

Will confidence position the biotechnology industry for growth?

BioForum

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Quarter 4 FY11

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Highlights

Every quarter, BioForum reports on the Australian and US pharmaceutical, biotechnology and medical devices markets and the broader life sciences industry. As well as reviewing market performance, BioForum covers initial and secondary capital raisings, clinical milestones, partnerships and mergers and acquisitions.

Q4 FY11

- *The Life Sciences Index underperformed the ASX All Ordinaries, falling by 8.2 per cent.*
- *The Biotech/Pharma (ex majors) Index contracted by 1.8 per cent while the Medical Devices (ex majors) fell 16.6 per cent.*
- *There were no Australian IPOs during the three months to 30 June 2011 compared to 29 companies listing on the ASX, primarily in the resources sector.*
- *In Australia, secondary raisings in the final quarter of 2011 totalled \$126 million, which was a slight decrease from Q2 and Q3. Medical devices companies raised \$3 million (compared with \$22 million in Q3) while biotechs raised \$123 million (compared with \$154 million in Q3).*

Introduction

In the fourth quarter

The Life Sciences Index underperformed the ASX All Ordinaries in the quarter to 30 June. The All Ords fell by 5.5 per cent compared with a drop in the Life Sciences of 8.2 per cent. On an annual basis, the Life Sciences Index posted growth of 4.0 per cent driven by the flat performance of the majors throughout the year. However, the Life Sciences ex majors demonstrated outstanding growth of 49.3 per cent on an annual basis compared to the ASX All Ordinaries' modest growth of 7.7 per cent. The Australian Life Sciences ex majors also outperformed the NASDAQ Biotech's annual growth of 38.6 per cent.

"The solid annual growth in the Life Sciences ex majors indicates broad-based improvement in this sector. The reversal of some of these gains in the June quarter reflected both profit taking and the ripple effect on the index resulting from some adverse clinical trial announcements for a few higher profile participants," said PwC Life Sciences partner Manoj Santiago.

The industry will welcome the Government's announcement in this year's Budget regarding the R&D tax concession and cash rebate. "Without this legislation many early stage loss-making entities will find it difficult to raise funds," Manoj said. "It is important that the industry continues to come together with a strong voice."

Sector performance in detail

The Biotech/Pharma (ex majors) Index contracted by 1.8 per cent while the Medical Devices (ex majors) fell 16.6 per cent.

The NASDAQ Composite fell slightly (0.3 per cent) while the NASDAQ Biotech rose 6.5 per cent, in contrast to the Australian result where the Life Sciences Index underperformed the ASX All Ordinaries.



Craig Lawn
PwC Private Clients



Manoj Santiago
PwC Private Clients

IPOs and secondary listings

There were no Australian IPOs during the three months to 30 June 2011 compared to 29 companies listing on the ASX, primarily in the resources sector.

In the US, two IPOs entered the market, both in the biotech space, raising a total of \$159 million, which was in line with Q3's listings of \$176 million.

Although no Australian IPOs entered the market, Manoj believes annual results to FY11, combined with the support demonstrated by the market for secondary raisings, has increased confidence among private companies contemplating a future as a listed entity.

In Australia, secondary raisings in the final quarter of 2011 totalled \$126 million, which was a slight decrease from Q2 and Q3. Medical devices companies raised \$3 million (compared with \$22 million in Q3) while biotechs raised \$123 million (compared with \$154 million in Q3). Biotechs raised an average of \$2.9 million which was in line with the previous three quarters. The average amount raised by medical devices companies dropped significantly to \$0.5 million from \$2.46 million in Q1 to Q3.

By contrast, in the US, medical devices companies raised the majority of the secondary capital at \$2.1 billion while the biotech sector raised \$1.5 billion. The biotech sector has not raised totals comparable to those in the medical device sector since Q4FY10.

PwC Life Sciences partner Craig Lawn says mixed signals continue to come from the US and the Australian market is not immune to volatility and structural pressures. "The life sciences sector is often seen as a longer term play, and although the trend line is good, the impact of uncertain market conditions is often felt by this sector immediately," Craig said.

"Currently there is sound momentum in the biotech market with good companies raising funds quickly. It could be said that the stockmarket may have started to become a bit more accepting of biotech companies. In terms of dollars raised, FY11 rivals the peaks of FY07," he said. "When looking at the future of the biotech industry it is important to assess the health of the whole community and say that until all sections are in balance overall, sustainability must be questioned. The industry may currently be experiencing a bit of a purple patch but the important issue is that early stage companies, with good management, must come through to take the science and make it a reality."

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01

*Quarterly
key findings*

Quarterly key findings

Market performance	Q4 FY11	Page
Life sciences industry total MCap	A\$35,003m	9
Life sciences industry growth	-8.2%	
Pharma/biotech sector total MCap	A\$24,023m	11
Pharma/biotech sector growth	-7.7%	
Medical device sector total MCap	A\$10,980m	11
Medical device sector growth	-9.3%	
Individual company performance		
Top individual performer	Genetic Technologies Ltd	16
Change in market cap over the past four quarters	500%	
Bottom individual performer	Hexima Ltd	17
	Ascent Pharmahealth Ltd	
Change in market cap over the past four quarters	-100%	
Financing		
Australian IPO count	0	12
Total raised (A\$m)	A\$0m	
US IPO count	2	12
Total raised	A\$159m	
Australian secondary financing count	50	14
Total raised (A\$m)	A\$126m	
US secondary financing count	61	14
Total raised	A\$3,578m	
Announcements	Q4 FY11	Page
Australia		
Total partnerships formed this quarter	28	18
Total mergers and acquisitions	8	21
Total announcement for clinical trials	45	22
Pre-clinical	3	
Phase I	6	
Phase II	9	
Phase III	5	
Total regulatory announcements	36	24
Other	79	26

02

*Market
performance*

Performance overview

Figure 1: Weekly performance over the quarter of the Australian life sciences compared to major indices

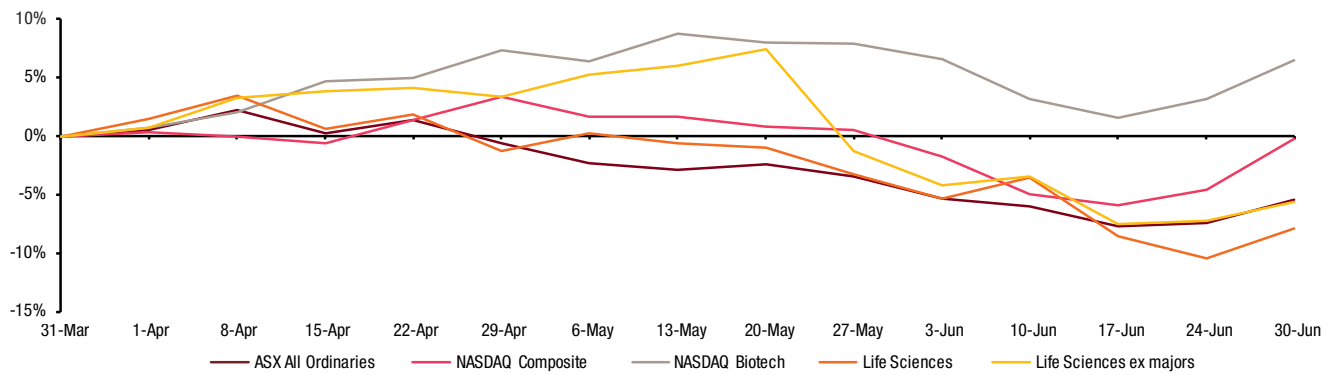


Table 1: Quarterly movements of the Australian life sciences sector by market capitalisation compared to major indices

	31-Dec-10	31-Mar-11	30-Jun-11	% Change (Dec-Mar)	% Change (Mar-Jun)
ASX All Ordinaries (Index)	4,847	4,929	4,660	1.7%	-5.5%
NASDAQ Composite (Index)	2,653	2,781	2,774	4.8%	-0.3%
NASDAQ Biotech (Index)	970	1,041	1,108	7.3%	6.5%
Life Sciences (market cap A\$m)	37,655	38,126	35,003	1.3%	-8.2%
Life Sciences ex majors (market cap A\$m)	8,005	9,618	9,074	20.1%	-5.7%

Graph 1: Quarterly movements of the Australian life sciences sector compared to major indices

