medicine	0	0	0	0	23	134	157	0
Lions Eye Institute	1	1	4	6	18	2	20	17
Ludwig Institute for Cancer Research Melbourne Branch	0	1	1	2	Unknown	Unknown	Unknown	4
Macfarlane Burnet Institute	2	1	4	7	98	75.5	173.5	2
Mental Health Research Institute of Victoria	0	0	0	0	0	0	0	1
Murdoch Childrens Research Institute	0	0	0	0	13	4	17	0
National Stroke Research Institute	0	0	0	0	0	0	0	0
Prince Henry's Institute of Medical Research	0	0	0	0	7	31	38	0
Prince of Wales Medical Research Institute	2	2	1	5	1	5	6	5
Queensland Cancer Fund	0	0	0	0	0	0	0	0
Queensland Institute of Medical Research	0	1	0	1	18	0	18	4
Royal Brisbane and Women's Hospital Research Foundation	0	0	0	0	0	0	0	0
Telethon Institute for Child Health Research	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	1
Victor Chang Cardiac Research Institute	0	0	0	0	3	0	3	0
The Walter and Eliza Hall Institute of Medical Research	3	3	2	8	164	32	196	3
Woolcock Institute of Medical Research	0	0	0	0	0	0	0	0

Table 33: Unit record data 2004: licences, options and assignments (LOA) activity

q1	q12a	q12b	q13	q14ai	q14aii	q14bi	q14bii	q14ci	q14cii	q14di	q14dii
	LOAs executed	LOAs active	LOAs yielding income	LOA income from running royalties		LOA income from cashed in equity		LOA income from other types		LOA income total	
	No.	No.	No.	No.	$'000	No.	$'000	No.	$'000	No.	$'000
Commonwealth Scientific and Industrial Research Organisation	50	383	226	131	12,452	3	5,211,916	92	2,600	226	20,263
Defence Science & Technology Organisation	15	75	9	6	882	0	0	3	144	9	1,025
ANSTO	2	2	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Australian Institute of Marine Science	1	4	0	0	0	0	0	0	0	0	0
Australian Catholic University	0	0	0	0	0	0	0	0	0	0	0
Charles Sturt University	5	11	9	1	1	0	0	8	278	9	279
Macquarie University	1	17	13	12	1,966	0	0	1	120	13	2,086
Southern Cross University	6	31	0	0	0	0	0	0	0	0	0
The University of New England	5	70	69	18	229	0	0	65	6,385[3]	83	6,614
The University of New South Wales	34	114	43	4	412	0	0	39	733	43	1,145
University of Newcastle	1	4	1	1	15	0	0	1	261	2	276
The University of Sydney	97	189	111	17	290	0	0	94	1,263	111	1,553
University of Technology, Sydney	4	16	3	3	45	0	0	0	0	3	45
University of Western Sydney	1	14	3	2	2	0	0	1	0	3	2
University of Wollongong	1	3	1	0	0	0	0	0	5	0	5
Deakin University	0	0	0	0	0	0	0	0	0	0	0
La Trobe University	2	7	0	0	0	0	0	0	0	0	0
Monash University	6	28	11	9	332	1	166,625	1	400	11	898
Royal Melbourne Institute of Technology (RMIT)	2	8	1	0	0	0	0	1	25	1	25
Swinburne University of Technology	2	3	2	2	216	0	0	0	0	2	216
The University of Melbourne	53	29	15	14	4,457	0	0	1	13	15	4,470
University of Ballarat	0	0	0	0	0	0	0	0	0	0	0
Victoria University	2	27	2	2	5	0	0	1	80	3	85
Bond University	0	0	0	0	0	0	0	0	0	0	0
Central Queensland University	1	2	1	1	270	0	0	0	0	1	270
Griffith University	1	12	0	0	0	0	0	0	0	0	0
James Cook University	2	6.5	2	1	0	0	0	1	125	2	125
Queensland University of Technology	2	19	5	5	142	0	0	0	0	5	142
University of Queensland	30	176	35	15	Confidential	1	Confidential	20	Confidential	36	13,290
University of Southern Queensland	2	8	2	2	20	0	0	0	0	2	20
University of the Sunshine Coast	0	0	0	0	0	0	0	0	0	0	0
Curtin University of Technology	2	4	1	1	5	0	0	0	0	1	5
Edith Cowan University	0	0	0	0	0	0	0	0	0	0	0
Murdoch University	1	2	2	2	1	0	0	0	0	2	1
The University of Western Australia	11	32	11	7	67	0	0	4	339	11	406

q1	q12a	q12b	q13	q14ai	q14aii	q14bi	q14bii	q14ci	q14cii	q14di	q14dii
	LOAs executed	LOAs active	LOAs yielding income	LOA income from running royalties		LOA income from cashed in equity		LOA income from other types		LOA income total	
	No.	No.	No.	No.	$'000	No.	$'000	No.	$'000	No.	$'000
The University of Notre Dame Australia	0	0	0	0	0	0	0	0	0	0	0
Flinders University	4	12	5	2	96	0	0	3	170	5	266
The University of Adelaide	9	52	22	22	1,442	0	0	1	62	23	1,504
University of South Australia	5	21	7	7	142	0	0	0	0	7	142
University of Tasmania	0	1	0	0	0	0	0	0	0	0	0
Charles Darwin University	0	1	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Australian National University	2	21	8	4	555	0	0	4	35	8	589
University of Canberra	0	0	0	0	0	0	0	0	0	0	0
ANZAC Research Institute	0	0	0	0	0	0	0	0	0	0	0
Baker Heart Research Institute	1	7	0	0	0	0	0	0	0	0	0
Bionic Ear Institute	0	0	0	0	0	0	0	0	0	0	0
Brain Research Institute	0	0	0	0	0	0	0	0	0	0	0
Cancer Council Victoria	0	0	0	0	0	0	0	0	0	0	0
Centenary Institute of Cancer Medicine and Cell Biology	0	1	1	1	8	0	0	0	0	1	8
Centre for Eye Research Australia	0	0	0	0	0	0	0	0	0	0	0
Child Health Research Institute	0	4	1	1	17	0	0	0	0	1	17
Children's Medical Research Institute	0	0	0	0	0	0	0	0	0	0	0
The George Institute for International Health	0	1	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
The Heart Research Institute	0	0	1	0	0	0	0	0	0	0	0
Howard Florey Institute of Experimental Physiology and Medicine	9	13	12	1	136	0	0	0	0	1	136
Lions Eye Institute	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ludwig Institute for Cancer Research Melbourne Branch	4	15	10	5	3,052	N/A	N/A	5	465	10	3,517
Macfarlane Burnet Institute		14	8		20		700,000		2,063		2,783
Mental Health Research Institute of Victoria	0	0	0	0	0	0	0	0	0	0	0
Murdoch Childrens Research Institute	0	2	0	0	0	0	0	0	0	0	0
National Stroke Research Institute	0	0	0	0	0	0	0	0	0	0	0
Prince Henry's Institute of Medical Research	0	2	1	1	65	0	0	0	0	1	65
Prince of Wales Medical Research Institute	0	0	N/A	0	0	0	0	0	0	0	0
Queensland Cancer Fund	0	0	0	0	0	0	0	0	0	0	0
Queensland Institute of Medical Research	1	1	0	0	0	0	0	0	0	0	0
Royal Brisbane and Women's Hospital Research Foundation	0	0	0	0	0	0	0	0	0	0	0
Telethon Institute for Child Health Research	1	14	1	0	0	0	0	1	100	1	100
Victor Chang Cardiac Research Institute	0	2	0	0	0	0	0	0	0	0	0
The Walter and Eliza Hall Institute of Medical Research	5	23	10	7	2,508	0	0	3	1,389	10	3,897
Woolcock Institute of Medical Research	0	0	0	0	0	0	0	0	0	0	0

Table 34: Unit record data 2004: licences, options and assignments (LOA) income

q1	q15a Income under $10,000 No.	q15b Income $10,000 - $50,000 No.	q15c Income $10,000 - $200,000 No.	q15d Income $200,000 - $500,000 No.	q15e Income $500,000 and over No.	q15f Total No.	q16 Income reported paid to other entities $'000	q17 Estimated sales resulting from technologies licensed $'000
Commonwealth Scientific and Industrial Research Organisation	123	69	20	9	5	226	2,772	1,330,000
Defence Science & Technology Organisation	3	2	3	1	0	9	0	44,000
ANSTO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Australian Institute of Marine Science	0	0	0	0	0	0	0	0
Australian Catholic University	0	0	0	0	0	0	0	0
Charles Sturt University	2	6	1	0	0	9	0	Unknown
Macquarie University	5	4	2	2	0	13	303	39,320
Southern Cross University	0	0	0	0	0	0	0	0
The University of New England	35	17	16	1	0	69	64	1,568
The University of New South Wales	12	28	2	1	0	43	39	145,679
University of Newcastle	0	1	0	1	0	2	0	247
The University of Sydney	93	11	7	0	0	111	173	18,300
University of Technology, Sydney	0	3	0	0	0	3	0	200,000
University of Western Sydney	3	0	0	0	0	3	0	20
University of Wollongong	1	0	0	0	0	1	0	Unknown
Deakin University	0	0	0	0	0	0	0	0
La Trobe University	0	0	0	0	0	0	0	0
Monash University	19	4	4	1	0	28	0	Unknown
Royal Melbourne Institute of Technology (RMIT)	0	1	0	0	0	1	0	0
Swinburne University of Technology	0	1	1	0	0	2	0	2,880
The University of Melbourne	8	2	2	0	3	15	647	443,000
University of Ballarat	0	0	0	0	0	0	0	0
Victoria University	1	0	1	0	0	2	0	13,000
Bond University	0	0	0	0	0	0	0	0
Central Queensland University	0	0	0	1	0	1	0	150
Griffith University	0	0	0	0	0	0	0	0
James Cook University	1	0	1	0	0	2	0	0
Queensland University of Technology	2	2	1	0	0	5	0	Unknown
University of Queensland	14	11	5	3	3	36	541	1,503,685
University of Southern Queensland	1	1	0	0	0	2	0	200
University of the Sunshine Coast	0	0	0	0	0	0	0	0
Curtin University of Technology	1	0	0	0	0	1	0	9
Edith Cowan University	0	0	0	0	0	0	0	0
Murdoch University	2	0	0	0	0	2	0	100

q1	q15a Income under $10,000 No.	q15b Income $10,000 - $50,000 No.	q15c Income $10,000 - $200,000 No.	q15d Income $200,000 - $500,000 No.	q15e Income $500,000 and over No.	q15f Total No.	q16 Income reported paid to other entities $'000	q17 Estimated sales resulting from technologies licensed $'000
The University of Western Australia	5	3	3	0	0	11	0	13,100
The University of Notre Dame Australia	0	0	0	0	0	0	0	0
Flinders University	1	2	2	0	0	5	11	Unknown
The University of Adelaide	12	5	4	0	1	22	401	Unknown
University of South Australia	6	0	1	0	0	7	0	4,403
University of Tasmania	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Charles Darwin University	0	0	0	0	0	0	0	0
Australian National University	3	2	3	0	0	8	30	16,938
University of Canberra	0	0	0	0	0	0	0	0
ANZAC Research Institute	0	0	0	0	0	0	0	0
Baker Heart Research Institute	0	0	0	0	0	0	N/A	N/A
Bionic Ear Institute	0	0	0	0	0	0	0	0
Brain Research Institute	0	0	0	0	0	0	0	0
Cancer Council Victoria	0	0	0	0	0	0	0	0
Centenary Institute of Cancer Medicine and Cell Biology	1	0	0	0	0	1	0	53
Centre for Eye Research Australia	0	0	0	0	0	0	0	0
Child Health Research Institute	0	1	0	0	0	1	0	Unknown
Children's Medical Research Institute	0	0	0	0	0	0	0	0
The George Institute for International Health	N/A	N/A	N/A	N/A	N/A	N/A	0	0
The Heart Research Institute	0	0	0	0	0	0	0	0
Howard Florey Institute of Experimental Physiology and Medicine	0	2	8	3	0	13	0	1,500
Lions Eye Institute	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ludwig Institute for Cancer Research Melbourne Branch	2	4	1	2	1	10	1,528	101,190
Macfarlane Burnet Institute	6	0	0	0	3	9	0	
Mental Health Research Institute of Victoria	0	0	0	0	0	0	0	0
Murdoch Childrens Research Institute	0	0	0	0	0	0	0	0
National Stroke Research Institute	0	0	0	0	0	0	N/A	N/A
Prince Henry's Institute of Medical Research	0	0	1	0	0	1	0	11,283
Prince of Wales Medical Research Institute	0	0	0	0	0	0	N/A	N/A
Queensland Cancer Fund	0	0	0	0	0	0	0	0
Queensland Institute of Medical Research	0	0	0	0	0	0	0	0
Royal Brisbane and Women's Hospital Research Foundation	0	0	0	0	0	0	0	0
Telethon Institute for Child Health Research	0	0	1	0	0	1	0	0
Victor Chang Cardiac Research Institute	0	0	0	0	0	0	0	0
The Walter and Eliza Hall Institute of Medical Research	2	2	1	2	3	10	709	118,400
Woolcock Institute of Medical Research	0	0	0	0	0	0	0	0

Table 35: Unit record data 2004: company start-up activity

q1	q18ai	q18aii	q18bi	q18bii	q18cii	q19	q20	q21
	Capital raising - IPOs		Capital raising - other		Capital raising - total	Value of all equity holdings	Start-up companies operational dependent on licensing/ assignment of technologies	Startup companies in which an equity holding
	No.	$'000	No.	$'000	$'000	$'000	No.	No.
Commonwealth Scientific and Industrial Research Organisation	0	0	1	2,875	2,875	10,547	17	9
Defence Science & Technology Organisation	0	0	0	0	0	0	0	0
ANSTO	N/A	N/A	N/A	N/A	N/A	0	0	N/A
Australian Institute of Marine Science							2	1
Australian Catholic University	0	0	0	0	0	0	0	0
Charles Sturt University	0	0	0	0	0	0	0	0
Macquarie University	0	0	4	2,074	2,074	1,437	9	6
Southern Cross University	0	0	0	0	0	0	0	0
The University of New England	0	0	1	59	59	5,703	3	2
The University of New South Wales	1	25,000	2	550	25,550	3,006	11	9
University of Newcastle	0	0	1	140	140	267	3	3
The University of Sydney	1	10,000	2	3,600	13,600	11,932	16	13
University of Technology, Sydney	0	0	0	0	0	1,300	2	3
University of Western Sydney	0	0	0	0	0	Unknown	1	1
University of Wollongong	0	0	0	0	0	0	1	1
Deakin University	0	0	0	0	0	465	1	1
La Trobe University	0	0	0	0	0	130	4	2
Monash University	2	36,000	1	1,100	37,100	38,152	26	17
Royal Melbourne Institute of Technology (RMIT)	0	0	0	0	0	103	1	1
Swinburne University of Technology	0	0	1	950	950	1,700	8	7
The University of Melbourne	0	0	2	4,000	4,000	200	20	7
University of Ballarat	0	0	0	0	0	0	1	1
Victoria University	0	0	0	0	0	150	3	1
Bond University	0	0	0	0	0	0	0	0
Central Queensland University	0	0	0	0	0	300	1	1
Griffith University	0	0	1	32	32	261	4	4
James Cook University	0	0	0	0	0	539	2	2
Queensland University of Technology	1	3,500	0	0	3,500	3,075	3	3
University of Queensland	0	0	19	38,041	38,041	48,450	38	38
University of Southern Queensland	0	0	0	0	0	0	0	0
University of the Sunshine Coast	0	0	0	0	0	0	0	0
Curtin University of Technology	0	0	3	9	9	1,134	4	3
Edith Cowan University	0	0	0	0	0	0	0	2
Murdoch University	0	0	1	12,500	12,500	Unknown	4	4