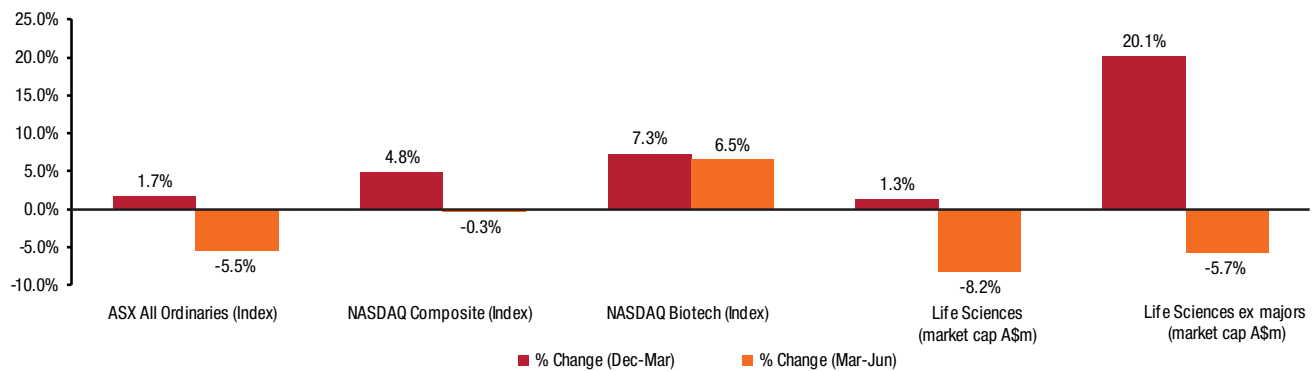


Figure 2: Two-year comparison of the Australian life sciences sector by market capitalisation compared to major indices

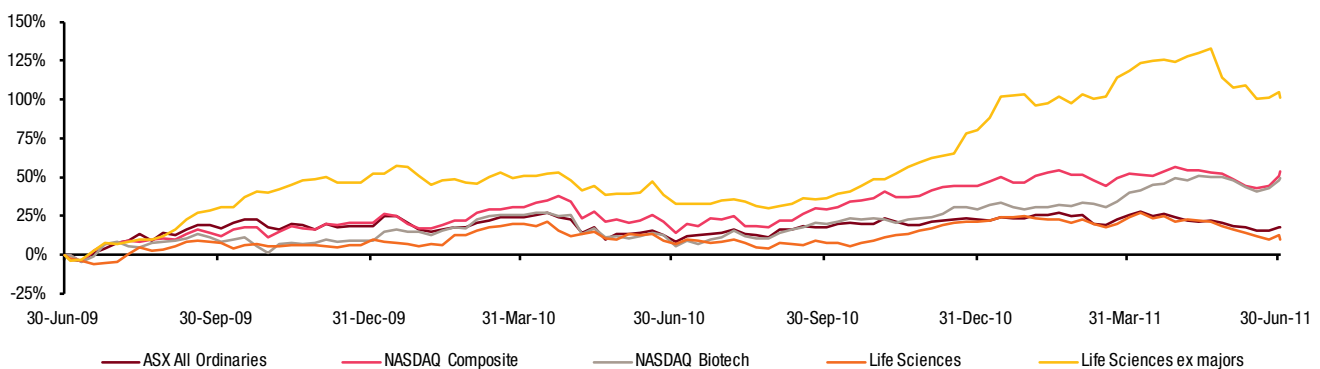


Table 2: Yearly performance of the Australian life sciences sector by market capitalisation compared to major indices

	% Change (Year to March 2011)			% Change (Year to June 2011)		
	31-Mar-10	31-Mar-11	% Change	30-Jun-10	30-Jun-11	% Change
ASX All Ordinaries (Index)	4,893	4,929	0.7%	4,325	4,660	7.7%
NASDAQ Composite (Index)	2,398	2,781	16.0%	2,109	2,774	31.5%
NASDAQ Biotech (Index)	745	1,041	39.6%	800	1,108	38.6%
Life Sciences (market cap A\$m)	37,199	38,126	2.5%	33,671	35,003	4.0%
Life Sciences ex majors (market cap A\$m)	6,701	9,618	43.5%	6,078	9,074	49.3%

Graph 2: Yearly performance of the Australian life sciences sector by market capitalisation compared to major indices

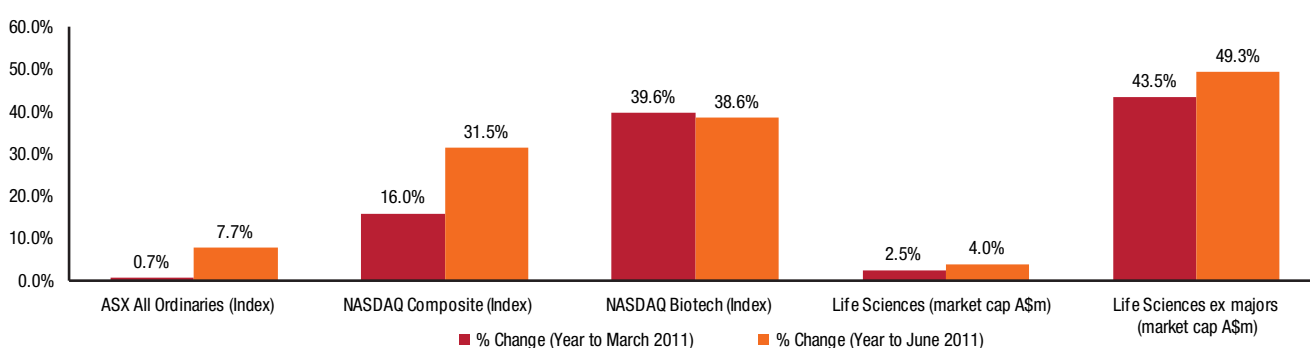


Figure 3: Quarterly performance of the Australian life sciences sector and subsectors

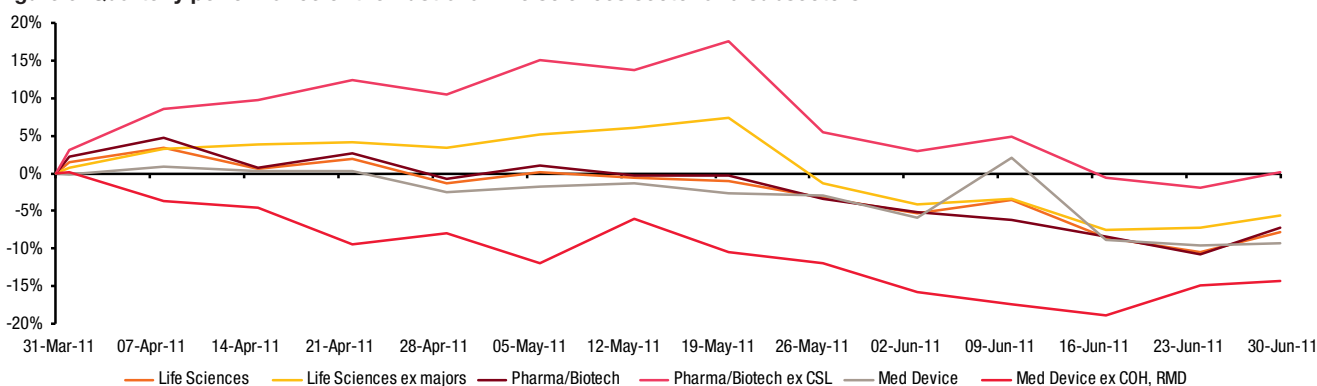


Table 3: Quarterly summary of the Australian life sciences indices' performance

	MCap (A\$m)	% of total value	Companies with share price gains	Proportion of subsector up	Companies with share price losses	Proportion of subsector down	Companies with share price flat	Proportion of subsector flat	Total number of companies
Pharma/Biotech	24,023	69%	19	30%	41	64%	4	6%	64
Pharma/Biotech ex CSL	6,569	72%	19	30%	40	63%	4	6%	63
Med Device	10,980	31%	6	16%	28	74%	4	11%	38
Med Device ex COH, RMD	3,004	33%	6	17%	26	72%	4	11%	36
Life Sciences	35,003	100%	25	25%	69	68%	8	8%	102
Life Sciences ex majors	9,074	106%	25	25%	66	67%	8	8%	99

Figure 4: Two-year comparison of the Australian life sciences indices' performance by market capitalisation