q1	q18ai	q18aii	q18bi	q18bii	q18cii	q19	q20	q21
	Capital raising - IPOs		Capital raising - other		Capital raising - total	Value of all equity holdings	Start-up companies operational dependent on licensing/ assignment of technologies	Startup companies in which an equity holding
	No.	$'000	No.	$'000	$'000	$'000	No.	No.
The University of Western Australia	0	0	0	0	0	10,900	4	4
The University of Notre Dame Australia	0	0	0	0	0	0	0	0
Flinders University	0	0	0	0	0	9,718	4	4
The University of Adelaide	0	0	1	4,975	4,975	10,867	8	6
University of South Australia	0	0	1	1,400	1,400	11,587	5	5
University of Tasmania	0	0	0	0	0	0	0	1
Charles Darwin University	0	0	0	0	0	255	1	1
Australian National University	0	0	1	4,000	4,000	Unknown	16	15
University of Canberra	0	0	0	0	0	0	0	0
ANZAC Research Institute								
Baker Heart Research Institute	0	0	0	0	0	0	2	1
Bionic Ear Institute	0	0	0	0	0	0	0	0
Brain Research Institute	0	0	0	0	0	0	0	0
Cancer Council Victoria	0	0	0	0	0	0	0	0
Centenary Institute of Cancer Medicine and Cell Biology							1	1
Centre for Eye Research Australia	0	0	0	0	0	0	0	0
Child Health Research Institute	0	0	0	0	0	0	0	0
Children's Medical Research Institute	0	0	0	0	0	0	0	0
The George Institute for International Health	0	0	0	0	0	0	N/A	N/A
The Heart Research Institute	0	0	0	0	0	0	0	N/A
Howard Florey Institute of Experimental Physiology and Medicine	0	0	0	0	0	1,200	3	3
Lions Eye Institute	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ludwig Institute for Cancer Research Melbourne Branch	0	0	1	6	6	6	2	1
Macfarlane Burnet Institute		0		11,563	11,563	Unknown	12	12
Mental Health Research Institute of Victoria	0	0	0	0	0	0	2	0
Murdoch Childrens Research Institute	0	0	0	0	0	863	4	4
National Stroke Research Institute	0	0	0	0	0	0	0	0
Prince Henry's Institute of Medical Research	0	0	0	0	0	0	1	1
Prince of Wales Medical Research Institute	0	0	0	0	0	N/A	0	0
Queensland Cancer Fund	0	0	0	0	0	0	0	0
Queensland Institute of Medical Research	0	0	1	1,875	1,875	Unknown	1	1
Royal Brisbane and Women's Hospital Research Foundation	0	0	0	0	0	0	0	0
Telethon Institute for Child Health Research	0	0	2	2,492	2,492	10,372	2	2
Victor Chang Cardiac Research Institute	0	0	0	0	0	0	0	0
The Walter and Eliza Hall Institute of Medical Research	0	0	1	507	507	338	2	2
Woolcock Institute of Medical Research	0	0	0	0	0	0	0	0

Table 36: Unit record data 2004: research contracts and consultancy

q1	q24a	q24b	q25a	q25b	q25c	q25d	q25e	q25f	q26
	No.	Contracts and consultancies entered into $'000	Gross contracted value $0-$10,000 No.	Gross contracted value $10,000 - $50,000 No.	Gross contracted value $50,000-$200,000 No.	Gross contracted value $200,000-$500,000 No.	Gross contracted value >$500,000 No.	Gross contracted value total No.	Contract and consultancies - repeat business No.
Commonwealth Scientific and Industrial Research Organisation	2,111	207,041	1,005	550	366	119	71	2,111	844
Defence Science & Technology Organisation	0	N/A	0	0	0	0	0	0	0
ANSTO	425	4,275	327	82	16	0	0	425	Unknown
Australian Institute of Marine Science	27	6,526	1	12	7	6	2	28	Unknown
Australian Catholic University	72	1,896	23	39	10	0	0	72	Unknown
Charles Sturt University	122	8,810	56	31	24	6	5	122	Unknown
Macquarie University	307	13,307	158	108	27	5	9	307	Unknown
Southern Cross University	80	3,585	12	10	8	5	12	47	0
The University of New England	183	9,264	50	73	54	5	1	183	34
The University of New South Wales	3,094	57,222	2,735	121	105	108	25	3,094	2,145
University of Newcastle	587	17,326	345	181	43	12	6	587	Unknown
The University of Sydney	514	49,331	220	169	83	21	21	514	Unknown
University of Technology, Sydney	49	3,168	12	22	12	1	2	49	14
University of Western Sydney	129	3,271	63	53	12	0	1	129	7
University of Wollongong	223	9,421	146	46	4	23	4	223	Unknown
Deakin University	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
La Trobe University	103	7,057	33	40	20	9	1	103	72
Monash University	506	37,700	259	158	66	17	6	506	Unknown
Royal Melbourne Institute of Technology (RMIT)	330	16,300	194	57	58	15	6	330	49
Swinburne University of Technology	105	1,541	76	23	5	1	0	105	Unknown
The University of Melbourne	220	63,417	17	63	86	34	20	220	121
University of Ballarat	148	2,010	107	30	11	0	0	148	Unknown
Victoria University	61	1,582	19	32	10	0	0	61	26
Bond University	11	783	2	4	3	2	0	11	Unknown
Central Queensland University	86	2,621	43	31	10	2	0	86	48
Griffith University	237	6,396	160	54	13	7	3	237	Unknown
James Cook University	72	2,675	20	34	15	3	0	72	Unknown
Queensland University of Technology	405	15,555	243	95	52	10	5	405	Unknown
University of Queensland	1,146	110,523	402	434	90	180	40	1,146	Unknown
University of Southern Queensland	Unknown	1,172	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
University of the Sunshine Coast	19	758	3	6	10	0	0	19	Unknown
Curtin University of Technology	700	13,000	400	100	100	75	25	700	175
Edith Cowan University	74	3,964	56	44	18	0	0	118	49
Murdoch University	5	478	0	3	1	1	0	5	Unknown

q1	q24a	q24b	q25a	q25b	q25c	q25d	q25e	q25f	q26
	No.	Contracts and consultancies entered into $'000	Gross contracted value $0-$10,000 No.	Gross contracted value $10,000 - $50,000 No.	Gross contracted value $50,000-$200,000 No.	Gross contracted value $200,000-$500,000 No.	Gross contracted value >$500,000 No.	Gross contracted value total No.	Contract and consultancies - repeat business No.
The University of Western Australia	234	8,542	58	128	45	3	0	234	Unknown
The University of Notre Dame Australia	0	0	0	0	0	0	0	0	0
Flinders University	108	6,251	42	41	20	3	2	108	52
The University of Adelaide	313	11,759	110	112	33	10	2	Unknown	40
University of South Australia	368	25,331	119	157	71	16	5	368	104
University of Tasmania	232	2,139	94	42	17	3	0	Unknown	Unknown
Charles Darwin University	67	4,408	18	36	8	3	2	67	30
Australian National University	593	101,663	151	163	117	111	51	593	513
University of Canberra	33	3,698	6	11	9	7	0	33	Unknown
ANZAC Research Institute	0	0	0	0	0	0	0	0	0
Baker Heart Research Institute	20	3,522	1	9	7	2	1	20	Unknown
Bionic Ear Institute	2	912	0	0	0	1	1	2	1
Brain Research Institute	16	552	3	10	3	0	0	16	Unknown
Cancer Council Victoria	0	0	0	0	0	0	0	0	0
Centenary Institute of Cancer Medicine and Cell Biology	4	55	2	2	0	0	0	4	1
Centre for Eye Research Australia	0	0	0	0	0	0	0	0	0
Child Health Research Institute	3	25	1	2	0	0	0	3	1
Children's Medical Research Institute	0	0	0	0	0	0	0	0	0
The George Institute for International Health	54	23,900	10	24	13	2	6	53	17
The Heart Research Institute	1	200	0	0	1	0	0	1	1
Howard Florey Institute of Experimental Physiology and Medicine	13	1,500	0	2	8	3	0	13	3
Lions Eye Institute	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ludwig Institute for Cancer Research Melbourne Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Macfarlane Burnet Institute	11	2,563	0	3	4	2	2	11	8
Mental Health Research Institute of Victoria	17	1,672	0	8	7	1	1	17	9
Murdoch Childrens Research Institute	42	3,374	8	20	9	3	2	42	35
National Stroke Research Institute	2	796	0	0	0	2	0	2	2
Prince Henry's Institute of Medical Research	19	1,886	6	7	2	4	0	19	Unknown
Prince of Wales Medical Research Institute	4	174	0	3	1	0	0	4	3
Queensland Cancer Fund	0	0	0	0	0	0	0	0	0
Queensland Institute of Medical Research	34	1,173	9	19	5	1	0	34	13
Royal Brisbane and Women's Hospital Research Foundation	1	200	0	0	1	0	0	1	1
Telethon Institute for Child Health Research	26	5,765	2	9	8	4	3	26	23
Victor Chang Cardiac Research Institute	0	0	0	0	0	0	0	0	0
The Walter and Eliza Hall Institute of Medical Research	8	1,514	1	1	4	1	1	8	4
Woolcock Institute of Medical Research	83	2,986	29	36	14	2	2	83	14

Table 37: Unit record data 2004: skills development and transfer

q1	q27a	q27b	q27b	q27c	q27c	q28a	q28c	q29
	Training offered in research commercialisation	In-house training provided	In-house training participants	Delivery by an external provider	External training participants	Training offered to industry to assist in understanding research findings	Number of participants in training programmes	Research post grad employed in startup companies
		No.	No.	No.	No	No.	No.	No
Commonwealth Scientific and Industrial Research Organisation	Yes	Yes	148	2		No		Unknown
Defence Science & Technology Organisation	Yes	Yes	25	2		No		
ANSTO	Yes	Yes	15	1	15	No	N/A	N/A
Australian Institute of Marine Science	Yes	No	0	1	3	No		Unknown
Australian Catholic University	No		0	0		No		0
Charles Sturt University	Yes	No	0	1	10	No		N/A
Macquarie University	Yes	Yes	48	1	56	No		Unknown
Southern Cross University	Yes	Yes	25	2		No		0
The University of New England	Yes	Yes	40	2		Yes	157	0
The University of New South Wales	Yes	Yes	370	2		No	N/A	4
University of Newcastle	No		0			No		Unknown
The University of Sydney	Yes	Yes	440	1	200	No		0
University of Technology, Sydney	Yes	Yes	35	2		No		5
University of Western Sydney	Yes	Yes	29	1	29	No	29	Unknown
University of Wollongong	Yes	Yes	30	1	30	No		0
Deakin University	Yes	Yes	0	1		No		Unknown
La Trobe University	Yes	Yes	0	2		Yes	100	Unknown
Monash University	Yes	Yes	120	1	120	No		Unknown
Royal Melbourne Institute of Technology (RMIT)	Yes	Yes	20	2		No		Unknown
Swinburne University of Technology	Yes	No	Unknown[4]	No		Yes	0	0
The University of Melbourne	Yes	Yes	Unknown	1	Unknown	No		Unknown
University of Ballarat	No	No	0	No		No	0	1
Victoria University	Yes	Yes	50	2		No		0
Bond University	No	No	0	No		Yes	20	0
Central Queensland University	Yes	Yes	49	1	49	Yes	49	0
Griffith University	Yes	Yes	22	1	3	No		Unknown
James Cook University	Yes	Yes	20	2		No		Unknown
Queensland University of Technology	Yes	Yes	90	1	25	No		Unknown
University of Queensland	Yes	Yes	228	1	2	No		Unknown
University of Southern Queensland	No					No		0
University of the Sunshine Coast	No					No		0
Curtin University of Technology	No					No		5
Edith Cowan University	Yes	Yes		2		No	as above	0
Murdoch University	Yes	Yes	35	1	15	No		Unknown

q1	q27a	q27b	q27b	q27c	q27c	q28a	q28c	q29
	Training offered in research commercialisation	In-house training provided	In-house training participants	Delivery by an external provider	External training participants	Training offered to industry to assist in understanding research findings	Number of participants in training programmes	Research post grad employed in startup companies
	No.		No.	No.	No	No.	No.	No
The University of Western Australia	Yes	Yes	35	1	35	No		28
The University of Notre Dame Australia	No					No	0	0
Flinders University	Yes	Yes	48	2		No		Unknown
The University of Adelaide	Yes	Yes	100	1	100	No		29
University of South Australia	Yes	Yes	330	2		No		4
University of Tasmania	Yes	Yes	80	1	25	No		0
Charles Darwin University	Yes	Yes	0	1	Unknown	Yes	Inknown	3
Australian National University	No		0			0		
University of Canberra	No		0	0		No		N/A
ANZAC Research Institute	No		0	0		No		0
Baker Heart Research Institute	No		0	0		No		Unknown
Bionic Ear Institute	Yes	No	0	Yes	4	No		N/A
Brain Research Institute	No		0	0		No	Unknown	N/A
Cancer Council Victoria	No		0	0		No		0
Centenary Institute of Cancer Medicine and Cell Biology	Yes	Yes	25	1	3	No		5
Centre for Eye Research Australia	No		0	0		No		0
Child Health Research Institute	No		0	0		No		N/A
Children's Medical Research Institute	No		0	0		No		
The George Institute for International Health	No		0	0		Yes		0
The Heart Research Institute	Yes	Yes	2	2		Yes	9	Unknown
Howard Florey Institute of Experimental Physiology and Medicine	Yes	No	0	1	4	Yes	2	1
Lions Eye Institute	No		0	0		No		N/A
Ludwig Institute for Cancer Research Melbourne Branch	Yes	Yes	Unknown	1	30	No	N/A	Unknown
Macfarlane Burnet Institute	Yes	Yes	Unknown	2		No		Unknown
Mental Health Research Institute of Victoria	Yes	Yes	20	2		No		Unknown
Murdoch Childrens Research Institute	Yes			1	3	No		13
National Stroke Research Institute	No		0	0		No	N/A	0
Prince Henry's Institute of Medical Research	Yes	Yes	1	2		No		Unknown
Prince of Wales Medical Research Institute	No			0		No		N/A
Queensland Cancer Fund	No			0		No		0
Queensland Institute of Medical Research	No			0		Yes	3	0
Royal Brisbane and Women's Hospital Research Foundation	No			0		No		0
Telethon Institute for Child Health Research	Yes	No		1	1	No		2
Victor Chang Cardiac Research Institute	No			0		No		
The Walter and Eliza Hall Institute of Medical Research	Yes	Yes	15	2		No		5
Woolcock Institute of Medical Research	No			0		Yes	976	0

Appendix 5

Start-up companies formed in 2003 and 2004

Start-up companies formed in 2003 and 2004

Table 38: Start-up companies formed in 2003

Institution	Name of company	ABN
Publicly funded research agencies		
CSIRO (7)	Betabiotics Pty Ltd	20105731137
	Comenergy Pty Ltd	97105224897
	HRZ Wheats Pty Ltd	79106590434
	Intellection Pty Ltd	58105166354
	Plantic Technologies Ltd	91097524975
	Polynovo Biomaterials Pty Limited	82108176049
	VacTX Pty Ltd	43107360145
AIMS (2)	WetPC Pty Ltd	
	Toxitech Pty Ltd.	
Universities		
Macquarie University (1)	Lighthouse Technologies	36105453816
The University of New England (1)	X'Prime Pty Ltd	24103811007
The University of NSW (1)	Hepatocell Therapeutics Pty Ltd	87109988954
University of Newcastle (1)	TheraPPy Pty Ltd	99104629567
The University of Sydney (3)	Elastagen Pty Ltd	81103425314
	Ucom Eleven Pty Ltd	70103425270
	Ucom Ten Pty Ltd	60103425289
University of Wollongong (1)	Enikos Pty Ltd	42107125299
Deakin University (1)	Chirogen Pty Ltd	36094253531
La Trobe University (1)	Peptide Solutions Pty Ltd	26106049558
Monash University (3)	Cortical Pty Ltd	
	Nephrogenix Pty Ltd	
	Norwood Immunology Ltd	
Swinburne University of Technology (1)	Combi Array Pty Ltd	
The University of Melbourne (4)	Hepitope Pty Ltd	
	Queue Solutions	
	Radical Biotechnology Pty Ltd	
	Teeleostin	
Central Queensland University (1)	Hortical Pty Ltd	26096908379
Queensland University of Technology (1)	Tissue Therapies Limited	45101955088
University of Queensland (5)	Betabiotics Pty Ltd	20105731137
	Origo Biotech Pty Ltd	
	RRC Company	
	Thrombostat Pty Ltd	
	Wave Instruments Pty Ltd	
Murdoch University (1)	Murdoch ILO Pty Ltd	52105212422
The University of Western Australia (1)	Media Farm Pty Ltd	15095353870
The University of Adelaide (1)	Reproductive Health Science Pty Ltd	51067210922
University of South Australia (3)	Iterative Connections Pty Ltd	29102670182
	PharmaQuest Pty Ltd	25102670164
	A-Rage Pty Ltd	16108592061
Australian National University (2)	Biovax Pty Ltd	40095920540
	Iliad Chemicals Pty Ltd	17099125612
Medical research institutes		
McFarlane Burnett Institute (5)	Hepgenics Pty Ltd	
	Hepitope Pty Ltd	
	IGAVAX	
	Picoral Pty Ltd	
	XENOTRANS LTD	
Howard Florey Institute of Experimental Physiology and Medicine (1)	Radical Biotechnology	
Prince Henry's Institute of Medical Research (1)	Diagnotech Pty Ltd	
Telethon Institute for Child Health Research (1)	Advanced Diagnostics Systems Pty Ltd	