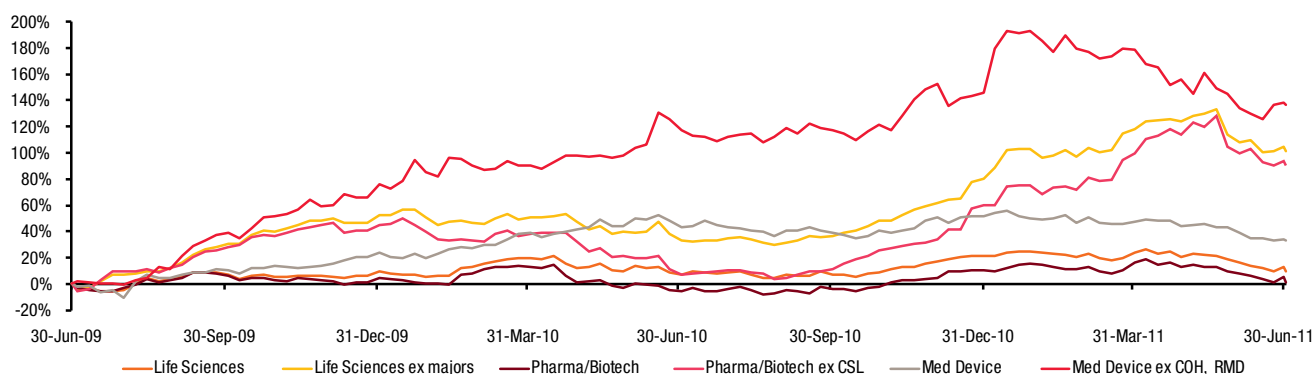
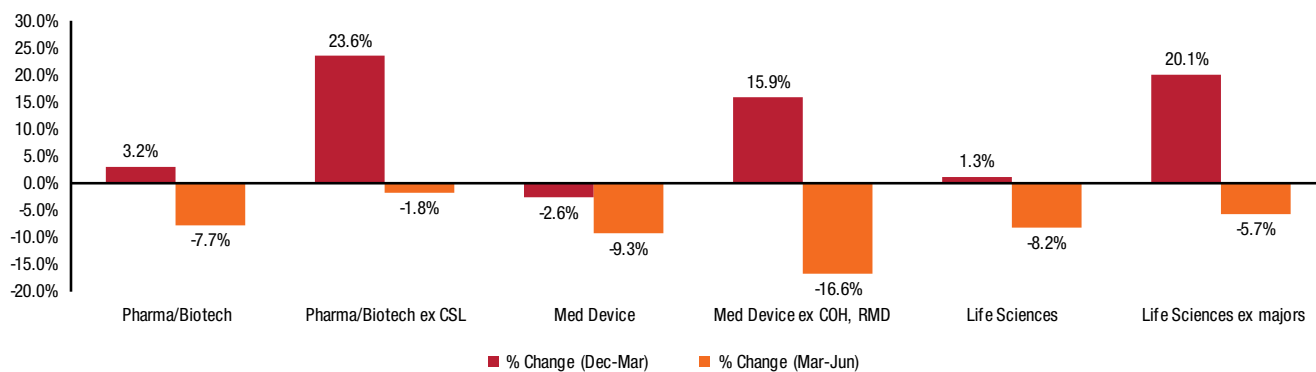


Table 4: Quarterly performance of the Australian life sciences sectors by market capitalisation A\$m

	31-Dec-10	31-Mar-11	30-Jun-11	% Change (Dec-Mar)	% Change (Mar-Jun)
Pharma/Biotech	25,228	26,024	24,023	3.2%	-7.7%
Pharma/Biotech ex CSL	5,412	6,687	6,569	23.6%	-1.8%
Med Device	12,427	12,102	10,980	-2.6%	-9.3%
Med Device ex COH, RMD	2,593	3,004	2,505	15.9%	-16.6%
Life Sciences	37,655	38,126	35,003	1.3%	-8.2%
Life Sciences ex majors	8,005	9,618	9,074	20.1%	-5.7%

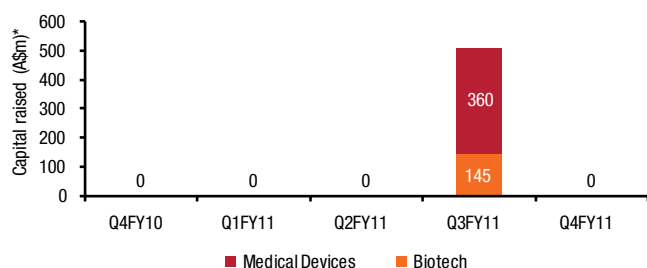
Graph 3: Quarterly performance of the Australian life sciences sector and subsectors by market capitalisation



IPO financing

Quarterly financing

Figure 5: Quarterly comparison of IPOs in Australia



*Amount shown is total market cap addition to the LS Index from IPOs on first day of trading

Figure 6: Quarterly comparison of IPOs in the US

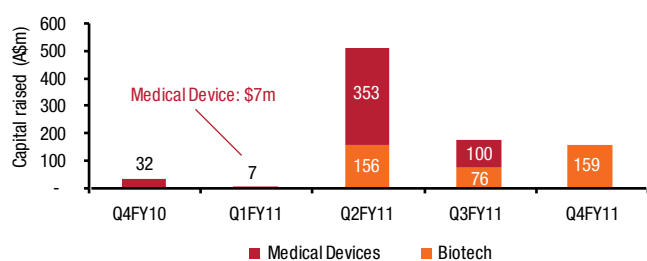


Table 5: Number of quarterly IPO Australian listings

	Biotech	Med Devices	ASX
Q4FY11	0	0	29
Q3FY11	1	1	29
Q2FY11	0	0	50
Q1FY11	0	0	19
Q4FY10	0	0	16

Table 6: Number of quarterly US IPO listings

	Biotech	Med Devices
Q4FY11	2	0
Q3FY11	1	3
Q2FY11	3	4
Q1FY11	0	1
Q4FY10	0	1

Table 7: Total of quarterly US IPO listing

Company	Listing date	Capital raised (A\$m)	Sector
Sagent Pharmaceuticals Inc	19/04/2011	100	Biotech
Tranzyme Inc	01/04/2011	59	Biotech
Total		159	

Yearly financing

Figure 7: Annual comparison of IPOs in Australia

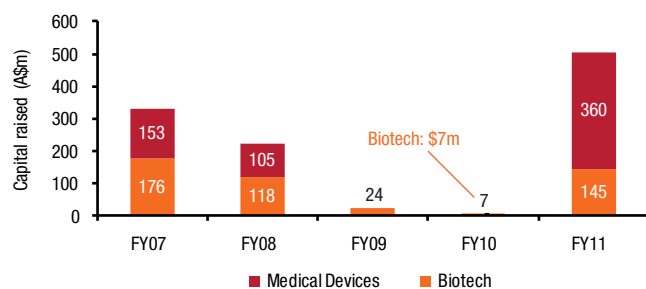


Table 8: Number of IPO listings in Australia

	Biotech	Med Devices	ASX
FY11	1	1	127
FY10	1	0	53
FY09	1	0	24
FY08	4	3	79
FY07	6	7	245

Figure 8: Annual comparison of IPOs in the US

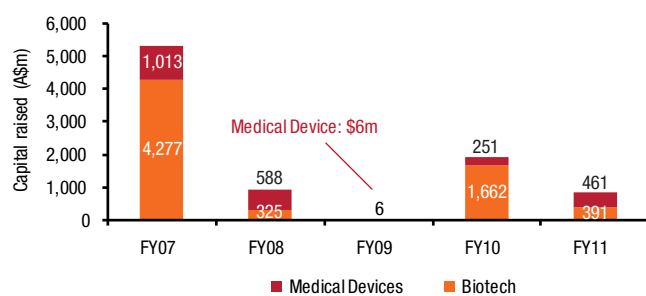


Table 9: Number of IPO listings in the US

	Biotech	Med Devices
FY11	6	8
FY10	7	2
FY09	0	1
FY08	8	8
FY07	42	12

Secondary finance market

Quarterly financing

Figure 9: Quarterly comparison of secondary financing in Australia

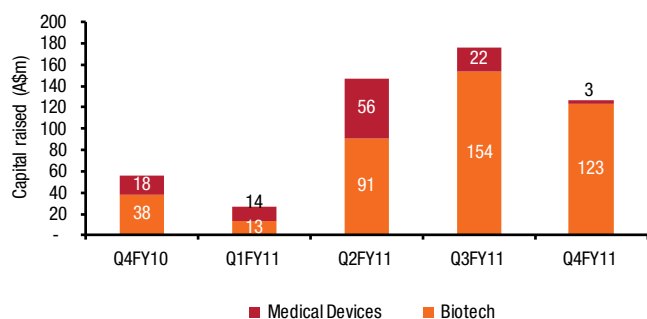


Table 10: Number of secondary deals (AU)

	Biotech	Avg. amount raised (\$m)	Med Devices	Avg. amount raised (\$m)
Q4FY11	43	2.9	7	0.5
Q3FY11	39	3.9	12	1.8
Q2FY11	41	2.2	13	4.3
Q1FY11	31	0.4	11	1.3
Q4FY10	26	1.5	6	3.0