Table 39: Start-up companies formed in 2004

Institution	Name of company	ABN
Publicly funded research agencies		
CSIRO (2)	DataTrace DNA Pty Ltd	91112861060
	Epitactix Pty Ltd	99106160392
Universities		
Macquarie University (2)	Applimex Systems	94107926634
	LAMS International	33108002419
University of Newcastle (1)	Probiotic Health Pty Ltd	77107951673
The University of Sydney (5)	Advanced Ocular Systems Ltd (now Regenera Ltd)	35107371460
	Ucom Fifteen Pty Ltd	95111864469
	Ucom Fourteen Pty Ltd	12111864496
	Ucom Sixteen Pty Ltd	14111864441
	Ucom Twelve Pty Ltd	
University of Western Sydney (1)	Phytonova	54107942665
Monash University (1)	Dia-B Tech	
Swinburne University of Technology (2)	Cortical Dynamics Pty Ltd	
	Laser Surfacing Solutions Pty Ltd	
The University of Melbourne (3)	Diagnotech Pty Ltd	
	Neuprotect Pty Ltd	
	VacTx Pty Ltd	
University of Queensland (6)	Dendright Pty Ltd	
	HerdVac Pty Ltd	
	Hydrexia Pty Ltd	
	Neurotide Pty Ltd	
	Symbiosis Group Ltd	
	XeroCoat Pty Ltd	
Curtin University of Technology (1)	Sea Gyro Pty Ltd	56107738554
University of South Australia (1)	Cohda Wireless Pty Ltd	84107936309
Australian National University (2)	Vaxine Pty Ltd	95100787719
	WRiota Pty Ltd	35112303965
Medical research institutes		
Howard Florey Institute of Experimental Physiology and Medicine (1)	NeuProtect Pty Ltd	
Ludwig Institute for Cancer Research (1)	Lymphatix Ltd	
National Stoke Research Institute (1)	Neuroscience Trials Australia	
Queensland Institute of Medical Research (1)	Replikun Biotech Pty Ltd	

Appendix 6

National Survey of Research Commercialisation (NSRC) Consistent Time Series Dataset 2000 to 2004

Appendix 6: National Survey of Research Commercialisation (NSRC) Consistent Time Series Dataset 2000 to 2004

To identify trends and cycles in commercialisation activity it was necessary to construct a consistent dataset covering the years from 2000 to 2004. As mentioned in the introduction to this report, the following parameters were applied in construction of the dataset.

- All dollar values presented are expressed in constant 2004 prices using the chain-volume price index applied to Gross Domestic Product in the Australian System of National Accounts.
- Only metrics that have remained consistent over the period were included.
- Institutions that responded to all years of the survey from 2000 to 2004 were included.
- Some institutions that did not take part in one year's survey but that exhibited an overall response rate to questions in all years equal or greater than 70 per cent were included. This includes six institutions that were not covered in the 2000 survey, that were active in commercialisation in later years. This means that the 59 institutions covered in the consistent time series dataset is greater than the number actually surveyed in 2000. This does not bias the results because the institutions added in 2000 are not very active in research commercialisation in the earlier years.

The 59 institutions included in the time series account for almost all of the commercialisation activity reported by all institutions that participated in the 2003 and 2004 survey. In 2004 the average coverage of data for the 16 key metrics captured in the 2000 to 2004 time series dataset is 97.8 per cent of that in the full sample surveyed for the NSRC for 2003 and 2004.

A number of institutions had variable response rates for specific questions in particular years, and six institutions were not surveyed in 2000:

- Defence Science and Technology Organisation (DSTO).
- Australian Nuclear and Scientific Organisation (ANSTO).
- Australian Institute of Marine Science (AIMS).
- University of Southern Queensland.
- University of the Sunshine Coast.
- Ludwig Institute for Cancer Research.

Several medical research institutes chose not to participate in the survey for 2003 and 2004. Consequently, data provided by these respondents can be found in the previously published reports but are not included in the following consistent time series dataset.

An examination of the full set of available data for 2000 to 2004 indicated that with a few exceptions most of the institutions with incomplete data coverage in previous years were not very active in research commercialisation during those periods. Consequently, it was possible to construct a consistent time series dataset for 2000 to 2004 that minimised the divergence between the full sample of data and the consistent time series dataset.

This was achieved by calculating the percentage coverage of data for each institution listed in the 2003-04 survey for 16 key metrics. These metrics, which are listed in the following table, allow derived metrics to be calculated such as licences, options and assignments (LOA) income net of payments to other institutions.

Table 40: List of metrics covered in the NSRC consistent time series dataset for 2000–2004

Commercialisation staff (full-time equivalent)
Invention disclosures
New US patent applications
New Australian patent applications
New Patent Cooperation Treaty patent applications
Australian patent issues
US patent issues
Patents issued worldwide
LOAs executed
Number of LOAs yielding income
LOA gross income in constant 2004 prices ($ million)
LOA income paid to others ($ million)
Number of start-ups formed during the year
Number of start-ups operational at year end
Number of start-ups operational at year end with institutional equity stakes
Value of equity holdings in constant 2004 prices ($ million)

Data coverage was calculated by counting for each institution the number of years for which a usable response had been provided (either a value of zero or a number greater than zero). Blank, unknown and N/A (not applicable) responses were not counted. The response count for each institution was then expressed as a percentage of the maximum possible count of 80 (that is, five years of usable data multiplied by 16 metrics). It was agreed that any institution with a data coverage greater than or equal to 70 per cent would be included in the consistent time series dataset for 2000 to 2004.

An institution-by-institution map of data coverage can be found in Table 41. This table details the number of years for which usable data are available by metric and on that basis calculates the percentage data coverage for each institution. The first column in the table lists the institutions that are covered in the consistent time series dataset.

Table 42 details the behaviour of each of these 16 metrics by year. All financial data are expressed in constant 2004 prices using the chain-volume price index applied to GDP in the Australian System of National Accounts.

Table 43 contains measurements of the difference between the full sample and the sample provided by the consistent time series dataset for 2000 to 2004. This difference is not large. The average percentage coverage of the consistent time series dataset and the full dataset for all 16 metrics is 97.9 per cent and for most metrics the coverage is greater than 97 per cent. Only in the case of the number of new start-up companies is the difference (77.4 per cent) a cause for concern over possible distortions introduced by the use of this consistent dataset to infer trends and cycles. In this case, the trend exhibited in the consistent time series dataset will under estimate that exhibited in the wider population of publicly funded research agencies, universities and medical research institutes.

The detailed tables for each metric can be found in the remainder of this appendix. In these metric-specific tables all financial values are in their 'as reported' current price form. This is to allow easy comparisons with previously published data. N/A is used to indicate that a data point is not available for a particular year (due to non-participation in the survey, a N/A, blank or unknown response). Each of these tables allows the difference between the full data set and the consistent time series dataset to be judged. The final column specifies whether or not a particular institution is included in the consistent time series dataset.

Table 41: Details of data coverage from 2000–2004 for 16 key commercialisation metrics

All years: 2000 to 2004	Included in consistent time series dataset?	Complete overall time series coverage (each key metric for every year)	Percentage coverage of metrics and years excluding R&D (%)	Key data coverage count excluding R&D (metrics and years)	R&D (survey data)	Commercialisation staff FTE	Invention disclosures	New US patent applications	New Australian patent applications	New PCT applications	Australian patent issues	US patent issues	Patents issued worldwide	LOAs executed	Number of LOAs yielding income	LOA gross income	LOA income paid to others	Number of start-ups in that year	Number of start-up companies operational and end of year	Number of start-ups operational at end of year with institutional equity stake	Value of equity holdings
Commonwealth Scientific and Industrial Research Organisation	Y		98%	78	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4	5
Defence Science and Technology Organisation	Y		80%	64	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Australian Nuclear Science and Technology Organisation	Y		73%	58	5	4	4	4	4	4	4	4	4	4	4	2	2	4	4	2	4
Australian Institute of Marine Science	Y		80%	64	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Australian Catholic University	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Charles Sturt University	Y		98%	78	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4	5
Macquarie University	Y		93%	74	5	4	5	4	4	5	5	5	5	5	5	5	5	4	4	5	4
Southern Cross University	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
The University of New England	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
The University of New South Wales	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
The University of Newcastle	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
The University of Sydney	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
University of Technology, Sydney	Y		98%	78	5	5	5	5	5	5	4	4	5	5	5	5	5	5	5	5	5
University of Western Sydney	Y		95%	76	5	4	5	4	5	5	5	5	5	5	5	5	5	4	4	5	5
University of Wollongong	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Deakin University	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
La Trobe University	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Monash University	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Royal Melbourne Institute of Technology	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Swinburne University of Technology	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
The University of Melbourne	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
University of Ballarat	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Victoria University	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bond University			44%	35	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	5	2

All years: 2000 to 2004	Included in consistent time series dataset?	Complete overall time series coverage (each key metric for every year)	Percentage coverage of metrics and years excluding R&D (%)	Key data coverage count excluding R&D (metrics and years)	R&D (survey data)	Commercialisation staff FTE	Invention disclosures	New US patent applications	New Australian patent applications	New PCT applications	Australian patent issues	US patent issues	Patents issued worldwide	LOAs executed	Number of LOAs yielding income	LOA gross income	LOA income paid to others	Number of start-ups in that year	Number of start-up companies operational and end of year	Number of start-ups operational at end of year with institutional equity stake	Value of equity holdings
Central Queensland University	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Griffith University	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
James Cook University	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Queensland University of Technology	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
The University of Queensland	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
University of Southern Queensland	Y		81%	65	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	4
University of the Sunshine Coast	Y		81%	65	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	4
Curtin University of Technology			48%	38	3	2	3	2	2	2	2	1	2	3	2	2	3	3	2	4	3
Edith Cowan University	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Murdoch University	Y		94%	75	5	5	5	4	4	5	5	4	5	5	4	4	5	5	5	5	5
The University of Western Australia	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
University of Notre Dame Australia	Y		83%	66	3	5	3	5	5	5	3	5	3	3	5	3	3	5	5	5	3
The Flinders University of South Australia	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
The University of Adelaide	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
University of South Australia	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
University of Tasmania	Y		98%	78	5	5	5	5	5	5	5	5	5	5	5	5	3	5	5	5	5
Charles Darwin University	Y		98%	78	5	5	5	5	5	5	5	5	5	5	5	3	5	5	5	5	5
The Australian National University	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
University of Canberra	Y		80%	64	4	4	4	4	4	5	4	5	4	4	4	3	3	4	4	4	4
ANZAC Research Institute			36%	29	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	1	2
Baker Medical Research Institute	Y		75%	60	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	1	4
Bionic Ear Institute			40%	32	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Brain Research Institute	Y		80%	64	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
The Cancer Council Victoria			40%	32	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Centenary Institute of Cancer Medicine and Cell Biology	Y		98%	78	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4	5

All years: 2000 to 2004	Included in consistent time series dataset?	Complete overall time series coverage (each key metric for every year)	Percentage coverage of metrics and years excluding R&D (%)	Key data coverage count excluding R&D (metrics and years)	R&D (survey data)	Commercialisation staff FTE	Invention disclosures	New US patent applications	New Australian patent applications	New PCT applications	Australian patent issues	US patent issues	Patents issued worldwide	LOAs executed	Number of LOAs yielding income	LOA gross income	LOA income paid to others	Number of start-ups in that year	Number of start-up companies operational and end of year	Number of start-ups operational at end of year with institutional equity stake	Value of equity holdings
Centre for Eye Research Australia			8%	6	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	2	0
Child Health Research Institute	Y		85%	68	5	4	4	4	5	4	4	4	4	4	5	4	5	4	4	4	5
Children's Medical Research Institute			30%	24	2	2	2	1	1	0	0	2	0	2	2	2	2	2	2	2	2
George Institute for International Health			34%	27	2	2	2	2	2	2	2	2	2	2	2	1	2	2	0	0	2
Heart Research Institute	Y		78%	62	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	4
Howard Florey Institute of Experimental Physiology and Medicine	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Lions Eye Institute			34%	27	3	2	2	2	2	3	2	2	2	3	2	0	0	2	0	0	3
Ludwig Institute for Cancer Research	Y		80%	64	5	4	4	4	4	4	4	4	4	4	5	4	4	4	4	2	5
MacFarlane Burnet Centre for Medical Research and Public Health	Y		98%	78	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4	5
Mental Health Research Institute of Victoria	Y		73%	58	3	4	3	4	4	4	3	4	3	3	3	3	3	4	5	4	4
Murdoch Childrens Research Institute	Y		99%	79	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
National Stroke Research Institute	Y		78%	62	4	4	4	4	4	4	4	4	4	4	4	4	2	4	4	4	4
Prince Henry's Institute of Medical Research	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Prince of Wales Medical Research Institute	Y		74%	59	4	4	4	4	5	4	4	4	4	4	2	4	2	4	3	3	4
Queensland Cancer Fund			4%	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0
Queensland Institute of Medical Research	Y		84%	67	5	3	4	4	5	4	5	4	4	4	4	4	5	4	4	4	5
Royal Brisbane & Women's Hospital Research Foundation	Y		79%	63	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4
Telethon Institute for Child Health Research	Y		93%	74	5	5	5	5	5	5	3	3	3	5	5	5	5	5	5	5	5
Victor Chang Cardiac Research Institute	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Walter and Eliza Hall Institute for Medical Research	Y	Y	100%	80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Woolcock Institute of Medical Research			15%	12	0	2	0	0	0	0	2	0	0	0	2	0	0	2	2	2	0

Table 42: Total metric values in the consistent time series dataset 2000–2004

	2000	2001	2002	2003	2004
Commercialisation staff (full-time equivalent)	160	203	253	293	279
Invention disclosures	532	714	684	812	961
New US patent applications	176	125	99	80	119
New Australian patent applications	400	352	415	459	471
New Patent Cooperation Treaty patent applications	206	219	218	162	167
Australian patent issues	143	83	106	150	188
US patent issues	115	64	57	134	203
Patents issued worldwide	496	274	286	830	873
LOAs executed	403	352	432	433	380
Number of LOAs yielding income	489	604	620	622	664
LOA gross income in constant 2004 prices ($ million)	117.6	82.6	83.5	77.7	65.5
LOA income paid to others ($ million)	4.731	6.128	7.531	11.218	7.219
Number of start-ups formed during the year	46	61	53	46	24
Number of start-ups operational at year end	85	113	124	228	251
Number of start-ups operational at year end with institutional equity stakes	66	82	91	165	185
Value of equity holdings in constant 2004 prices ($ million)	130.1	125.3	107.2	155.7	183.8

Table 43: Differences between totals in the full sample and the consistent time series dataset in 2004