Figure 10: Quarterly comparison of secondary financing in the US

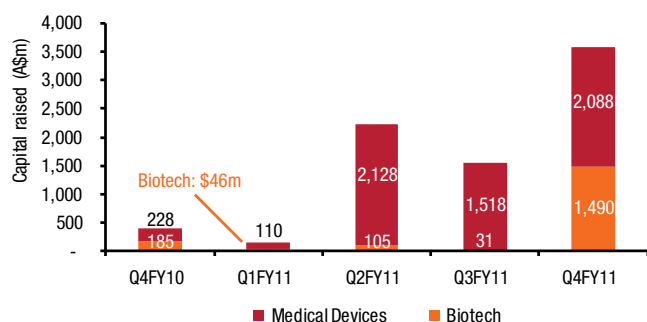


Table 11: Number of secondary deals (US)

	Biotech	Med Devices
Q4FY11	43	18
Q3FY11	8	43
Q2FY11	17	51
Q1FY11	2	9
Q4FY10	6	11

“The solid annual growth in the Life Sciences ex majors indicates broad-based improvement in this sector”

*PwC Life Sciences partner
Manoj Santiago*

Yearly financing

Figure 11: Annual comparison of secondary financing in Australia

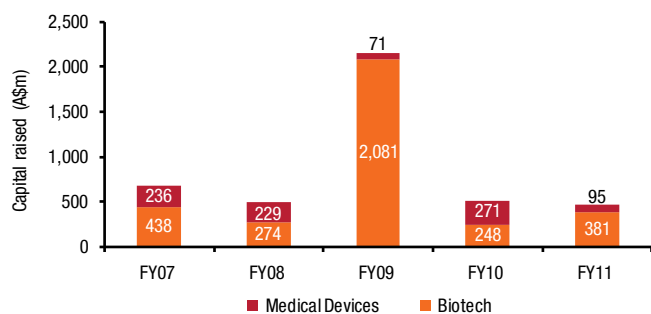


Table 12: Number of Australian secondary raisings

	Biotech	Med Devices
FY11	154	43
FY10	107	39
FY09	87	41
FY08	99	66
FY07	98	75

Figure 12: Annual comparison of secondary financing in the US

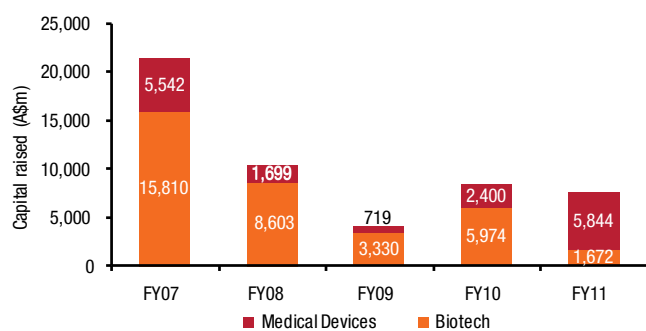


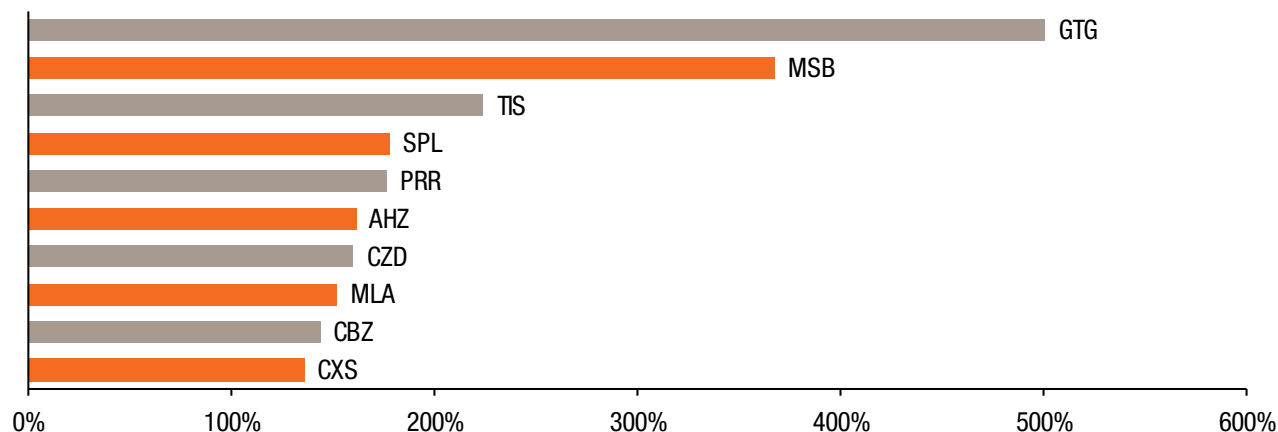
Table 13: Number of US secondary raisings

	Biotech	Med Devices
FY11	70	121
FY10	122	57
FY09	48	24
FY08	80	29
FY07	258	59



Top 10

Performers over past four quarters



01

GENETIC TECHNOLOGIES LTD (GTG)

Return: 500%
Closing price: \$0.21
MCap: A\$84.97m

Genetic Technologies granted Qiagen non-exclusive rights to a number of GTG patents, including non-coding analysis, gene mapping and internal standards. The company also extended its forensic DNA testing agreement with NSW Police by one year.

02

MESOBLAST LTD (MSB)

Return: 368%
Closing price: \$8.65
MCap: A\$2,419.70m

The shareholders of Angioblast approved its acquisition by Mesoblast which increased Mesoblast's ownership to 100% while also broadening its product pipeline across a wide range of clinical indication areas. The company was also granted key patents by the USPTO in two distinct patent families relating to neural degenerative disease exclusively.

03

TISSUE THERAPIES LTD (TIS)

Return: 224%
Closing price: \$0.58
MCap: A\$97.03m

Tissue Therapies was granted the third core patent in the VitroGro IP family in the US and received a Deed of Letters Patent from the US Patent and Trademark Office.

04

STARPHARMA HOLDINGS LTD (SPL)

Return: 178%
Closing price: \$1.50
MCap: A\$371.62m

Starpharma Holdings signed an agreement granting marketing rights over the VivaGel coated condom in Japan to Okamoto Industries. The company also announced successful results of a major clinical study that demonstrated efficacy of VivaGel for the treatment of bacterial vaginosis (BV).

05

PRIMA BIOMED LTD (PRR)

Return: 176%
Closing price: \$0.29
MCap: A\$262.15m

Prima BioMed's subsidiary, Oncomab Pty Ltd, entered into a licensing agreement with Bioceros to further develop Oncomab's technology to create an immunotherapy treatment for cancers. The company also entered into an agreement with the European Medicines Agency for a phase III clinical registration trial for the CVac ovarian cancer vaccine.

06

ALLIED HEALTHCARE GROUP LTD (AHZ)

Return: 161%
Closing price: \$0.08
MCap: A\$34.7m

BioMD merged with Allied Medical and changed its name to Allied Healthcare Group Ltd (AHZ), creating a diversified healthcare group focused on a growing distribution business and the commercialisation of new medical technologies.

07

CALZADA LTD (CZD)

Return: 160%
Closing price: \$0.07
MCap: A\$22.53m

Calzada signed a licensing deal with Phosphagenics Ltd to launch a cosmeceutical product containing Calzada's anti-obesity peptide, known as AOD9604, in combination with Phosphagenics' TPM technology. Calzada also signed an agreement with CuroNZ to develop and commercialise its neural regeneration peptides technology.

08

MEDICAL AUSTRALIA LTD (MLA)

Return: 152%
Closing price: \$0.03
MCap: A\$10.42m

Medical Australia signed a manufacturing partnership with leading global healthcare company Pharmatel Fresenius Kabi, which has a strong presence in Europe, Latin America, the US and the Asia-Pacific region. The company also signed its largest supply chain agreement with Healthscope to supply its range of IV consumable products.

09

CBIO LTD (CBZ)

Return: 144%
Closing price: \$0.63
MCap: A\$98.19m

The company successfully completed clinical development of its lead drug, XToll. The final study report is due later in 2011. In addition, Cbio filed a patent cooperation treaty application and a corresponding patent application in Taiwan.

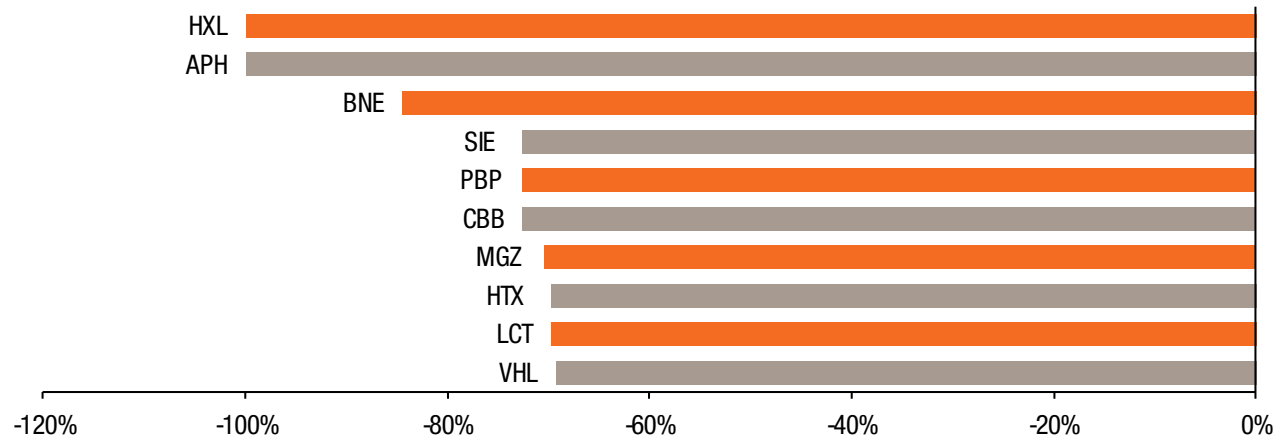
10

CHEMGENEX PHARMACEUTICALS LTD (CXS)

Return: 136%
Closing price: \$0.70
MCap: A\$219.49m

The company had a pre-NDA meeting with the US FDA concerning Omapro for the treatment of chronic myeloid leukaemia and no further clinical trials were required. The company was also awarded a US\$244,479 grant by the Internal Revenue Service.

Bottom 10 Performers over past four quarters



01

VIRAX HOLDINGS LTD (VHL)

Return: -69%
Closing price: \$0.02
MCap: A\$5.47m

Virax Holdings announced that Roche terminated its exclusive global development and commercialisation agreement with VHL covering TG4001, citing strategic reasons. In addition, VIR201 did not meet its primary or secondary immunological endpoints, failing to elicit a statistically significant increases in immune responses relative to the control group.

02

LIVING CELL TECHNOLOGIES LTD (LCT)

Return: -70%
Closing price: \$0.07
MCap: A\$21.61m

Living Cell Technologies executed a \$5.75m funding agreement and completed a share placement with ASK. It also announced that the net loss for the half year ended 31 December increased by 28% to \$4.3m.

03

HEALTHLINX LTD (HTX)

Return: -70%
Closing price: \$0.03
MCap: A\$5.09m

HealthLinx issued options to the Springtree Special Opportunities Fund in return for funding totalling up to \$7.23m.

04

MEDIGARD LTD (MGZ)

Return: -71%
Closing price: \$0.03
MCap: A\$2.55m

Dr Peter Clark announced his intention to resign from his executive role at Medigard but will continue to act as a consultant.

05

CORDLIFE LTD (CBB)

Return: -73%
Closing price: \$0.10
MCap: A\$15.09m

Cordlife announced a capital reduction to implement the demerger of Cordlife Singapore (and its operations) from CBB. The company also amended the formula to compute the maximum number of shares to be issued based on the historical book value of Cordlife Singapore.

06

PROBIOTEC LTD (PBP)

Return: -73%
Closing price: \$0.36
MCap: A\$18.79m

After reviewing its operations, Probiotec disposed of non-core assets, closed loss-making operations and acted to improve its business. It now expects an annualised increase in EBITDA of \$3.6m to \$4.1m.

07

SCIGEN LTD (SIE)

Return: -73%
Closing price: \$0.08
MCap: A\$41.42m

Loss before income tax for the period decreased from \$42.0m to \$17.6m however there was still a net decrease in cash and cash equivalents of \$759k. Including losses due to exchange rate fluctuations the total cash and cash equivalents decrease was \$963k leaving a closing balance of \$3.9m for the period ended 31 December 2010.

08

BONE MEDICAL LTD (BNE)

Return: -84%
Closing price: \$0.01
MCap: A\$1.56m

Bone Medical executed a convertible note funding deal with La Jolla Cove Investors for US\$6m at an interest rate of 4.75% a year, payable monthly in cash or fully paid ordinary shares and maturing in three years.

09

ASCENT PHARMAHEALTH LTD (APH)

Return: -100%
Closing price: -
MCap: A\$0m

Ascent Pharmahealth and Strides Arcolab entered into an agreement under which Linkace Investments, a company wholly owned by Strides, will acquire all Ascent shares. As such Ascent was delisted from the ASX on June 3.

10

HEXIMA LTD (HXL)

Return: -100%
Closing price: -
MCap: A\$0m

Hexima was delisted from the ASX on June 17 because its share volumes and share price were low and did not reflect the commercial and technical progress made by the company. It also announced the retirement of Professor Adrienne Clarke AC as non-executive director and the resignation of Joshua Hofheimer as a director. Steven Skala was reappointed as a director and Ross Dobinson and Professor Marilyn Anderson as directors.

03

Announcements

Partnerships

Company	Pharma/biotech partner	Application	Value (A\$m)	Comments
Biotechnology				Total 20
Analytica (ALT)	Medical Australia	Drug delivery	Not applicable	Analytica and Medical Australia have completed the first order of AutoStart Burettes for the NSW Ambulance Service.
Bionomics (BNO)	Merck Serono	Multiple sclerosis research program	Not applicable	Bionomics and Merck Serono have extended their drug research program by at least another year.
Calzada (CZD)	CuroNZ	Neural regeneration	Not disclosed	Calzada agreed to transfer its neural regeneration peptides technology to CuroNZ in return for royalties or a share of any sub-licensing income from developing and commercialising the NRP technology.
Cellmid (CDY)	Antitope	Anti-midkine antibody	Not disclosed	Cellmid and Antitope agreed to develop a humanised anti-midkine antibody for the treatment of rheumatoid arthritis and multiple sclerosis, using Cellmid's patented sequence and Antitope's proprietary EpiScreen and Composite Human Antibody technologies.
Genetic Technologies (GTG)	Orchid Cellmark	Use of GTG gene mapping	Not disclosed	Genetic Technologies agreed to grant Orchid non-exclusive rights to a number of GTG patents, including non-coding analysis, gene mapping and internal standards patents.
Genetic Technologies (GTG)	ViennaLab Diagnostics	Use of GTG patents	Not disclosed	Genetic Technologies granted ViennaLab non-exclusive rights to a number of GTG patents relating to its non-coding DNA.
Genetic Technologies (GTG)	World's leading pharmaceutical companies	Cancer	Not disclosed	Genetic Technologies agreed to use certain expertise and intellectual property to develop specific and novel genetic oncology profiling systems for the targeting of chemotherapy in late stage cancer patients.
HealthLinx (HTX)	Garvan Institute of Medical Research	Cancer	Not disclosed	HealthLinx and Garvan Institute of Medical Research have collaborated to assess the expression of a proprietary HealthLinx biomarker in plasma samples provided by the Garvan Institute and the relationship with chemotherapy and overall survival for sufferers of prostate cancer.
KarmelSonix (KSX)	Omron Healthcare	Asthma	Not disclosed	KarmelSonix will partner with Omron Healthcare exclusively in key global markets to launch KarmelSonix's products targeting an estimated 50m asthma patients.
NuSep (NSP)	Thermo Fisher Scientific	Gel distribution agreement	US\$850,000	NuSep signed a three year gel distribution agreement giving Thermo Fisher Scientific access to NuSep's nUView gels in the Bio-Rad and Invitrogen format cassettes, which account for about 90% of all the gels sold in the US.
Patrys (PAB)	Laureate Biopharmaceutical Services	Cancer	Not disclosed	Patrys has extended its relationship with Laureate to manufacture lead product PAT-LM1 for pre-clinical and clinical use. Patrys already has a contract with Laureate to produce a lead anti-cancer product, PAT-SM6.
Phosphagenics (POH)	Global dermatology company	Acne	Not disclosed	Phosphagenics has entered the second stage of a development agreement with a global dermatology company to jointly develop a prescription drug to treat acne.
Phosphagenics (POH)	Rodney Cutler	Hair care	Not disclosed	Phosphagenics and Rodney Cutler signed a non-exclusive agreement to develop new formulations using its platform technology to target the delivery of active ingredients into the scalp.
Phosphagenics (POH)	3M	Pain relief	Not disclosed	Phosphagenics has successfully completed the initial formulation collaboration with 3M and is now about to commercialise its first-in-class oxycodone pain patch.
Phylogica (PYC)	Pepscan Therapeutics	Peptide technologies	Not disclosed	Phylogica and Pepscan Therapeutics have agreed to evaluate the combination of their complementary peptide technologies for drug discovery.
Phylogica (PYC)	Roche	Drug delivery	Not disclosed	Phylogica has extended its collaboration with Roche and granted Roche an option to license a specific phylomer peptide with demonstrated ability to cross the blood-brain barrier.
pSivida (PVA)	Pfizer	Ocular hypertension and glaucoma	Up to \$168m plus royalties	pSivida and Pfizer have amended and reinstated their R&D agreement to focus solely on development of sustained release implants to deliver latanoprost for ocular hypertension and glaucoma.
Starpharma Holdings (SPL)	Okamoto Industries	Sexual health	Not disclosed	Starpharma Holdings has granted the marketing rights of the VivaGel coated condom for the Japanese market to Okamoto.