	Consistent time series sample total as a percentage of overall sample total in 2004	Value of difference between full sample and consistent dataset sample in 2004	Unit
Commercialisation staff (full-time equivalent)	97.9%	6.10	FTE
Invention disclosures	99.5%	5	n
New US patent applications	100.0%	0	n
New Australian patent applications	99.8%	1	n
New Patent Cooperation Treaty patent applications	98.8%	2	n
Australian patent issues	99.5%	1	n
US patent issues	99.5%	1	n
Patents issued worldwide	98.6%	12	n
LOAs executed	99.2%	3	n
Number of LOAs yielding income	99.8%	1	n
LOA gross income	100.0%	4,600	$
LOA income paid to others	100.0%	-	$
Number of start-ups	77.4%	7	n
Number of start-ups operational and year end	98.4%	4	n
Number of start-ups operational at year end with institutional equity stakes	98.5%	3	n
Value of equity holdings	99.4%	1,134,000	$
Average for these metrics	97.9%		
Note:			
Contracts and consultancies (n)	94.1%	850	n
Contracts and consultancies ($)	95.4%	41,580,656	$

Table 44: Commercialisation staff on a FTE basis by institution 2000–2004

Commercialisation staff FTEs	2000	2001	2002	2003	2004	Used in consistent time series analysis?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	97	107	133	154	130	Y
Defence Science and Technology Organisation	N/A	2	4	4	4	Y
Australian Nuclear Science and Technology Organisation	N/A	-	-	10	9	Y
Australian Institute of Marine Science	N/A	-	-	1	1	Y
Sub-total	97	109	137	168	143	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	1	-	1	1	Y
Macquarie University	1	-	2	2	5	Y
Southern Cross University	-	-	-	-	1	Y
The University of New England	30	31	32	3	3	Y
The University of New South Wales	8	12	12	9	9	Y
The University of Newcastle	1	2	2	2	2	Y
The University of Sydney	5	7	7	8	9	Y
University of Technology, Sydney	1	2	2	3	3	Y
University of Western Sydney	1	-	2	4	4	Y
University of Wollongong	1	1	1	0	0	Y
Deakin University	3	1	1	1	1	Y
La Trobe University	1	1	1	1	1	Y
Monash University	5	8	9	12	13	Y
Royal Melbourne Institute of Technology	3	4	4	3	2	Y
Swinburne University of Technology	1	2	4	3	3	Y
The University of Melbourne	-	9	9	5	6	Y
University of Ballarat	-	-	1	1	1	Y
Victoria University	0	1	1	1	1	Y
Bond University	N/A	N/A	N/A	-	0	
Central Queensland University	0	-	-	-	-	Y
Griffith University	2	2	2	3	5	Y
James Cook University	1	1	1	1	1	Y
Queensland University of Technology	2	2	2	1	1	Y
The University of Queensland	5	9	11	23	24	Y
University of Southern Queensland	N/A	-	-	-	-	Y
University of the Sunshine Coast	N/A	-	-	0	0	Y
Curtin University of Technology	N/A	N/A	2	N/A	1	
Edith Cowan University	-	-	-	1	1	Y
Murdoch University	4	1	1	2	1	Y
The University of Western Australia	1	1	3	3	3	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	5	4	4	4	4	Y
The University of Adelaide	5	5	6	6	7	Y
University of South Australia	2	3	7	6	7	Y
University of Tasmania	1	-	2	3	2	Y
Charles Darwin University	-	1	-	0	0	Y
The Australian National University	4	2	4	4	5	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	89	113	135	113	126	

Commercialisation staff FTEs	2000	2001	2002	2003	2004	Used in consistent time series analysis?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	-	-	
Baker Medical Research Institute	N/A	3	5	3	3	Y
Bionic Ear Institute	N/A	N/A	N/A	1	1	
Brain Research Institute	N/A	-	-	-	-	Y
The Cancer Council Victoria	N/A	N/A	N/A	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	1	1	2	2	1	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	0	-	N/A	-	-	Y
Children's Medical Research Institute	-	-	-	-	-	
George Institute for International Health	N/A	N/A	N/A	-	1	
Heart Research Institute	N/A	N/A	N/A	-	-	Y
Howard Florey Institute of Experimental Physiology and Medicine	1	3	3	1	1	Y
Lions Eye Institute	N/A	N/A	N/A	-	-	
Ludwig Institute for Cancer Research	N/A	1	1	2	2	Y
MacFarlane Burnet Centre for Medical Research and Public Health	0	1	-	3	3	Y
Mental Health Research Institute of Victoria	-	-	-	-	-	Y
Murdoch Childrens Research Institute	0	-	-	0	1	Y
National Stroke Research Institute	N/A	-	-	0	0	Y
Prince Henry's Institute of Medical Research	1	1	1	1	1	Y
Prince of Wales Medical Research Institute	N/A	-	-	-	-	Y
Queensland Cancer Fund	N/A	N/A	N/A	N/A	-	
Queensland Institute of Medical Research	N/A	N/A	1	1	2	Y
Royal Brisbane & Women's Hospital Research Foundation	N/A	-	-	-	-	Y
Telethon Institute for Child Health Research	1	-	-	1	0	Y
Victor Chang Cardiac Research Institute	0	-	-	-	-	Y
Walter and Eliza Hall Institute for Medical Research	-	2	2	2	3	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	1	1	
Sub-total	4	12	15	16	17	
TOTAL	190	234	287	297	286	
Data used in consistent time series dataset						
Publicly funded research agencies	97	109	137	168	143	
Universities	59	82	101	110	122	
Medical research institutes	4	12	15	15	14	
TOTAL	160	203	253	293	279	
Coverage of consistent time series dataset (%)						
Publicly funded research agencies (%)	100.0	100.0	100.0	100.0	100.0	
Universities (%)	66.4	72.6	74.8	97.8	97.1	
Medical research institutes (%)	100.0	100.0	100.0	90.9	85.1	
TOTAL	84.2	86.8	88.2	98.7	97.9	

Note: totals and sub-totals may not equate to the sum of the discrete numbers in the table due to rounding effects. Data used in consistent time series dataset may not equate to the totals and sub-totals above as the consistent time series covers only those institutions that provided an adequate response for the years 2000 through 2004, as indicated in the final column.

Table 45: Invention disclosures by institution 2000–2004

Invention Disclosures	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	62	34	21	22	N/A	Y
Defence Science and Technology Organisation	N/A	15	45	30	19	Y
Australian Nuclear Science and Technology Organisation	N/A	8	11	9	15	Y
Australian Institute of Marine Science	N/A	2	-	4	1	Y
Sub-total	62	59	77	65	35	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	1	-	5	6	Y
Macquarie University	6	1	2	22	25	Y
Southern Cross University	-	2	2	10	15	Y
The University of New England	1	2	-	1	4	Y
The University of New South Wales	46	76	70	61	65	Y
The University of Newcastle	14	8	16	7	7	Y
The University of Sydney	52	104	84	57	113	Y
University of Technology, Sydney	5	7	1	7	28	Y
University of Western Sydney	5	-	10	12	7	Y
University of Wollongong	21	25	14	4	6	Y
Deakin University	-	-	-	N/A	N/A	Y
La Trobe University	3	3	2	5	4	Y
Monash University	40	43	-	33	37	Y
Royal Melbourne Institute of Technology	-	10	11	6	5	Y
Swinburne University of Technology	20	20	26	39	32	Y
The University of Melbourne	N/A	7	3	4	6	Y
University of Ballarat	-	-	-	-	-	Y
Victoria University	N/A	2	1	4	2	Y
Bond University	N/A	N/A	N/A	-	-	
Central Queensland University	-	1	2	-	2	Y
Griffith University	4	3	3	8	4	Y
James Cook University	4	2	6	3	2	Y
Queensland University of Technology	7	12	39	29	16	Y
The University of Queensland	123	85	95	153	182	Y
University of Southern Queensland	N/A	-	-	N/A	N/A	Y
University of the Sunshine Coast	N/A	-	-	-	-	Y
Curtin University of Technology	N/A	N/A	12	N/A	5	
Edith Cowan University	-	-	3	4	13	Y
Murdoch University	N/A	-	3	N/A	16	Y
The University of Western Australia	20	18	27	16	21	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	8	18	21	13	13	Y
The University of Adelaide	23	30	35	32	36	Y
University of South Australia	12	59	-	72	56	Y
University of Tasmania	2	5	10	20	33	Y
Charles Darwin University	4	3	2	-	-	Y
The Australian National University	25	14	13	25	30	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	445	561	513	652	791	

Invention Disclosures	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	-	-	
Baker Medical Research Institute	N/A	6	8	2	9	Y
Bionic Ear Institute	N/A	N/A	N/A	-	-	
Brain Research Institute	N/A	-	-	-	-	Y
The Cancer Council Victoria	N/A	-	-	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	-	-	-	N/A	1	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	-	-	N/A	-	-	Y
Children's Medical Research Institute	N/A	N/A	N/A	-	-	
George Institute for International Health	N/A	N/A	N/A	-	-	
Heart Research Institute	N/A	-	-	-	-	Y
Howard Florey Institute of Experimental Physiology and Medicine	6	3	3	10	8	Y
Lions Eye Institute	N/A	N/A	-	-	-	
Ludwig Institute for Cancer Research	N/A	70	70	42	65	Y
MacFarlane Burnet Centre for Medical Research and Public Health	1	1	2	2	5	Y
Mental Health Research Institute of Victoria	N/A	-	-	4	2	Y
Murdoch Childrens Research Institute	-	-	-	5	6	Y
National Stroke Research Institute	N/A	-	-	2	-	Y
Prince Henry's Institute of Medical Research	3	-	-	2	-	Y
Prince of Wales Medical Research Institute	N/A	-	-	-	-	Y
Queensland Cancer Fund	N/A	N/A	N/A	N/A	-	
Queensland Institute of Medical Research	10	N/A	8	6	8	Y
Royal Brisbane & Women's Hospital Research Foundation	N/A	-	-	-	-	Y
Telethon Institute for Child Health Research	5	1	-	3	3	Y
Victor Chang Cardiac Research Institute	-	2	3	1	2	Y
Walter and Eliza Hall Institute for Medical Research	-	11	12	16	26	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	-	-	
Sub-total	25	94	106	95	135	
TOTAL	532	714	696	812	961	

Data used in consistent time series dataset					
Publicly funded research agencies	62	59	77	65	35
Universities	445	561	501	652	786
Medical research institutes	25	94	106	95	135
TOTAL	532	714	684	812	961

Coverage of consistent time series dataset (%)					
Publicly funded research agencies (%)	100.0	100.0	100.0	66.2	100.0
Universities (%)	100.0	100.0	97.7	100.0	97.3
Medical research institutes (%)	100.0	100.0	100.0	100.0	100.0
TOTAL	100.0	100.0	98.3	97.3	97.8

Note: totals and sub-totals may not equate to the sum of the discrete numbers in the table due to rounding effects. Data used in consistent time series dataset may not equate to the totals and sub-totals above.

Table 46: New United States patent applications by institution 2000–2004

New US Patent Applications	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	77	66	23	14	29	Y
Defence Science and Technology Organisation	N/A	3	3	-	-	Y
Australian Nuclear Science and Technology Organisation	N/A	1	1	-	-	Y
Australian Institute of Marine Science	N/A	-	-	-	-	Y
Sub-total	77	70	27	14	29	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	-	-	-	-	Y
Macquarie University	-	-	3	-	3	Y
Southern Cross University	3	-	-	-	2	Y
The University of New England	-	-	-	-	-	Y
The University of New South Wales	7	-	-	3	8	Y
The University of Newcastle	-	4	4	-	-	Y
The University of Sydney	6	5	12	3	7	Y
University of Technology, Sydney	-	-	-	2	1	Y
University of Western Sydney	-	-	-	-	-	Y
University of Wollongong	4	1	1	2	1	Y
Deakin University	-	-	-	-	-	Y
La Trobe University	-	-	-	1	-	Y
Monash University	3	6	14	-	7	Y
Royal Melbourne Institute of Technology	-	1	-	-	-	Y
Swinburne University of Technology	3	4	-	-	-	Y
The University of Melbourne	19	1	-	1	2	Y
University of Ballarat	-	-	-	-	-	Y
Victoria University	-	-	-	-	1	Y
Bond University	N/A	N/A	N/A	-	-	
Central Queensland University	-	-	-	-	-	Y
Griffith University	-	-	-	1	-	Y
James Cook University	-	-	1	-	-	Y
Queensland University of Technology	2	3	1	1	1	Y
The University of Queensland	7	9	9	22	19	Y
University of Southern Queensland	N/A	-	-	3	-	Y
University of the Sunshine Coast	N/A	-	-	-	-	Y
Curtin University of Technology	N/A	N/A	1	N/A	-	
Edith Cowan University	-	-	3	-	-	Y
Murdoch University	N/A	-	1	-	1	Y
The University of Western Australia	-	-	-	-	1	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	5	2	8	1	1	Y
The University of Adelaide	4	3	3	2	7	Y
University of South Australia	1	-	1	-	-	Y
University of Tasmania	-	-	-	-	-	Y
Charles Darwin University	-	-	-	-	-	Y
The Australian National University	23	9	2	1	1	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	87	48	64	42	63	

New US Patent Applications	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	-	-	
Baker Medical Research Institute	N/A	1	-	1	7	Y
Bionic Ear Institute	N/A	N/A	N/A	-	-	
Brain Research Institute	N/A	-	-	-	-	Y
The Cancer Council Victoria	N/A	N/A	N/A	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	-	-	2	-	-	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	-	-	N/A	-	-	Y
Children's Medical Research Institute	N/A	N/A	N/A	N/A	-	
George Institute for International Health	N/A	N/A	N/A	1	-	
Heart Research Institute	-	-	-	-	-	Y
Howard Florey Institute of Experimental Physiology and Medicine	3	3	3	4	4	Y
Lions Eye Institute	N/A	N/A	N/A	-	-	
Ludwig Institute for Cancer Research	N/A	-	2	12	12	Y
MacFarlane Burnet Centre for Medical Research and Public Health	-	-	-	1	-	Y
Mental Health Research Institute of Victoria	N/A	-	-	-	1	Y
Murdoch Childrens Research Institute	2	2	-	2	-	Y
National Stroke Research Institute	N/A	-	-	-	-	Y
Prince Henry's Institute of Medical Research	1	-	2	2	-	Y
Prince of Wales Medical Research Institute	N/A	-	-	-	-	Y
Queensland Cancer Fund	N/A	N/A	N/A	N/A	-	
Queensland Institute of Medical Research	1	N/A	-	-	-	Y
Royal Brisbane & Women's Hospital Research Foundation	N/A	-	-	-	-	Y
Telethon Institute for Child Health Research	1	1	-	-	-	Y
Victor Chang Cardiac Research Institute	-	-	-	1	-	Y
Walter and Eliza Hall Institute for Medical Research	4	-	-	1	3	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	-	-	
Sub-total	12	7	9	25	27	
TOTAL	176	125	100	81	119	

Data used in consistent time series dataset					
Publicly funded research agencies	77	70	27	14	29
Universities	87	48	63	42	63
Medical research institutes	12	7	9	24	27
TOTAL	176	125	99	80	119

Coverage of consistent time series dataset (%)					
Publicly funded research agencies (%)	100.0	100.0	100.0	100.0	100.0
Universities (%)	100.0	100.0	98.4	100.0	100.0
Medical research institutes(%)	100.0	100.0	100.0	96.0	100.0
TOTAL	100.0	100.0	99.0	98.8	100.0

Note: totals and sub-totals may not equate to the sum of the discrete numbers in the table due to rounding effects. Data used in consistent time series dataset may not equate to the totals and sub-totals above.