Company	Pharma/biotech partner	Application	Value (A\$m)	Comments
Stirling Products (STI)	Immune Network	Immune system optimisation	20m shares of Immune Network and share in profits	Stirling Products signed a conditional agreement with Immune Network to exclusively license ImmunoXel together with an improved formulation of ImmunoXel.
Stirling Products (STI)	Cice Group	Drug delivery	Not disclosed	Stirling Products and Zodiac Capital have entered into a conditional agreement with Cice Group for the exclusive use of licensed high density aerosol for the pulmonary delivery of a proprietary form of Deltaran.
Medical Devices				Total 8
AtCor Medical (ACG)	Sonic Healthcare	Cardiovascular disease	Not disclosed	AtCor Medical agreed to supply SphygmoCor devices to Sonic Healthcare's Lifescreen division for inclusion in its health evaluation service for insurance professionals and their clients.
CogState (CGS)	International pharmaceutical company	Iron deficiency	\$0.7m	CogState has signed a contract with an international pharmaceutical company to provide its cognitive testing technology and associated services for a phase 3 clinical trial for the treatment of iron deficiency.
Medical Australia (MLA)	Healthscope	IV consumables	Not disclosed	The company has signed its largest supply agreement to supply consumable products to Healthscope, Australia's largest private hospital operator, for two years.
MediVac (MDV)	NSW Ambulance	Infection control	Not disclosed	MediVac and NSW Ambulance have signed a distribution agreement whereby MediVac will supply its new SunnyWipes antimicrobial hand sanitising gel.
Medtech Global (MDG)	Federal Government	Record management	Not disclosed	Medtech Global has signed a contract with the Federal Government to deliver software to eHealth sites.
Medtech Global (MDG)	Rajiv Gandhi Cancer Institute and Research Center and The National Agro Foundation	Record management	Not disclosed	Medtech Global has signed a memorandum of understanding with India's Rajiv Gandhi Cancer Institute and Research Center and The National Agro Foundation to digitise patient records and patient management systems.
Nanosonics (NAN)	GE Healthcare	Diagnostic medicine	Not disclosed	Nanosonics signed a contract giving GE Healthcare distribution rights in the North American and Canadian healthcare markets. Nanosonics has also granted non-exclusive OEM rights to GE Healthcare for other regions globally where it already has approval to market the Trophon EPR ultrasound device.
OBJ (OBJ)	GlaxoSmithKline Consumer Healthcare	Oral healthcare	Not disclosed	OBJ and GlaxoSmithKline Consumer Healthcare signed an exclusive agreement to develop new products which make use of OBJ's proprietary Enhanced Transdermal Polymer (ETP) and Field In Motion (FIM) technologies in the field of oral healthcare.

Mergers, acquisitions and divestment

Dominant company	Target company	Type of deal	Value (A\$m)	Comments
Biotechnology				Total 6
BioProspect (BPO)	Frontier Gasfields	Investment	Not disclosed	BioProspect and Frontier Gasfields decided to extend the exclusivity period in their agreement until seven days after the next BPO general meeting.
Cordlife (CBB)	Cordlife Singapore	Demerger	Not disclosed	Cordlife demerged its operations from Cordlife Singapore.
Novogen (NRT)	Marshall Edwards	Sale	\$4m	Novogen finalised an asset purchase agreement between itself and its subsidiary Marshall Edwards.
Progen Pharmaceuticals (PGL)	EPI Pharmaceuticals	Divestment	Not disclosed	Progen completed the restructuring of its business and set up a new company, EPI Pharmaceuticals, in the US to hold its epigenetic and cell proliferation assets.
Strategic Pooled Development	Cryosite (CTE)	Share sale	\$870,644	Cryosite announced that Strategic Pooled Development has sold 8,706,443 shares in Cryosite at a price of 10 cents per share.
Qiagen	Cellestis (CST)	Acquisition	A\$3.55 per share	Cellestis approved a takeover by Qiagen via a scheme of arrangement.
Medical Devices				Total 2
BioMD (BOD)	Allied Medical	Merger	Not disclosed	BioMD announced that its bid for Allied Medical has closed and it will start compulsory acquisition of the remaining 10% shares of Allied Medical once the 90% minimum acceptance level is reached. The new entity will be named Allied Healthcare Group.
CogState (CGS)	Axon Potential	Divestment	Not applicable	CogState has launched Axon Potential, a new venture dedicated to creating cognitive training programs for competitive athletes.

Clinical trials

Company	Drug	Application	Comments
Pre-clinical			Total 3
Cellmid (CDY)	Midkine (MK)	Acute myocardial infection	Cellmid announced that it has completed its milestone pre-clinical studies into the efficacy of Midkine and it is now confirmed that MK does indeed reduce heart damage due to ischemia and reperfusion injury.
Circadian Technologies (CIR)	VGX-100	Cancer	The company announced that VGX-100 is effective in combination with Avastin and Docetaxel therapy in ovarian cancer tumors. Results show potential for VGX-100 as a treatment for 'front of the eye' diseases.
Progen Pharmaceuticals (PGL)	PG545	Cancer	The company announced that PG545 slows solid tumour growth and inhibits the development of spontaneous lung metastasis in a model of breast cancer. Moreover, blockade of metastasis is linked with significantly improved overall survival.
Phase I			Total 6
Agenix (AGX)	ThromboView	Pulmonary embolism	Results of a phase1b study confirmed the safety of Agenix's lead diagnostic product for the detection of pulmonary embolism.
Avita Medical (AVH)	ReCell Spray On Skin	Burns, hypo and hyperpigmentation	The company announced that the clinical study of 18 patients suffering from partial thickness burns demonstrated successful wound healing after being treated with ReCell Spray On Skin.
Bionomics (BNO)	BNC210	Cancer	An independent research study conducted by Norwegian University of Science and Technology has demonstrated a key link between the effectiveness of antidepressants and neurogenesis. This provides further validation of BNC210 following the recent success of a phase1b trial.
Circadian Technologies (CIR)	IMC-3C5	Cancer	Circadian announced that its licensee ImClone Systems has commenced the first phase 1 clinical trial of its fully-human monoclonal antibody IMC-3C5.
CSL (CSL)	CSL627	Haemophilia	In-house studies have shown that the molecular integrity of CSL627 is significantly increased using a single chain design, resulting in a homogeneous product that may be more stable than currently available options.
Patrys (PAB)	PAT-SM6	Cancer	The clinical results of PAT-SM6 showed that this antibody helps in significant reduction of metastases in test animals. This positive result supports the ongoing development of PAT-SM6 as an anti-cancer therapeutic.
Phase II			Total 9
BioMD (BOD)	Tissue heart valve	Heart disease	A feasibility study by BioMD's subsidiary Celxcel and a global tissue heart valve manufacturer completed its first major milestone late last year and is continuing to the second phase. The study has shown positive result in both the objectives.
Circadian Technologies (CIR)	Avastin	Cancer	VEGF-C has shown to be significantly raised just prior to and at the time of disease progression while VEGF-D has shown to be significantly increased after disease progression. The results support the target of additional VEGF family proteins to improve treatment outcomes.
CogState (CGS)	TC-5619	Schizophrenia	CogState announced that its computerised tests of cognition were successfully used as the primary endpoint by Targacept to determine the effectiveness of the drug TC-5619 to improve cognitive function in schizophrenia sufferers.
CogState (CGS)	Cognitive testing technology	Depression	CogState's computerised tests of cognition were successfully used by EnVivo Pharmaceuticals to determine the effectiveness of the drug EVP-6124 to improve cognitive function in patients suffering from schizophrenia.
Mesoblast (MSB)	Revascor	Cardiovascular disease	Phase 2 clinical trial results show Mesoblast's proprietary 'off-the-shelf' adult stem cell product Revascor increases blood supply to damaged heart muscle.
Neuren Pharmaceuticals (NEU)	NNZ-2566	Brain injury	The company has completed the enrolment of 30 patients in the phase II Intrepid-2566 trial and data on safety have been independently reviewed by the Data and Safety Monitoring Committee which has recommended progression to the second cohort.
Novogen (NRT)	GLYC-101	Wound healing	Novogen's subsidiary Glycotex submitted final results of the phase 2 clinical trial of its drug GLYC-101. The results show that the time to complete wound closure was shorter for all applications compared to the placebo.
Prana Biotechnology (PBT)	PBT2	Huntington's disease	A phase IIa trial showed that PBT2 has the ability to restore cognition in degenerative conditions, together with positive data achieved with PBT2 in mouse models.
Starpharma Holdings (SPL)	VivaGel	Bacterial vaginosis	The company announced a major phase 2 clinical study demonstrated efficacy of VivaGel for the treatment of bacterial vaginosis (BV).
Phase III			Total 5
Bioniche Life Sciences (BNC)	Urocidin	Cancer	Phase III trial results showed that Urocidin may provide an alternative to cystectomy for patients with bacillus Calmette-Guérin (BCG) refractory non-muscle invasive bladder cancer.
Biota Holdings (BTA)	CS-8958 or Inavir	Influenza A and B	A phase III prophylaxis trial for CS-8958 showed that one or two doses were effective in preventing influenza transmission.
Prima BioMed (PRR)	CVac	Ovarian cancer	The potency assay for the CVac immunotherapy ovarian cancer vaccine has been successfully developed. This will help in establishing CVac as a pharmaceutical product.
pSivida (PVA)	Iluvien	Diabetes	The company presented new safety and efficacy data from a phase 3 study of Iluvien in diabetic oedema. pSivida plans to submit this new subgroup data to the FDA in support of its pending new drug application.