Table 47: New Australian patent applications by institution 2000–2004

New Australian Patent Applications	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	68	70	75	105	123	Y
Defence Science and Technology Organisation	N/A	10	18	10	12	Y
Australian Nuclear Science and Technology Organisation	N/A	3	13	4	6	Y
Australian Institute of Marine Science	N/A	3	2	2	-	Y
Sub-total	68	86	108	121	141	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	1	-	8	3	Y
Macquarie University	6	-	9	4	2	Y
Southern Cross University	15	2	2	3	5	Y
The University of New England	1	2	3	3	1	Y
The University of New South Wales	54	44	40	59	56	Y
The University of Newcastle	10	4	11	7	12	Y
The University of Sydney	36	30	24	17	26	Y
University of Technology, Sydney	5	1	4	3	2	Y
University of Western Sydney	5	-	30	9	-	Y
University of Wollongong	5	8	6	2	5	Y
Deakin University	1	-	-	-	-	Y
La Trobe University	5	1	4	-	3	Y
Monash University	27	27	37	27	23	Y
Royal Melbourne Institute of Technology	5	5	1	7	6	Y
Swinburne University of Technology	4	4	7	4	3	Y
The University of Melbourne	28	18	11	13	14	Y
University of Ballarat	-	-	-	-	-	Y
Victoria University	2	2	-	1	3	Y
Bond University	N/A	N/A	N/A	-	-	
Central Queensland University	-	2	1	-	3	Y
Griffith University	1	3	3	7	5	Y
James Cook University	4	1	3	4	1	Y
Queensland University of Technology	12	15	10	15	9	Y
The University of Queensland	28	27	21	40	49	Y
University of Southern Queensland	N/A	-	-	4	4	Y
University of the Sunshine Coast	N/A	-	-	-	-	Y
Curtin University of Technology	N/A	N/A	8	N/A	1	
Edith Cowan University	1	-	3	4	3	Y
Murdoch University	N/A	-	1	7	4	Y
The University of Western Australia	10	9	9	4	3	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	6	1	2	5	2	Y
The University of Adelaide	11	13	14	17	26	Y
University of South Australia	5	1	1	3	5	Y
University of Tasmania	2	2	3	1	-	Y
Charles Darwin University	-	-	-	-	-	Y
The Australian National University	12	13	11	15	16	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	301	236	279	292	294	

New Australian Patent Applications	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	-	-	
Baker Medical Research Institute	N/A	5	8	5	6	Y
Bionic Ear Institute	N/A	N/A	-	-	-	
Brain Research Institute	N/A	-	-	-	2	Y
The Cancer Council Victoria	N/A	-	-	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	-	1	-	2	1	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	-	-	-	-	-	Y
Children's Medical Research Institute	N/A	N/A	N/A	N/A	-	
George Institute for International Health	N/A	N/A	N/A	1	-	
Heart Research Institute	N/A	-	-	-	-	Y
Howard Florey Institute of Experimental Physiology and Medicine	3	3	3	5	6	Y
Lions Eye Institute	N/A	N/A	N/A	-	-	
Ludwig Institute for Cancer Research	N/A	5	2	-	-	Y
MacFarlane Burnet Centre for Medical Research and Public Health	1	1	4	4	7	Y
Mental Health Research Institute of Victoria	N/A	-	-	1	-	Y
Murdoch Childrens Research Institute	1	2	2	3	2	Y
National Stroke Research Institute	N/A	-	-	-	-	Y
Prince Henry's Institute of Medical Research	1	1	2	2	-	Y
Prince of Wales Medical Research Institute	2	1	-	1	1	Y
Queensland Cancer Fund	N/A	N/A	N/A	N/A	-	
Queensland Institute of Medical Research	5	-	3	6	3	Y
Royal Brisbane & Women's Hospital Research Foundation	N/A	-	-	-	-	Y
Telethon Institute for Child Health Research	5	-	-	3	3	Y
Victor Chang Cardiac Research Institute	-	-	-	1	-	Y
Walter and Eliza Hall Institute for Medical Research	13	11	12	13	6	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	-	-	
Sub-total	31	30	36	47	37	
TOTAL	400	352	423	460	472	

Data used in consistent time series dataset					
Publicly funded research agencies	68	86	108	121	141
Universities	301	236	271	292	293
Medical research institutes	31	30	36	46	37
TOTAL	400	352	415	459	471

Coverage of consistent time series dataset (%)					
Publicly funded research agencies (%)	100.0	100.0%	100.0%	100.0%	100.0%
Universities (%)	100.0%	100.0%	97.1%	100.0%	99.7%
Medical research institutes(%)	100.0%	100.0%	100.0%	97.9%	100.0%
TOTAL	100.0%	100.0%	98.1%	99.8%	99.8%

Note: totals and sub-totals may not equate to the sum of the discrete numbers in the table due to rounding effects. Data used in consistent time series dataset may not equate to the totals and sub-totals above.

Table 48: New Patent Cooperation Treaty patent applications by institution 2000–2004

New Patent Cooperation Treaty Patents Applications	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	68	79	56	66	60	Y
Defence Science and Technology Organisation	N/A	7	3	-	-	Y
Australian Nuclear Science and Technology Organisation	N/A	1	2	5	1	Y
Australian Institute of Marine Science	N/A	-	1	-	-	Y
Sub-total	68	87	62	71	61	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	1	-	1	1	Y
Macquarie University	2	-	3	1	3	Y
Southern Cross University	-	-	-	2	4	Y
The University of New England	1	-	-	-	-	Y
The University of New South Wales	19	18	24	10	6	Y
The University of Newcastle	7	4	4	6	5	Y
The University of Sydney	26	14	16	5	5	Y
University of Technology, Sydney	2	2	-	8	1	Y
University of Western Sydney	-	-	4	3	5	Y
University of Wollongong	2	2	1	-	1	Y
Deakin University	-	-	-	-	-	Y
La Trobe University	2	2	1	-	-	Y
Monash University	11	15	16	19	18	Y
Royal Melbourne Institute of Technology	1	-	1	-	-	Y
Swinburne University of Technology	2	2	1	-	-	Y
The University of Melbourne	-	11	12	1	-	Y
University of Ballarat	-	-	-	-	-	Y
Victoria University	2	2	-	1	5	Y
Bond University	N/A	N/A	N/A	-	-	
Central Queensland University	-	-	-	-	-	Y
Griffith University	2	-	2	-	-	Y
James Cook University	1	2	-	-	-	Y
Queensland University of Technology	2	3	3	-	-	Y
The University of Queensland	15	9	24	4	22	Y
University of Southern Queensland	N/A	-	-	3	-	Y
University of the Sunshine Coast	N/A	-	-	-	-	Y
Curtin University of Technology	N/A	N/A	9	N/A	1	
Edith Cowan University	-	-	-	3	2	Y
Murdoch University	-	-	-	1	3	Y
The University of Western Australia	5	2	4	1	1	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	1	2	1	1	2	Y
The University of Adelaide	4	3	9	6	6	Y
University of South Australia	1	4	1	1	2	Y
University of Tasmania	-	-	2	-	-	Y
Charles Darwin University	-	-	-	-	-	Y
The Australian National University	12	15	4	-	-	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	120	113	142	75	92	

New Patent Cooperation Treaty Patents Applications	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	-	-	
Baker Medical Research Institute	N/A	2	2	4	-	Y
Bionic Ear Institute	N/A	N/A	N/A	1	1	
Brain Research Institute	N/A	-	-	-	-	Y
The Cancer Council Victoria	N/A	N/A	N/A	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	N/A	-	-	2	-	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	1	-	N/A	-	-	Y
Children's Medical Research Institute	N/A	N/A	N/A	N/A	N/A	
George Institute for International Health	N/A	N/A	N/A	-	-	
Heart Research Institute	N/A	-	-	-	-	Y
Howard Florey Institute of Experimental Physiology and Medicine	2	1	3	3	1	Y
Lions Eye Institute	N/A	N/A	N/A	3	-	
Ludwig Institute for Cancer Research	N/A	6	4	-	7	Y
MacFarlane Burnet Centre for Medical Research and Public Health	1	-	-	1	-	Y
Mental Health Research Institute of Victoria	N/A	-	-	-	-	Y
Murdoch Childrens Research Institute	2	2	-	-	2	Y
National Stroke Research Institute	N/A	-	-	-	-	Y
Prince Henry's Institute of Medical Research	1	-	2	2	-	Y
Prince of Wales Medical Research Institute	N/A	-	-	-	-	Y
Queensland Cancer Fund	N/A	N/A	N/A	N/A	-	
Queensland Institute of Medical Research	-	N/A	-	3	3	Y
Royal Brisbane & Women's Hospital Research Foundation	N/A	-	-	-	-	Y
Telethon Institute for Child Health Research	2	2	-	-	-	Y
Victor Chang Cardiac Research Institute	2	2	3	1	2	Y
Walter and Eliza Hall Institute for Medical Research	7	4	9	-	-	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	-	-	
Sub-total	18	19	23	20	16	
TOTAL	206	219	227	166	169	

Data used in consistent time series dataset					
Publicly funded research agencies	68	87	62	71	61
Universities	120	113	133	75	91
Medical research institutes	18	19	23	16	15
TOTAL	206	219	218	162	167

Coverage of consistent time series dataset (%)					
Publicly funded research agencies (%)	100.0	100.0	100.0	100.0	100.0
Universities (%)	100.0	100.0	93.7	100.0	98.9
Medical research institutes (%)	100.0	100.0	100.0	80.0	93.8
TOTAL	100.0	100.0	96.0	97.6	98.8

Note: totals and sub-totals may not equate to the sum of the discrete numbers in the table due to rounding effects. Data used in consistent time series dataset may not equate to the totals and sub-totals above.

Table 49: Australian patents issued by institution 2000–2004

Australian Patents Issued	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	40	37	27	25	30	Y
Defence Science and Technology Organisation	N/A	1	1	2	2	Y
Australian Nuclear Science and Technology Organisation	N/A	1	2	6	11	Y
Australian Institute of Marine Science	N/A	-	-	8	8	Y
Sub-total	40	39	30	41	51	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	1	-	8	12	Y
Macquarie University	-	-	2	1	2	Y
Southern Cross University	15	2	2	-	2	Y
The University of New England	1	2	2	2	1	Y
The University of New South Wales	9	2	4	7	8	Y
The University of Newcastle	-	1	1	1	2	Y
The University of Sydney	5	8	5	25	26	Y
University of Technology, Sydney	3	-	-	N/A	6	Y
University of Western Sydney	5	-	1	0	-	Y
University of Wollongong	1	-	2	-	-	Y
Deakin University	-	-	-	-	-	Y
La Trobe University	-	-	-	-	-	Y
Monash University	15	-	27	1	-	Y
Royal Melbourne Institute of Technology	-	1	-	-	-	Y
Swinburne University of Technology	-	-	-	-	-	Y
The University of Melbourne	18	11	6	7	5	Y
University of Ballarat	-	-	-	-	-	Y
Victoria University	2	-	-	-	1	Y
Bond University	N/A	N/A	N/A	-	-	
Central Queensland University	-	1	-	1	2	Y
Griffith University	-	-	-	-	-	Y
James Cook University	-	-	1	-	-	Y
Queensland University of Technology	-	2	2	-	-	Y
The University of Queensland	6	2	9	6	13	Y
University of Southern Queensland	N/A	-	-	1	4	Y
University of the Sunshine Coast	N/A	-	-	-	-	Y
Curtin University of Technology	N/A	N/A	-	N/A	-	
Edith Cowan University	-	-	3	-	-	Y
Murdoch University	-	-	-	1	1	Y
The University of Western Australia	2	-	2	-	-	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	4	-	-	-	3	Y
The University of Adelaide	3	-	2	28	37	Y
University of South Australia	2	1	1	5	4	Y
University of Tasmania	-	-	-	-	-	Y
Charles Darwin University	-	-	-	-	-	Y
The Australian National University	5	1	-	2	1	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	96	35	72	96	130	

Australian Patents Issued	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	-	-	
Baker Medical Research Institute	N/A	1	-	-	-	Y
Bionic Ear Institute	N/A	N/A	N/A	-	-	
Brain Research Institute	N/A	-	-	-	-	Y
The Cancer Council Victoria	N/A	N/A	N/A	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	1	1	-	-	-	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	-	-	N/A	-	-	Y
Children's Medical Research Institute	N/A	N/A	N/A	N/A	N/A	
George Institute for International Health	N/A	N/A	N/A	-	-	
Heart Research Institute	N/A	-	-	-	-	Y
Howard Florey Institute of Experimental Physiology and Medicine	2	1	-	2	-	Y
Lions Eye Institute	N/A	N/A	-	1	1	
Ludwig Institute for Cancer Research	N/A	2	1	1	-	Y
MacFarlane Burnet Centre for Medical Research and Public Health	-	-	-	2	2	Y
Mental Health Research Institute of Victoria	N/A	N/A	-	-	-	Y
Murdoch Childrens Research Institute	-	1	-	-	-	Y
National Stroke Research Institute	N/A	-	-	-	-	Y
Prince Henry's Institute of Medical Research	1	-	-	-	-	Y
Prince of Wales Medical Research Institute	N/A	-	-	1	2	Y
Queensland Cancer Fund	N/A	N/A	N/A	N/A	-	
Queensland Institute of Medical Research	-	-	-	-	-	Y
Royal Brisbane & Women's Hospital Research Foundation	-	-	-	-	-	Y
Telethon Institute for Child Health Research	-	-	-	N/A	N/A	Y
Victor Chang Cardiac Research Institute	-	-	-	2	-	Y
Walter and Eliza Hall Institute for Medical Research	3	3	3	5	3	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	-	-	
Sub-total	7	9	4	14	8	
TOTAL	143	83	106	151	189	

Data used in consistent time series dataset					
Publicly funded research agencies	40	39	30	41	51
Universities	96	35	72	96	130
Medical research institutes	7	9	4	13	7
TOTAL	143	83	106	150	188

Coverage of consistent time series dataset (%)					
Publicly funded research agencies	100.0%	100.0%	100.0%	100.0%	100.0%
Universities	100.0%	100.0%	100.0%	100.0%	100.0%
Medical research institutes	100.0%	100.0%	100.0%	92.9%	87.5%
TOTAL	100.0%	100.0%	100.0%	99.3%	99.5%

Note: totals and sub-totals may not equate to the sum of the discrete numbers in the table due to rounding effects. Data used in consistent time series dataset may not equate to the totals and sub-totals above.

Table 50: United States patents issued by institution 2000–2004

New US Patents Issued	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	41	32	24	37	39	Y
Defence Science and Technology Organisation	N/A	-	2	2	3	Y
Australian Nuclear Science and Technology Organisation	N/A	2	1	-	2	Y
Australian Institute of Marine Science	N/A	-	-	7	7	Y
Sub-total	41	34	27	46	51	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	-	-	-	-	Y
Macquarie University	-	-	3	3	1	Y
Southern Cross University	3	-	-	-	2	Y
The University of New England	-	-	-	-	-	Y
The University of New South Wales	5	-	-	6	8	Y
The University of Newcastle	1	-	1	-	1	Y
The University of Sydney	9	6	6	22	21	Y
University of Technology, Sydney	2	-	-	N/A	4	Y
University of Western Sydney	-	-	-	-	-	Y
University of Wollongong	1	-	1	-	-	Y
Deakin University	-	-	-	-	1	Y
La Trobe University	-	-	-	-	-	Y
Monash University	1	-	-	-	2	Y
Royal Melbourne Institute of Technology	-	-	-	-	-	Y
Swinburne University of Technology	1	-	-	-	-	Y
The University of Melbourne	13	-	-	12	5	Y
University of Ballarat	-	-	-	-	-	Y
Victoria University	-	-	-	-	-	Y
Bond University	N/A	N/A	N/A	-	-	
Central Queensland University	-	-	-	-	-	Y
Griffith University	1	1	-	-	-	Y
James Cook University	-	-	1	-	-	Y
Queensland University of Technology	2	2	-	3	2	Y
The University of Queensland	15	8	5	10	6	Y
University of Southern Queensland	N/A	-	-	3	-	Y
University of the Sunshine Coast	N/A	-	-	-	-	Y
Curtin University of Technology	N/A	N/A	-	N/A	-	
Edith Cowan University	-	-	3	-	-	Y
Murdoch University	N/A	-	-	1	-	Y
The University of Western Australia	1	-	2	-	-	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	4	1	1	1	1	Y
The University of Adelaide	2	-	-	17	85	Y
University of South Australia	-	2	1	3	5	Y
University of Tasmania	-	-	-	-	-	Y
Charles Darwin University	-	-	-	-	-	Y
The Australian National University	6	2	3	2	1	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	67	22	27	83	144	

New US Patents Issued	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	-	-	
Baker Medical Research Institute	N/A	-	3	-	-	Y
Bionic Ear Institute	N/A	N/A	N/A	-	-	
Brain Research Institute	N/A	-	-	-	-	Y
The Cancer Council Victoria	N/A	N/A	N/A	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	-	-	-	-	-	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	-	-	N/A	-	-	Y
Children's Medical Research Institute	N/A	N/A	N/A	N/A	N/A	
George Institute for International Health	N/A	N/A	N/A	-	-	
Heart Research Institute	N/A	-	-	-	-	Y
Howard Florey Institute of Experimental Physiology and Medicine	2	1	-	-	-	Y
Lions Eye Institute	N/A	N/A	N/A	-	1	
Ludwig Institute for Cancer Research	N/A	3	-	-	1	Y
MacFarlane Burnet Centre for Medical Research and Public Health	2	-	-	2	1	Y
Mental Health Research Institute of Victoria	N/A	-	-	-	-	Y
Murdoch Childrens Research Institute	-	1	N/A	-	-	Y
National Stroke Research Institute	N/A	-	-	-	-	Y
Prince Henry's Institute of Medical Research	1	-	-	-	-	Y
Prince of Wales Medical Research Institute	N/A	-	-	-	2	Y
Queensland Cancer Fund	N/A	N/A	N/A	-	-	
Queensland Institute of Medical Research	-	N/A	-	-	1	Y
Royal Brisbane & Women's Hospital Research Foundation	N/A	-	-	-	-	Y
Telethon Institute for Child Health Research	-	3	-	N/A	N/A	Y
Victor Chang Cardiac Research Institute	-	-	-	2	-	Y
Walter and Eliza Hall Institute for Medical Research	2	-	-	1	3	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	-	-	
Sub-total	7	8	3	5	9	
TOTAL	115	64	57	134	204	

Data used in consistent time series dataset					
Publicly funded research agencies	41	34	27	46	51
Universities	67	22	27	83	144
Medical research institutes	7	8	3	5	8
TOTAL	115	64	57	134	203

Coverage of consistent time series dataset (%)					
Publicly funded research agencies (%)	100.0	100.0	100.0	100.0	100.0
Universities (%)	100.0	100.0	100.0	100.0	100.0
Medical research institutes (%)	100.0	100.0	100.0	100.0	88.9
TOTAL	100.0	100.0	100.0	100.0	99.5

Note: totals and sub-totals may not equate to the sum of the discrete numbers in the table due to rounding effects. Data used in consistent time series dataset may not equate to the totals and sub-totals above.