Company	Drug	Application	Comments
QRxPharma (QRX)	MoxDuo IR	Acute postoperative pain	The company announced successful completion of its phase 3 study comparing the tolerability and safety profile of MoxDuo. At equi-analgesic doses, it showed positive results as MoxDuo produced less respiratory depression than morphine or oxycodone.
Other		Total	Total 22
Antisense Therapeutics (ANP)	ATL1103	Cancer	The company announced that ATL1103 has shown the successful inhibition of GHR and suppression of serum IGF-I levels in both mice and primates. It plans an experimental program to evaluate the potential of ATL1103 in cancer prevention and therapy.
AtCor Medical Holdings (ACG)	SphygmoCor	Blood pressure	A study published in the American Heart Association's journal, <i>Hypertension</i> , showed that central blood pressure measurement is more effective than brachial blood pressure measurement. This demonstrates the usefulness of SphygmoCor, which measures central blood pressure.
Benitec (BLT)	RNA interference technology (ddRNAi)	Cancer	Independent researchers in the US have demonstrated the potential of Benitec's gene silencing technology to provide effective human therapeutics for prostate cancer.
Benitec (BLT)	Gene silencing technology	Pain management	An independent study showed using Benitec's gene silencing technology significantly reduces pain in animals without side effects and validates Benitec's chronic neuropathic pain program.
Bionomics (BNO)	BNC105	Cancer	The phase 1 clinical trial data of BNC105 was published in a prestigious international cancer journal. This trial identified doses for phase 2 trials and confirmed both safety profile and mechanism of action.
Cellmid (CDY)	Celera's six biomarker lung cancer diagnostic panel	Cancer	The recently completed study showed 83% sensitivity and specificity in non-smoking lung cancer patients. Calera expects to use this panel of biomarkers when CT tests show irregularities.
Circadian Technologies (CIR)	VGX-100	Cancer	The company demonstrated that its lead anti-cancer therapeutic, VGX-100, significantly inhibits tumour growth and spread in a variety of different mouse models of human cancer. Thus it has potential to be a useful new treatment for some types of cancer.
Eastland Medical Syatems (EMS)	ArTiMist clinical trial	Malaria	The company announced that a further 50 patients will be recruited for treatment under the Burkina Faso component of the trial.
Ellex Medical Lasers (ELX)	Retinal regeneration therapy	Early age-related macular degeneration	The company announced positive clinical results for its breakthrough retinal regeneration therapy which showed Ellex 2RT improved visual function and drusen reduction in high-risk patients.
HeartWare International (HIN)	Ventricular assist system	Heart failure	The company reported additional data from a bridge-to-transplant clinical trial showing survival rates of 94% at six months for continued access patients.
Neuren Pharmaceuticals (NEU)	Antibodies targeting trefoil factors	Cancer	Perseis Therapeutics, a subsidiary of Neuren, completed the in vitro testing phase of its antibody screening program and has selected three fully human monoclonal antibodies to validate in an animal model using human breast cancer cells.
Phylogica (PYC)	Phylomer peptides	Not disclosed	The company announced promising results of its novel cell-penetrating phylomer peptides while making a presentation for the first time at the TIDES Conference on Peptide Discovery and Development.
Progen Pharmaceuticals (PGL)	PI-88	Hepatocellular carcinoma	Progen's licensee Medigen Biotechnology has approval for a phase III clinical trial in hepatocellular carcinoma in Taiwan.
QRxPharma (QRX)	MoxDuo	Acute pain following surgical procedures	The company presented clinical data on MoxDuo comparative trials at the American Pain Society (APS) Annual Scientific Meeting.
Solagran (SLA)	Ropren	Liver transplantation	The company announced that the study to determine efficacy of Ropren in the preparation of a living related donor's liver for transplantation has shown very positive results.
Solagran (SLA)	Ropren	Liver cirrhosis	The clinical trials showed Ropren can influence not only the cells of the liver, but also the cells of nervous tissue of the central as well as peripheral nervous systems.
Starpharma Holdings (SPL)	Docetaxel	Breast cancer	The company nominated Docetaxel as a lead candidate in its cancer drug delivery program following encouraging early results.
Sunshine Heart (SHC)	C-Pulse heart assist system	Early heart failure	The company completed an initial feasibility animal study of a next-generation transcatheter C-Pulse Heart Assist System. This fully-implantable C-Pulse model would eliminate the need for wires to breach the skin, thereby improving patient comfort and reducing the risk of infection.
Unilife Corporation (UNS)	One of its portfolio devices	Targeted organ delivery	Unilife announced that one of its portfolio devices was selected by a leading global pharmaceutical company for clinical trials in conjunction with a pipeline biologic drug for targeted organ delivery.
Viralytics (VLA)	Cavatak	Cancer	Viralytics has approval to commence the administration of the highest dosing level of Cavatak in the final group of patients with late stage melanoma, breast or prostate cancer in the phase I intravenous study.
Virax holdings (VHL)	TG1042	Skin cancer	The company announced the appointment of a board to advise on the positioning and clinical development of TG1042 as it moves towards a clinical trial.
Virax holdings (VHL)	TG1042	Skin cancer	The company announced that Nantes University Hospital in France is conducting a clinical trial in metastatic melanoma which combines TG 1042 treatment and tumour infiltration lymphocytes treatment. Preliminary results are expected in early 2012.