Table 51: Total patents issued worldwide by institution 2000–2004

Total Patents Issued Worldwide	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	257	150	148	317	237	Y
Defence Science and Technology Organisation	N/A	2	4	9	14	Y
Australian Nuclear Science and Technology Organisation	N/A	4	3	36	35	Y
Australian Institute of Marine Science	N/A	-	-	36	41	Y
Sub-total	257	156	155	398	327	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	1	-	8	12	Y
Macquarie University	-	-	5	11	6	Y
Southern Cross University	-	2	2	-	6	Y
The University of New England	-	2	2	2	1	Y
The University of New South Wales	20	2	4	25	24	Y
The University of Newcastle	1	1	2	5	6	Y
The University of Sydney	23	15	19	108	109	Y
University of Technology, Sydney	5	2	-	-	15	Y
University of Western Sydney	5	-	1	2	1	Y
University of Wollongong	2	-	5	-	-	Y
Deakin University	-	-	-	-	1	Y
La Trobe University	2	-	-	-	-	Y
Monash University	10	-	-	1	7	Y
Royal Melbourne Institute of Technology	-	1	-	-	-	Y
Swinburne University of Technology	1	-	-	-	-	Y
The University of Melbourne	31	37	26	42	58	Y
University of Ballarat	-	-	-	-	-	Y
Victoria University	4	-	-	-	1	Y
Bond University	N/A	N/A	N/A	-	-	
Central Queensland University	-	1	-	1	2	Y
Griffith University	1	1	-	-	-	Y
James Cook University	-	-	3	-	-	Y
Queensland University of Technology	11	5	5	4	2	Y
The University of Queensland	50	18	31	38	29	Y
University of Southern Queensland	N/A	-	-	7	4	Y
University of the Sunshine Coast	N/A	-	-	-	-	Y
Curtin University of Technology	N/A	N/A	-	N/A	-	
Edith Cowan University	-	-	3	-	-	Y
Murdoch University	-	-	-	4	1	Y
The University of Western Australia	6	-	2	-	-	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	8	1	1	6	7	Y
The University of Adelaide	13	-	2	122	216	Y
University of South Australia	4	5	6	18	15	Y
University of Tasmania	-	-	-	-	-	Y
Charles Darwin University	-	-	-	-	-	Y
The Australian National University	22	7	4	13	7	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	219	101	123	417	530	

Total Patents Issued Worldwide	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	-	-	
Baker Medical Research Institute	N/A	2	3	-	-	Y
Bionic Ear Institute	N/A	N/A	N/A	-	-	
Brain Research Institute	N/A	-	-	-	-	Y
The Cancer Council Victoria	N/A	N/A	N/A	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	3	1	-	-	-	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	-	-	N/A	-	-	Y
Children's Medical Research Institute	N/A	N/A	N/A	N/A	N/A	
George Institute for International Health	N/A	N/A	N/A	-	-	
Heart Research Institute	N/A	-	-	-	-	Y
Howard Florey Institute of Experimental Physiology and Medicine	2	1	-	3	-	Y
Lions Eye Institute	N/A	N/A	-	1	6	
Ludwig Institute for Cancer Research	N/A	5	1	1	2	Y
MacFarlane Burnet Centre for Medical Research and Public Health	2	-	-	9	7	Y
Mental Health Research Institute of Victoria	N/A	N/A	-	-	-	Y
Murdoch Childrens Research Institute	-	2	-	-	-	Y
National Stroke Research Institute	N/A	-	-	-	-	Y
Prince Henry's Institute of Medical Research	1	-	1	-	-	Y
Prince of Wales Medical Research Institute	N/A	-	-	1	5	Y
Queensland Cancer Fund	N/A	N/A	N/A	N/A	-	
Queensland Institute of Medical Research	-	N/A	-	-	1	Y
Royal Brisbane & Women's Hospital Research Foundation	N/A	-	-	-	-	Y
Telethon Institute for Child Health Research	3	3	-	N/A	N/A	Y
Victor Chang Cardiac Research Institute	-	-	-	6	-	Y
Walter and Eliza Hall Institute for Medical Research	9	3	3	7	8	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	-	-	
Sub-total	20	17	8	28	29	
TOTAL	496	274	286	842	885	

Data used in consistent time series dataset					
Publicly funded research agencies	257	156	155	398	327
Universities	219	101	123	406	524
Medical research institutes	20	17	8	27	23
TOTAL	496	274	286	830	873

Coverage of consistent time series dataset (%)					
Publicly funded research agencies (%)	100.0	100.0	100.0	100.0	100.0
Universities (%)	100.0	100.0	100.0	97.4	98.9
Medical research institutes (%)	100.0	100.0	100.0	96.4	79.3
TOTAL (%)	100.0	100.0	100.0	98.6	98.6

Note: totals and sub-totals may not equate to the sum of the discrete numbers in the table due to rounding effects. Data used in consistent time series dataset may not equate to the totals and sub-totals above.

Table 52: LOAs executed by institution 2000–2004

Number of LOAs executed	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	168	158	188	146	50	Y
Defence Science and Technology Organisation	N/A	7	7	12	15	Y
Australian Nuclear Science and Technology Organisation	N/A	-	-	-	2	Y
Australian Institute of Marine Science	N/A	1	-	-	1	Y
Sub-total	**168**	**166**	**195**	**158**	**68**	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	3	-	3	5	Y
Macquarie University	-	-	-	1	1	Y
Southern Cross University	4	20	20	5	6	Y
The University of New England	11	2	2	17	5	Y
The University of New South Wales	12	28	43	29	34	Y
The University of Newcastle	3	1	4	-	1	Y
The University of Sydney	31	21	23	65	97	Y
University of Technology, Sydney	9	6	3	2	4	Y
University of Western Sydney	-	-	-	3	1	Y
University of Wollongong	2	20	22	2	1	Y
Deakin University	1	-	-	-	-	Y
La Trobe University	5	1	2	2	2	Y
Monash University	16	5	4	2	6	Y
Royal Melbourne Institute of Technology	1	11	6	1	2	Y
Swinburne University of Technology	-	3	3	1	2	Y
The University of Melbourne	25	15	37	40	53	Y
University of Ballarat	-	-	-	-	-	Y
Victoria University	-	5	2	4	2	Y
Bond University	N/A	N/A	N/A	-	-	
Central Queensland University	-	1	-	-	1	Y
Griffith University	19	-	-	3	1	Y
James Cook University	1	-	3	-	2	Y
Queensland University of Technology	2	4	2	2	2	Y
The University of Queensland	63	16	18	31	30	Y
University of Southern Queensland	N/A	-	-	3	2	Y
University of the Sunshine Coast	N/A	-	-	-	-	Y
Curtin University of Technology	N/A	N/A	2	N/A	2	
Edith Cowan University	-	-	-	-	-	Y
Murdoch University	N/A	-	-	-	1	Y
The University of Western Australia	9	4	5	5	11	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	-	-	-	3	4	Y
The University of Adelaide	1	3	8	15	9	Y
University of South Australia	2	2	-	6	5	Y
University of Tasmania	-	1	-	-	-	Y
Charles Darwin University	-	1	-	-	-	Y
The Australian National University	8	2	11	4	2	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	**225**	**175**	**220**	**249**	**294**	

Number of LOAs executed	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	-	-	
Baker Medical Research Institute	N/A	2	1	-	1	Y
Bionic Ear Institute	N/A	-	-	-	-	
Brain Research Institute	N/A	-	-	-	-	Y
The Cancer Council Victoria	N/A	N/A	N/A	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	-	-	-	-	-	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	2	-	N/A	-	-	Y
Children's Medical Research Institute	N/A	N/A	N/A	-	-	
George Institute for International Health	N/A	N/A	N/A	1	-	
Heart Research Institute	-	-	-	1	-	Y
Howard Florey Institute of Experimental Physiology and Medicine	3	2	6	8	9	Y
Lions Eye Institute	N/A	N/A	-	N/A	N/A	
Ludwig Institute for Cancer Research	N/A	1	1	-	4	Y
MacFarlane Burnet Centre for Medical Research and Public Health	-	-	1	3	N/A	Y
Mental Health Research Institute of Victoria	N/A	-	-	-	-	Y
Murdoch Childrens Research Institute	2	-	-	-	-	Y
National Stroke Research Institute	N/A	-	-	-	-	Y
Prince Henry's Institute of Medical Research	-	-	1	-	-	Y
Prince of Wales Medical Research Institute	N/A	-	-	-	-	Y
Queensland Cancer Fund	N/A	N/A	N/A	N/A	-	
Queensland Institute of Medical Research	2	N/A	2	1	1	Y
Royal Brisbane & Women's Hospital Research Foundation	N/A	-	-	-	-	Y
Telethon Institute for Child Health Research	-	1	2	3	1	Y
Victor Chang Cardiac Research Institute	1	1	-	-	-	Y
Walter and Eliza Hall Institute for Medical Research	-	4	5	10	5	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	-	-	
Sub-total	10	11	19	27	21	
TOTAL	403	352	434	434	383	

Data used in consistent time series dataset					
Publicly funded research agencies	168	166	195	158	68
Universities	225	175	218	249	291
Medical research institutes	10	11	19	26	21
TOTAL	403	352	432	433	380

Coverage of consistent time series dataset (%)					
Publicly funded research agencies	100.0%	100.0%	100.0%	100.0%	100.0%
Universities	100.0%	100.0%	99.1%	98.8%	99.9%
Medical research institutes	100.0%	100.0%	100.0%	96.3%	100.0%
TOTAL	100.0%	100.0%	99.5%	99.1%	98.7%

Note: totals and sub-totals may not equate to the sum of the discrete numbers in the table due to rounding effects. Data used in consistent time series dataset may not equate to the totals and sub-totals above.

Table 53: Number of LOAs yielding income by institution 2000–2004

Number of LOAs yielding income	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	220	294	279	242	226	Y
Defence Science and Technology Organisation	N/A	7	6	6	9	Y
Australian Nuclear Science and Technology Organisation	N/A	-	-	-	-	Y
Australian Institute of Marine Science	N/A	-	-	-	-	Y
Sub-total	**220**	**301**	**285**	**248**	**235**	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	-	-	16	9	Y
Macquarie University	8	-	12	14	13	Y
Southern Cross University	-	-	-	-	-	Y
The University of New England	62	62	62	63	69	Y
The University of New South Wales	12	24	40	37	43	Y
The University of Newcastle	4	2	3	1	1	Y
The University of Sydney	32	36	34	66	111	Y
University of Technology, Sydney	6	6	2	N/A	3	Y
University of Western Sydney	3	-	1	2	3	Y
University of Wollongong	2	2	2	2	1	Y
Deakin University	-	-	-	-	-	Y
La Trobe University	1	1	-	-	-	Y
Monash University	3	-	-	7	11	Y
Royal Melbourne Institute of Technology	3	9	8	3	1	Y
Swinburne University of Technology	2	5	5	2	2	Y
The University of Melbourne	40	14	12	16	15	Y
University of Ballarat	-	-	-	-	-	Y
Victoria University	-	1	1	3	2	Y
Bond University	N/A	N/A	N/A	-	-	
Central Queensland University	-	1	1	1	1	Y
Griffith University	17	-	-	-	-	Y
James Cook University	4	1	4	2	2	Y
Queensland University of Technology	6	8	8	5	5	Y
The University of Queensland	7	29	26	36	35	Y
University of Southern Queensland	N/A	-	-	2	2	Y
University of the Sunshine Coast	N/A	-	-	-	-	Y
Curtin University of Technology	N/A	N/A	4	N/A	1	
Edith Cowan University	-	-	-	-	-	Y
Murdoch University	-	-	1	N/A	2	Y
The University of Western Australia	4	7	8	10	11	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	4	5	9	3	5	Y
The University of Adelaide	17	38	46	23	22	Y
University of South Australia	6	11	-	6	7	Y
University of Tasmania	1	-	1	-	-	Y
Charles Darwin University	-	-	-	-	-	Y
The Australian National University	8	8	7	7	8	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	**252**	**270**	**297**	**327**	**385**	

Number of LOAs yielding income	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	-	-	
Baker Medical Research Institute	N/A	2	5	2	-	Y
Bionic Ear Institute	N/A	-	-	-	-	
Brain Research Institute	N/A	-	-	-	-	Y
The Cancer Council Victoria	N/A	-	-	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	1	1	1	1	1	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	2	N/A	N/A	1	1	Y
Children's Medical Research Institute	N/A	N/A	N/A	-	-	
George Institute for International Health	N/A	N/A	N/A	-	-	
Heart Research Institute	N/A	-	-	-	1	Y
Howard Florey Institute of Experimental Physiology and Medicine	3	2	6	14	12	Y
Lions Eye Institute	N/A	N/A	N/A	N/A	N/A	
Ludwig Institute for Cancer Research	-	13	14	8	10	Y
MacFarlane Burnet Centre for Medical Research and Public Health	-	1	1	7	8	Y
Mental Health Research Institute of Victoria	-	N/A	-	-	-	Y
Murdoch Childrens Research Institute	1	2	2	-	-	Y
National Stroke Research Institute	N/A	-	-	-	-	Y
Prince Henry's Institute of Medical Research	-	-	1	1	1	Y
Prince of Wales Medical Research Institute	N/A	-	-	N/A	N/A	Y
Queensland Cancer Fund	N/A	N/A	N/A	N/A	-	
Queensland Institute of Medical Research	2	N/A	2	1	-	Y
Royal Brisbane & Women's Hospital Research Foundation	-	-	-	-	-	Y
Telethon Institute for Child Health Research	3	1	2	1	1	Y
Victor Chang Cardiac Research Institute	1	1	-	-	-	Y
Walter and Eliza Hall Institute for Medical Research	4	10	8	11	10	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	-	-	
Sub-total	17	33	42	47	45	
TOTAL	489	604	624	622	665	

Data used in consistent time series dataset					
Publicly funded research agencies	220	301	285	248	235
Universities	252	270	293	327	384
Medical research institutes	17	33	42	47	45
TOTAL	489	604	620	622	664

Coverage of consistent time series dataset (%)					
Publicly funded research agencies (%)	100.0	100.0	100.0	100.0	100.0
Universities (%)	100.0	100.0	98.7	100.0	99.7
Medical research institutes (%)	100.0	100.0	100.0	100.0	100.0
TOTAL	100.0	100.0	99.4	100.0	99.8

Note: totals and sub-totals may not equate to the sum of the discrete numbers in the table due to rounding effects. Data used in consistent time series dataset may not equate to the totals and sub-totals above.

Table 54: Gross LOA income in current prices by institution 2000–2004

LOA Gross Income in current prices ($ '000)	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	11,620	17,115	12,110	15,643	19,530	Y
Defence Science and Technology Organisation	N/A	654	994	441	1,025	Y
Australian Nuclear Science and Technology Organisation	N/A	-	-	N/A	N/A	Y
Australian Institute of Marine Science	N/A	-	-	-	-	Y
Sub-total	11,620	17,769	13,104	16,084	20,555	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	-	-	445	279	Y
Macquarie University	1,065	-	1,092	2,216	2,086	Y
Southern Cross University	-	-	-	-	-	Y
The University of New England	6,075	6,018	6,020	6,674	6,614	Y
The University of New South Wales	4,446	1,718	2,175	1,660	1,145	Y
The University of Newcastle	74	97	170	43	276	Y
The University of Sydney	1,823	783	1,552	4,239	1,553	Y
University of Technology, Sydney	1,257	144	6	-	45	Y
University of Western Sydney	206	-	5	47	2	Y
University of Wollongong	1,810	1,547	1,650	78	5	Y
Deakin University	-	-	-	-	-	Y
La Trobe University	44	42	-	-	-	Y
Monash University	320	-	-	6,967	898	Y
Royal Melbourne Institute of Technology	175	756	433	32	25	Y
Swinburne University of Technology	850	807	133	120	216	Y
The University of Melbourne	52,000	3,431	4,125	13,806	4,470	Y
University of Ballarat	-	-	-	-	-	Y
Victoria University	-	13	5	47	85	Y
Bond University	N/A	N/A	N/A	-	-	
Central Queensland University	-	20	20	233	270	Y
Griffith University	185	-	-	-	-	Y
James Cook University	24	15	237	135	125	Y
Queensland University of Technology	1,284	691	347	176	142	Y
The University of Queensland	6,675	27,518	27,927	5,075	13,290	Y
University of Southern Queensland	N/A	-	-	2	20	Y
University of the Sunshine Coast	N/A	-	-	-	-	Y
Curtin University of Technology	N/A	N/A	135	N/A	5	
Edith Cowan University	-	-	-	-	-	Y
Murdoch University	-	-	234	N/A	1	Y
The University of Western Australia	62	464	150	159	406	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	4,223	120	236	1,332	266	Y
The University of Adelaide	480	549	872	702	1,504	Y
University of South Australia	137	339	358	72	142	Y
University of Tasmania	5	-	192	-	-	Y
Charles Darwin University	-	-	-	N/A	N/A	Y
The Australian National University	656	635	451	437	589	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	83,878	45,704	48,525	44,697	34,460	

LOA Gross Income in current prices ($ '000)	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	-	-	
Baker Medical Research Institute	N/A	3,000	3,168	167	-	Y
Bionic Ear Institute	N/A	N/A	N/A	-	-	
Brain Research Institute	N/A	-	-	-	-	Y
The Cancer Council Victoria	N/A	N/A	N/A	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	1	0	0	6	8	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	2,400	-	N/A	17	17	Y
Children's Medical Research Institute	N/A	N/A	N/A	-	-	
George Institute for International Health	N/A	N/A	N/A	-	N/A	
Heart Research Institute	N/A	-	-	-	-	Y
Howard Florey Institute of Experimental Physiology and Medicine	1,656	350	550	982	136	Y
Lions Eye Institute	N/A	N/A	-	N/A	N/A	
Ludwig Institute for Cancer Research	N/A	5,546	6,845	5,017	3,517	Y
MacFarlane Burnet Centre for Medical Research and Public Health	-	250	220	2,488	2,783	Y
Mental Health Research Institute of Victoria	N/A	-	-	-	-	Y
Murdoch Childrens Research Institute	9	1,621	1,712	-	-	Y
National Stroke Research Institute	N/A	-	-	-	-	Y
Prince Henry's Institute of Medical Research	-	-	29	51	65	Y
Prince of Wales Medical Research Institute	N/A	-	-	-	-	Y
Queensland Cancer Fund	N/A	N/A	N/A	N/A	-	
Queensland Institute of Medical Research	618	-	122	96	-	Y
Royal Brisbane & Women's Hospital Research Foundation	N/A	-	-	-	-	Y
Telethon Institute for Child Health Research	790	370	808	15	100	Y
Victor Chang Cardiac Research Institute	232	60	-	-	-	Y
Walter and Eliza Hall Institute for Medical Research	2,284	1,670	4,422	6,036	3,897	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	-	-	
Sub-total	7,991	12,868	17,876	14,875	10,524	
TOTAL	103,48	76,341	79,505	75,656	65,539	

Data used in consistent time series dataset					
Publicly funded research agencies	11,620	17,769	13,104	16,084	20,555
Universities	83,878	45,704	48,390	44,697	34,455
Medical research institutes	7,991	12,868	17,876	14,875	10,524
TOTAL	103,48	76,341	79,369	75,656	65,534

Coverage of consistent time series dataset (%)					
Publicly funded research agencies(%)	100.0	100.0	100.0	100.0	100.0
Universities (%)	100.0	100.0	99.7	100.0	100.0
Medical research institutes (%)	100.0	100.0	100.0	100.0	100.0
TOTAL	100.0	100.0	99.8	100.0	100.0

Note: totals and sub-totals may not equate to the sum of the discrete numbers in the table due to rounding effects. Data used in consistent time series dataset may not equate to the totals and sub-totals above.

Table 55: LOA income paid to other institutions by institution 2000–2004

LOA Income paid to others in current prices ($ '000)	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	2,180	1,900	1,906	1,229	2,772	Y
Defence Science and Technology Organisation	N/A	-	-	-	-	Y
Australian Nuclear Science and Technology Organisation	N/A	-	-	N/A	N/A	Y
Australian Institute of Marine Science	N/A	-	-	-	-	Y
Sub-total	2,180	1,900	1,906	1,229	2,772	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	-	-	-	-	Y
Macquarie University	-	-	-	456	303	Y
Southern Cross University	-	-	-	-	-	Y
The University of New England	252	200	200	58	64	Y
The University of New South Wales	-	570	1,309	38	39	Y
The University of Newcastle	30	-	6	23	-	Y
The University of Sydney	202	35	38	115	173	Y
University of Technology, Sydney	-	-	-	-	-	Y
University of Western Sydney	-	-	-	-	-	Y
University of Wollongong	-	-	-	-	-	Y
Deakin University	-	-	-	-	-	Y
La Trobe University	-	-	-	-	-	Y
Monash University	-	-	-	-	-	Y
Royal Melbourne Institute of Technology	-	-	-	-	-	Y
Swinburne University of Technology	-	-	-	-	-	Y
The University of Melbourne	-	200	396	5,190	647	Y
University of Ballarat	-	-	-	-	-	Y
Victoria University	-	-	-	-	-	Y
Bond University	N/A	N/A	N/A	-	-	
Central Queensland University	-	-	-	-	-	Y
Griffith University	-	-	-	-	-	Y
James Cook University	-	-	-	-	-	Y
Queensland University of Technology	-	-	-	-	-	Y
The University of Queensland	-	-	-	351	541	Y
University of Southern Queensland	N/A	-	-	-	-	Y
University of the Sunshine Coast	N/A	-	-	-	-	Y
Curtin University of Technology	N/A	N/A	-	N/A	-	
Edith Cowan University	-	-	-	-	-	Y
Murdoch University	-	-	-	-	-	Y
The University of Western Australia	-	-	-	-	-	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	-	-	-	-	11	Y
The University of Adelaide	-	-	-	94	401	Y
University of South Australia	24	-	-	-	-	Y
University of Tasmania	-	-	-	N/A	N/A	Y
Charles Darwin University	-	-	-	-	-	Y
The Australian National University	30	-	-	3	30	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	537	1,005	1,949	6,327	2,209	

LOA Income paid to others in current prices ($ '000)	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	-	-	
Baker Medical Research Institute	N/A	-	-	-	N/A	Y
Bionic Ear Institute	N/A	N/A	N/A	-	-	
Brain Research Institute	N/A	-	-	-	-	Y
The Cancer Council Victoria	N/A	N/A	N/A	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	-	-	-	-	-	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	N/A	-	N/A	-	-	Y
Children's Medical Research Institute	N/A	N/A	N/A	-	-	
George Institute for International Health	N/A	N/A	N/A	-	-	
Heart Research Institute	-	-	N/A	-	-	Y
Howard Florey Institute of Experimental Physiology and Medicine	-	-	-	-	-	Y
Lions Eye Institute	N/A	N/A	-	N/A	N/A	
Ludwig Institute for Cancer Research	N/A	2,757	3,306	2,468	1,528	Y
MacFarlane Burnet Centre for Medical Research and Public Health	-	-	-	-	-	Y
Mental Health Research Institute of Victoria	-	-	-	-	-	Y
Murdoch Childrens Research Institute	-	-	-	-	-	Y
National Stroke Research Institute	N/A	-	-	N/A	N/A	Y
Prince Henry's Institute of Medical Research	-	-	-	-	-	Y
Prince of Wales Medical Research Institute	N/A	-	-	N/A	N/A	Y
Queensland Cancer Fund	N/A	N/A	N/A	N/A	-	
Queensland Institute of Medical Research	75	-	-	29	-	Y
Royal Brisbane & Women's Hospital Research Foundation	-	-	-	-	-	Y
Telethon Institute for Child Health Research	-	-	-	-	-	Y
Victor Chang Cardiac Research Institute	-	-	-	-	-	Y
Walter and Eliza Hall Institute for Medical Research	1,371	-	-	874	709	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	-	-	
Sub-total	1,446	2,757	3,306	3,370	2,237	
TOTAL	4,163	5,662	7,162	10,926	7,219	

Data used in consistent time series dataset					
Publicly funded research agencies	2,180	1,900	1,906	1,229	2,772
Universities	537	1,005	1,949	6,327	2,209
Medical research institutes	1,446	2,757	3,306	3,370	2,237
TOTAL	4,163	5,662	7,162	10,926	7,219

Coverage of consistent time series dataset (%)					
Publicly funded research agencies (%)	100.0	100.0	100.0	100.0	100.0
Universities (%)	100.0	100.0	100.0	100.0	100.0
Medical research institutes (%)	100.0	100.0	100.0	100.0	100.0
TOTAL	100.0	100.0	100.0	100.0	100.0

Note: totals and sub-totals may not equate to the sum of the discrete numbers in the table due to rounding effects. Data used in consistent time series dataset may not equate to the totals and sub-totals above.

Table 56: Number of new start-up companies formed by institution 2000–2004

Number of new start-up companies	2000	2001	2002	2003	2004	Used in consistent time series analysis?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	13	10	3	7	2	Y
Defence Science and Technology Organisation	N/A	-	-	-	-	Y
Australian Nuclear Science and Technology Organisation	N/A	-	-	-	-	Y
Australian Institute of Marine Science	N/A	-	1	2	-	Y
Sub-total	13	10	4	9	2	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	-	-	-	-	Y
Macquarie University	-	N/A	4	1	2	Y
Southern Cross University	2	-	-	-	-	Y
The University of New England	-	1	-	1	-	Y
The University of New South Wales	1	-	1	1	-	Y
The University of Newcastle	1	1	-	1	1	Y
The University of Sydney	6	9	3	3	5	Y
University of Technology, Sydney	-	2	1	-	-	Y
University of Western Sydney	-	N/A	-	-	1	Y
University of Wollongong	-	-	-	1	-	Y
Deakin University	1	-	-	1	-	Y
La Trobe University	2	1	3	1	-	Y
Monash University	3	1	4	3	1	Y
Royal Melbourne Institute of Technology	1	1	-	-	-	Y
Swinburne University of Technology	-	3	2	1	2	Y
The University of Melbourne	-	3	3	4	3	Y
University of Ballarat	-	-	-	-	-	Y
Victoria University	-	2	1	-	-	Y
Bond University	N/A	N/A	N/A	-	-	
Central Queensland University	-	1	-	1	-	Y
Griffith University	2	2	1	-	-	Y
James Cook University	-	-	2	-	-	Y
Queensland University of Technology	-	1	-	1	-	Y
The University of Queensland	2	13	9	5	6	Y
University of Southern Queensland	N/A	-	-	-	-	Y
University of the Sunshine Coast	N/A	-	-	-	-	Y
Curtin University of Technology	N/A	N/A	1	-	1	
Edith Cowan University	-	-	-	-	-	Y
Murdoch University	2	-	1	1	-	Y
The University of Western Australia	4	1	3	1	-	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	1	1	1	-	-	Y
The University of Adelaide	-	1	1	1	-	Y
University of South Australia	1	1	1	3	1	Y
University of Tasmania	-	-	-	-	-	Y
Charles Darwin University	-	1	-	-	-	Y
The Australian National University	3	-	3	2	2	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	32	46	45	33	25	

Number of new start-up companies	2000	2001	2002	2003	2004	Used in consistent time series analysis?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	-	-	
Baker Medical Research Institute	N/A	2	3	-	-	Y
Bionic Ear Institute	N/A	N/A	N/A	-	-	
Brain Research Institute	N/A	-	-	-	-	Y
The Cancer Council Victoria	N/A	N/A	N/A	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	-	1	-	-	-	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	1	-	N/A	1	-	Y
Children's Medical Research Institute	N/A	N/A	N/A	-	-	
George Institute for International Health	N/A	N/A	N/A	-	-	
Heart Research Institute	N/A	-	-	-	-	Y
Howard Florey Institute of Experimental Physiology and Medicine	-	-	-	1	1	Y
Lions Eye Institute	N/A	N/A	N/A	-	-	
Ludwig Institute for Cancer Research	N/A	-	-	-	1	Y
MacFarlane Burnet Centre for Medical Research and Public Health	-	-	1	5	-	Y
Mental Health Research Institute of Victoria	-	-	-	-	-	Y
Murdoch Childrens Research Institute	-	3	1	-	-	Y
National Stroke Research Institute	N/A	-	-	-	1	Y
Prince Henry's Institute of Medical Research	-	-	-	1	-	Y
Prince of Wales Medical Research Institute	N/A	-	-	-	-	Y
Queensland Cancer Fund	N/A	N/A	N/A	-	-	
Queensland Institute of Medical Research	-	N/A	-	-	1	Y
Royal Brisbane & Women's Hospital Research Foundation	-	-	-	-	-	Y
Telethon Institute for Child Health Research	-	-	8	-	-	Y
Victor Chang Cardiac Research Institute	-	-	-	-	-	Y
Walter and Eliza Hall Institute for Medical Research	-	1	-	-	-	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	-	-	
Sub-total	1	7	13	8	4	
TOTAL	46	63	62	50	31	

Data used in consistent time series dataset					
Publicly funded research agencies	13	10	3	7	2
Universities	32	46	40	32	21
Medical research institutes	1	5	10	7	1
TOTAL	46	61	53	46	24

Coverage of consistent time series dataset (%)					
Publicly funded research agencies (%)	100.0	100.0	75.0	77.8	100.0
Universities (%)	100.0	100.0	88.9	97.0	84.0
Medical research institutes (%)	100.0	71.4	76.9	87.5	25.0
TOTAL	100.0	96.8	85.5	92.0	77.4

Note: totals and sub-totals may not equate to the sum of the discrete numbers in the table due to rounding effects. Data used in consistent time series dataset may not equate to the totals and sub-totals above.

Table 57: Number of start-up companies operational at the end of the year by institution 2000–2004

Number of start-ups operational at the end of the year	2000	2001	2002	2003	2004	Used in consistent time series analysis?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	N/A	7	3	15	17	Y
Defence Science and Technology Organisation	N/A	-	-	-	-	Y
Australian Nuclear Science and Technology Organisation	N/A	-	-	-	-	Y
Australian Institute of Marine Science	N/A	-	1	2	2	Y
Sub-total	-	7	4	17	19	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	1	-	N/A	-	Y
Macquarie University	-	-	3	7	9	Y
Southern Cross University	2	-	-	-	-	Y
The University of New England	-	1	-	3	3	Y
The University of New South Wales	8	8	9	10	11	Y
The University of Newcastle	1	1	-	2	3	Y
The University of Sydney	20	24	25	18	16	Y
University of Technology, Sydney	-	2	1	6	2	Y
University of Western Sydney	-	-	-	-	1	Y
University of Wollongong	-	-	-	1	1	Y
Deakin University	1	1	1	1	1	Y
La Trobe University	2	4	6	4	4	Y
Monash University	5	6	8	20	26	Y
Royal Melbourne Institute of Technology	1	2	-	1	1	Y
Swinburne University of Technology	-	3	2	5	8	Y
The University of Melbourne	3	3	3	17	20	Y
University of Ballarat	-	-	-	1	1	Y
Victoria University	-	2	1	3	3	Y
Bond University	N/A	N/A	N/A	-	-	
Central Queensland University	-	-	-	1	1	Y
Griffith University	4	2	3	4	4	Y
James Cook University	-	-	2	3	2	Y
Queensland University of Technology	3	3	-	3	3	Y
The University of Queensland	15	27	34	34	38	Y
University of Southern Queensland	N/A	-	-	-	-	Y
University of the Sunshine Coast	N/A	-	-	-	-	Y
Curtin University of Technology	N/A	N/A	2	N/A	4	
Edith Cowan University	-	-	-	-	-	Y
Murdoch University	1	-	1	4	4	Y
The University of Western Australia	4	6	3	7	4	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	1	1	1	6	4	Y
The University of Adelaide	-	1	1	7	8	Y
University of South Australia	3	1	2	3	5	Y
University of Tasmania	-	-	-	-	-	Y
Charles Darwin University	-	1	-	1	1	Y
The Australian National University	8	-	3	13	16	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	82	100	111	185	204	

Number of start-ups operational at the end of the year	2000	2001	2002	2003	2004	Used in consistent time series analysis?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	N/A	N/A	
Baker Medical Research Institute	N/A	2	3	-	2	Y
Bionic Ear Institute	N/A	N/A	N/A	-	-	
Brain Research Institute	N/A	-	-	-	-	Y
The Cancer Council Victoria	N/A	N/A	N/A	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	-	1	1	1	1	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	1	-	N/A	-	-	Y
Children's Medical Research Institute	N/A	N/A	N/A	-	-	
George Institute for International Health	N/A	N/A	N/A	N/A	N/A	
Heart Research Institute	N/A	-	-	-	-	Y
Howard Florey Institute of Experimental Physiology and Medicine	-	-	-	1	3	Y
Lions Eye Institute	N/A	N/A	-	N/A	N/A	
Ludwig Institute for Cancer Research	N/A	-	-	1	2	Y
MacFarlane Burnet Centre for Medical Research and Public Health	-	-	1	12	12	Y
Mental Health Research Institute of Victoria	-	-	-	2	2	Y
Murdoch Childrens Research Institute	2	1	2	4	4	Y
National Stroke Research Institute	N/A	-	-	-	-	Y
Prince Henry's Institute of Medical Research	-	-	-	1	1	Y
Prince of Wales Medical Research Institute	N/A	-	-	N/A	-	Y
Queensland Cancer Fund	N/A	N/A	N/A	N/A	-	
Queensland Institute of Medical Research	-	N/A	-	-	1	Y
Royal Brisbane & Women's Hospital Research Foundation	N/A	-	N/A	-	-	Y
Telethon Institute for Child Health Research	-	-	-	2	2	Y
Victor Chang Cardiac Research Institute	-	1	2	-	-	Y
Walter and Eliza Hall Institute for Medical Research	-	1	2	2	2	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	-	-	
Sub-total	3	6	11	26	32	
TOTAL	85	113	126	228	255	

Data used in consistent time series dataset					
Publicly funded research agencies	-	7	4	17	19
Universities	82	100	109	185	200
Medical research institutes	3	6	11	26	32
TOTAL	85	113	124	228	251

Coverage of consistent time series dataset (%)					
Publicly funded research agencies (%)	0.0	100.0	100.0	100.0	100.0
Universities (%)	100.0	100.0	98.2	100.0	98.0
Medical research institutes (%)	100.0	100.0	100.0	100.0	100.0
TOTAL	100.0	100.0	98.4	100.0	98.4

Note: totals and sub-totals may not equate to the sum of the discrete numbers in the table due to rounding effects. Data used in consistent time series dataset may not equate to the totals and sub-totals above.

Table 58: Number of start-up companies operational at year end with institutional equity stake by institution 2000–2004

Start-up companies operating at year end with institutional equity stakes	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	N/A	6	1	7	9	Y
Defence Science and Technology Organisation	N/A	-	-	-	-	Y
Australian Nuclear Science and Technology Organisation	N/A	-	-	N/A	N/A	Y
Australian Institute of Marine Science	N/A	-	-	1	1	Y
Sub-total	-	6	1	8	10	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	-	-	N/A	-	Y
Macquarie University	-	-	3	4	6	Y
Southern Cross University	2	-	-	-	-	Y
The University of New England	-	-	-	2	2	Y
The University of New South Wales	8	7	6	8	9	Y
The University of Newcastle	-	1	-	2	3	Y
The University of Sydney	14	17	19	15	13	Y
University of Technology, Sydney	-	1	-	3	3	Y
University of Western Sydney	1	-	-	-	1	Y
University of Wollongong	-	-	-	1	1	Y
Deakin University	1	1	1	1	1	Y
La Trobe University	-	-	2	2	2	Y
Monash University	5	-	8	14	17	Y
Royal Melbourne Institute of Technology	1	2	-	1	1	Y
Swinburne University of Technology	-	3	2	5	7	Y
The University of Melbourne	2	3	3	5	7	Y
University of Ballarat	-	-	-	1	1	Y
Victoria University	-	-	1	1	1	Y
Bond University	N/A	N/A	N/A	-	-	
Central Queensland University	-	-	-	1	1	Y
Griffith University	2	2	3	4	4	Y
James Cook University	-	-	2	3	2	Y
Queensland University of Technology	1	1	-	3	3	Y
The University of Queensland	15	25	28	34	38	Y
University of Southern Queensland	N/A	-	-	-	-	Y
University of the Sunshine Coast	N/A	-	-	-	-	Y
Curtin University of Technology	N/A	N/A	2	N/A	3	
Edith Cowan University	-	-	-	2	2	Y
Murdoch University	1	-	1	4	4	Y
The University of Western Australia	2	3	3	7	4	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	1	1	1	6	4	Y
The University of Adelaide	-	1	1	5	6	Y
University of South Australia	3	1	2	3	5	Y
University of Tasmania	-	-	-	1	1	Y
Charles Darwin University	-	1	-	1	1	Y
The Australian National University	7	-	3	10	15	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	66	70	91	149	168	

Start-up companies operating at year end with institutional equity stakes	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	-	N/A	
Baker Medical Research Institute	N/A	2	3	-	1	Y
Bionic Ear Institute	N/A	N/A	N/A	-	-	
Brain Research Institute	N/A	-	-	-	-	Y
The Cancer Council Victoria	N/A	N/A	N/A	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	-	1	1	1	1	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	1	-	N/A	-	-	Y
Children's Medical Research Institute	N/A	N/A	N/A	-	-	
George Institute for International Health	N/A	N/A	N/A	N/A	N/A	
Heart Research Institute	N/A	-	-	N/A	N/A	Y
Howard Florey Institute of Experimental Physiology and Medicine	-	-	-	1	3	Y
Lions Eye Institute	N/A	N/A	-	N/A	N/A	
Ludwig Institute for Cancer Research	N/A	-	-	-	1	Y
MacFarlane Burnet Centre for Medical Research and Public Health	-	-	1	12	12	Y
Mental Health Research Institute of Victoria	-	-	-	-	-	Y
Murdoch Childrens Research Institute	2	1	2	4	4	Y
National Stroke Research Institute	N/A	-	-	-	-	Y
Prince Henry's Institute of Medical Research	-	-	-	1	1	Y
Prince of Wales Medical Research Institute	N/A	-	-	N/A	-	Y
Queensland Cancer Fund	N/A	N/A	N/A	N/A	-	
Queensland Institute of Medical Research	-	N/A	-	2	1	Y
Royal Brisbane & Women's Hospital Research Foundation	-	-	-	-	-	Y
Telethon Institute for Child Health Research	-	-	-	2	2	Y
Victor Chang Cardiac Research Institute	-	-	-	-	-	Y
Walter and Eliza Hall Institute for Medical Research	-	1	2	2	2	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	-	-	
Sub-total	3	5	9	25	28	
TOTAL	69	81	101	182	206	

Data used in consistent time series dataset					
Publicly funded research agencies	-	6	1	8	10
Universities	66	70	89	149	165
Medical research institutes	-	6	1	8	10
TOTAL	66	82	91	165	185

Coverage of consistent time series dataset (%)					
Publicly funded research agencies (%)	0.0	100.0	100.0	100.0	100.0
Universities (%)	100.0	100.0	97.8	100.0	98.2
Medical research institutes (%)	0.0	120.0	11.1	32.0	35.7
TOTAL	95.7	101.2	90.1	90.7	89.8

Note: totals and sub-totals may not equate to the sum of the discrete numbers in the table due to rounding effects. Data used in consistent time series dataset may not equate to the totals and sub-totals above.

Table 59: Value of equity holdings in current prices by institution 2000–2004

Value of equity holdings in current Prices ($ '000)	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Publicly funded research agencies						
Commonwealth Scientific and Industrial Research Organisation	29,808	29,827	18,994	17,612	10,547	Y
Defence Science and Technology Organisation	N/A	-	-	-	-	Y
Australian Nuclear Science and Technology Organisation	N/A	-	-	-	-	Y
Australian Institute of Marine Science	N/A	-	-	N/A	N/A	Y
Sub-total	29,808	29,827	18,994	17,612	10,547	
Universities						
Australian Catholic University	-	-	-	-	-	Y
Charles Sturt University	-	-	-	-	-	Y
Macquarie University	-	-	364	420	1,437	Y
Southern Cross University	550	-	-	-	-	Y
The University of New England	-	-	-	5,259	5,703	Y
The University of New South Wales	975	554	1,142	2,243	3,006	Y
The University of Newcastle	8	22	172	212	267	Y
The University of Sydney	10,300	7,663	8,942	13,757	11,932	Y
University of Technology, Sydney	-	-	-	-	1,300	Y
University of Western Sydney	-	-	-	N/A	N/A	Y
University of Wollongong	-	-	-	-	-	Y
Deakin University	-	100	360	412	465	Y
La Trobe University	136	130	130	130	130	Y
Monash University	N/A	-	-	35,852	38,152	Y
Royal Melbourne Institute of Technology	102	-	-	103	103	Y
Swinburne University of Technology	9,000	9,100	511	1,350	1,700	Y
The University of Melbourne	10,000	3,123	4,388	101	200	Y
University of Ballarat	-	-	-	-	-	Y
Victoria University	-	-	-	130	150	Y
Bond University	N/A	N/A	N/A	-	-	
Central Queensland University	N/A	-	50	300	300	Y
Griffith University	96	858	658	256	261	Y
James Cook University	409	-	20	432	539	Y
Queensland University of Technology	-	-	-	1,419	3,075	Y
The University of Queensland	11,330	46,408	46,431	25,882	48,450	Y
University of Southern Queensland	N/A	-	-	-	-	Y
University of the Sunshine Coast	N/A	-	-	-	-	Y
Curtin University of Technology	N/A	N/A	-	N/A	1,134	
Edith Cowan University	-	-	-	-	-	Y
Murdoch University	N/A	-	-	N/A	N/A	Y
The University of Western Australia	20,000	11,400	11,400	10,900	10,900	Y
University of Notre Dame Australia	-	-	-	-	-	Y
The Flinders University of South Australia	-	-	-	9,512	9,718	Y
The University of Adelaide	-	-	-	11,716	10,867	Y
University of South Australia	2,540	300	579	9,100	11,587	Y
University of Tasmania	-	-	-	-	-	Y
Charles Darwin University	N/A	-	250	255	255	Y
The Australian National University	3,289	-	-	N/A	N/A	Y
University of Canberra	N/A	-	-	-	-	Y
Sub-total	68,735	79,658	75,396	129,741	161,631	

Value of equity holdings in current Prices ($ '000)	2000	2001	2002	2003	2004	Used in consistent data set 2000 to 2004?
Medical research institutes						
ANZAC Research Institute	N/A	N/A	N/A	-	N/A	
Baker Medical Research Institute	N/A	3,000	3,168	-	-	Y
Bionic Ear Institute	N/A	N/A	N/A	-	-	
Brain Research Institute	N/A	-	-	-	-	Y
The Cancer Council Victoria	N/A	N/A	N/A	-	-	
Centenary Institute of Cancer Medicine and Cell Biology	-	2,000	3,000	N/A	N/A	Y
Centre for Eye Research Australia	N/A	N/A	N/A	-	-	
Child Health Research Institute	12,000	-	-	-	-	Y
Children's Medical Research Institute	N/A	N/A	N/A	-	-	
George Institute for International Health	N/A	N/A	N/A	-	-	
Heart Research Institute	N/A	-	-	-	-	Y
Howard Florey Institute of Experimental Physiology and Medicine	3,179	100	130	750	1,200	Y
Lions Eye Institute	N/A	N/A	N/A	N/A	N/A	
Ludwig Institute for Cancer Research	N/A	-	-	-	6	Y
MacFarlane Burnet Centre for Medical Research and Public Health	N/A	-	-	N/A	N/A	Y
Mental Health Research Institute of Victoria	-	-	-	-	-	Y
Murdoch Childrens Research Institute	0	1,150	1,063	1,284	863	Y
National Stroke Research Institute	N/A	-	-	-	-	Y
Prince Henry's Institute of Medical Research	-	-	-	N/A	-	Y
Prince of Wales Medical Research Institute	N/A	-	-	N/A	N/A	Y
Queensland Cancer Fund	N/A	N/A	N/A	N/A	-	
Queensland Institute of Medical Research	756	-	199	N/A	N/A	Y
Royal Brisbane & Women's Hospital Research Foundation	N/A	-	-	-	-	Y
Telethon Institute for Child Health Research	-	-	-	1,880	10,372	Y
Victor Chang Cardiac Research Institute	-	-	-	N/A	-	Y
Walter and Eliza Hall Institute for Medical Research	-	-	-	338	338	Y
Woolcock Institute of Medical Research	N/A	N/A	N/A	-	-	
Sub-total	15,935	6,250	7,560	4,251	12,779	
TOTAL	114,478	115,735	101,950	151,605	184,956	

Data used in consistent time series dataset					
Publicly funded research agencies	29,808	29,827	18,994	17,612	10,547
Universities	68,735	79,658	75,396	129,741	160,497
Medical research institutes	15,935	6,250	7,560	4,251	12,779
TOTAL	114,478	115,735	101,950	151,605	183,822

Coverage of consistent time series dataset (%)					
Publicly funded research agencies (%)	100.0	100.0	100.0	100.0	100.0
Universities (%)	100.0	100.0	100.0	100.0	99.3
Medical research institutes (%)	100.0	100.0	100.0	100.0	100.0
TOTAL	100.0	100.0	100.0	100.0	99.4

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Footnotes

1. Includes staff employed in the University of New England Agricultural Business Research Institute who are involved in producing, selling, upgrading and adapting to client requirements animal genetics software products.
2. Includes staff employed in the University of New England Agricultural Business Research Institute who are involved in producing, selling, upgrading and adapting to client requirements animal genetics software products.
3. Includes income from services associated with animal genetics software provided by the University of New England's Agricultural Business Research Institute and sourced from the Animal Genetics Breeding Unit ¬ a joint venture between the University of New England, the Department of Primary Industries and industry partners.
4. Swinburne: Commercialising Innovation and Intellectual Property (1,2,& 5 day formats) Opportunity Evaluation (OE) (12x3 hours) yet no of participants given as 'blank'

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