Regulatory

Company	Product	Application	Comments
Biotechnology			Total 33
Acrux (ACR)	Recuvyra	Pain management following surgery in dogs	The Committee for Medicinal Products for Veterinary Use (CVMP) of the European Medicines Agency has recommended the granting of a marketing authorisation for the veterinary product Recuvyra transdermal solution for dogs.
Acrux (ACR)	Ellavie	Menopause	The company has received marketing authorisation for Ellavie, Acrux's estradiol spray for treating menopause symptoms, from the Medical Products Agency in Sweden.
Antisense Therapeutics (ANP)	ATL1103	Cancer	The company has received full ethical approval from the Human Research Ethics Committee to conduct the planned phase 1 trial of ATL1103. Further, on 29/06/2011, the first human subject was dosed in the trial of ATL1103.
Benitec (BLT)	Patent for gene silencing	N/A	The company announced that two further patents owned or licensed exclusively by Benitec have been granted or allowed in Europe and the US respectively. Benitec has also been granted another RNA interference patent in Japan relating to its treatment of Hepatitis C.
Bioniche Life Science (BNC)	Marketing authorisation for Folltropin	N/A	Bioniche has been granted authorisation to market its Folltropin-V livestock embryo transfer technology in China.
Calzada (CZD)	First PolyNovo patent in US	N/A	Calzada's subsidiary PolyNovo Biomaterials has received a formal notice from the USPTO in respect of the Chain Extenders patent. This is PolyNovo's first allowance of a patent in the US. The company has also been granted another patent for its bone disorder treatment.
Clinuvel Pharmaceuticals (CUV)	Patent for Scenesse	Skin protection	The company has been granted an Australian patent for the exclusive use and manufacture of formulations of alpha melanocyte stimulating hormone (alpha-MSH) analogues until early 2025.
Cryosite (CTE)	Scope of TGA licence expanded for cord blood cells	N/A	The Therapeutic Goods Administration broadened Cryosite's licence to include the processing, storage on site and release for supply of Directed Allogenic Haematopoietic Progenitor cord blood cells.
CSL (CSL)	Warning letter from FDA	N/A	US FDA issued a warning letter to CSL Biotherapies, a division of CSL, in relation to the irregularities it found when it inspected the CSL Biotherapies' influenza vaccine manufacturing facilities, processes and procedures at the Parkville, Australia site, in March 2011.
Genetic Technologies (GTG)	Conclusion of first assertion suit	N/A	The company has concluded the first assertion suit it instituted in the US District Court against nine companies in February 2010 and has secured over \$14.5m in licensing revenue since the filing.
Genetic Technologies (GTG)	US approval granted for Brevagen	N/A	Genetic Technologies secured US approval for the launch of the Brevagen breast cancer risk test.
Genetic Technologies (GTG)	New infringement suit	N/A	Genetic has filed a suit in the US District Court in Colorado, asserting infringement of its primary non-coding patent against a number of companies.
Genetic Technologies	Settlement of legal suit	N/A	The company has executed a settlement and licence agreement with Navigenics.
Giaconda (GIA)	Deed of company arrangement approved	N/A	The administrator of Giaconda, Nicholas Crouch, announced that the deed of company arrangement at the second creditors' meeting was approved by all parties.
HealthLinx (HTX)	Patent for AGR2 biomarker	N/A	HealthLinx Limited has been granted a patent for its AGR2 biomarker by the European Patent Organisation.
HealthLinx (HTX)	Patent approval for OviPlex	Cancer	The company has been granted a patent for its OviPlex technology in Australia.
HealthLinx (HTX)	Objection to HealthLinx patent dismissed	N/A	The company announced that the European office has rejected Sigma Aldrich's objection against HealthLinx's IgY Immunodepletion patent.
Immuron (IMC)	Meeting with US FDA regarding IMM 124E	N/A	Immuron has been granted a pre-IND meeting with the US FDA as it progresses towards a phase IIb clinical trial for its lead drug candidate IMM 124E to treat non-alcoholic steatohepatitis.
Mesoblast (MSB)	Patent relating to Mesenchymal Precursor Cell	Neural degenerative disease	The company has been granted key patents by the USPTO in two distinct patent families to which Mesoblast has exclusive worldwide commercial rights.
Mesoblast (MSB)	US FDA clears phase 2 trial	N/A	US FDA has approved a phase 2 clinical trial of Mesoblast's technology after pre-clinical results showed it reversed degenerative processes and promised to relieve lower back pain.
NuSep (NSP)	Settlement of a legal case with Thermo Fisher Scientific	N/A	NuSep settled a US intellectual property case over its patented analytical gel cassettes with Thermo Fisher Scientific. The terms of this settlement are confidential.

Company	Product	Application	Comments
Patrys (PAB)	Patent grant for PAT-SC1, PAT-LM1 and PAT-CM1	N/A	Patrys has been granted patents for its anti-cancer products PAT-SC1, PAT-LM1 and PAT-CM1 which cover the three largest markets for drug sales, the US, Europe and Japan.
Pharmaxis (PXS)	European marketing authorisation declined for Bronchitol	Cystic fibrosis	The Committee of Medicinal Products for Human Use has refused marketing authorisation for Bronchitol citing that effectiveness and benefits have not been established.
Phylogica (PYC)	A key US patent granted	N/A	The company has been granted a key US patent for its peptide drug discovery platform.
Prana Biotechnology (PBT)	PBT2 and selected 8-hydroxyquinoline compounds	N/A	The company has been granted a key PBT2 patent in Japan. This patent also covers pharmaceutical compositions containing PBT2 and selected 8-hydroxyquinoline compounds and the use of the compounds for the treatment of Alzheimer's disease.
Prima BioMed (PRR)	Mannan fusion protein conjugated vaccine	N/A	Prima's subsidiary Cancer Vac has been granted a patent from the Japanese Patent Office for manufacture of the mannan fusion protein conjugated vaccine to a patient's own dendritic cells.
Prima BioMed (PRR)	CVac	Cancer	The Dubai Healthcare City (DHCC) has granted approval for the marketing and distribution of CVac.
Progen Pharmaceuticals (PGL)	Recognition from European Medicine Agency	N/A	The company announced that its licensee Medigen Biotechnology Corporation has been granted orphan medicinal product designation by the EMA.
pSivida (PVA)	Iluvien	Diabetes	pSivida's licensee Alimera Sciences resubmitted a new drug application for the investigational drug Iluvien for the treatment of diabetic macular oedema (DME) to the US FDA.
QRxPharma (QRX)	MoxDuo IR	N/A	The company has received a new US patent which covers a proprietary dosing algorithm for converting patients from intravenous opioid administration to orally administered MoxDuo IR.
Sirtex Medical (SRX)	Update on legal proceedings	N/A	The Federal Court of Australia has upheld Dr Gray's appeal in part thereby reducing the damages awarded to Sirtex by \$8,165.90 and ordered Dr Gray to pay Sirtex's costs.
Solagran (SLA)	Finalisation of litigation	N/A	Legal proceedings against <i>The Age</i> newspaper have been finalised and the company is now satisfied that the matter has come to an end.
Solagran (SLA)	Bioeffective A	N/A	The company announced that the Ministry of Health in the United Arab Emirates has approved Bioeffective A for use in UAE and the inaugural batch will be despatched to Dubai soon.
Medical Devices			Total 3
Austofix Group (AYX)	Prosthesis	N/A	The company received regulatory approval to begin marketing its total hip replacement product, a well-tried prosthesis with proven clinical outcomes in major European markets.
REVA Medical (RVA)	ReZolve	Cardiovascular disease	The company has received regulatory approval from the German health authority, BfArM, to begin a clinical trial. Approval was also granted by the Brazilian Ministry of Health.
Sunshine Heart (SHC)	C-Pulse Heart Assist System	Cardiovascular disease	The company announced that the US FDA has approved the company's investigational device exemption supplement for the C-Pulse Heart Assist System allowing it to implant an additional 20 patients and to add two new study sites.

Other news

Company	Product	Application	Comments
Biotechnology			Total 50
Actinogen (ACW)		N/A	Mark Killmier has resigned as company secretary and Suraj Sanghani has been appointed in his place.
Agenix (AGX)		N/A	The company has completed the fourth draw down on a standby subscription agreement with Fortrend Securities. This means that Agenix has satisfied all the conditions under the terms of the agreement and is under no further legal obligation.
Agenix (AGX)	AGX 1009	Hepatitis B	Agenix will file an application to China's State Food and Drug Administration to begin clinical trials in China for its lead Hepatitis B drug, AGX 1009.
Ascent Pharmahealth (APH)		N/A	The Supreme Court of Australia approved the scheme between Ascent Pharmahealth and its shareholders.
Avexa (AVX)		N/A	Joe Bains has retired as director and chairman of the company and non-executive director Iain Kirkwood has been appointed as the new chairman of the company.
Avita Medical (AVH)		N/A	The company has expanded its sales and marketing operations into three new countries: Russia, the Netherlands and Portugal. It has established commercial operations in Australia, France, Germany and the United Kingdom.
Avita Medical (AVH)	Recell Spray-On Skin	Burns	The company has started commercialisation of Recell Spray-On Skin in six countries in the Arabian peninsula by introducing the product to a dozen clinicians.
Avita (AVH)	ReCell Spray-On Skin	Hypertrophic dyspigmented scars	The company introduced its ReCell Spray-On Skin to hundreds of clinicians at a special ReCell symposium held at in Bochum, Germany.
Benitec (BLT)		N/A	The company has announced the appointment of Gregory West as joint secretary alongside John Rawling to provide additional resources and flexibility to the company.
Bionomics (BNO)		N/A	The company has entered into a contract to sell its head office and research facility and a long term leaseback arrangement with the purchaser for a 10 year period.
Bionomics (BNO)		N/A	The company announced the appointment of Melanie Young to the position of CFO and company secretary.
Biota Holdings (BTA)	Laninamivir	Influenza	Biota Holdings' subsidiary, Biota Scientific Management, has been awarded an estimated US\$231m contract by BARDA for the advanced development of Laninamivir. The contract is fully funded over an estimated five years and is contingent upon the delivery of key milestones.
Biota Holdings (BTA)		N/A	Biota received notification from GlaxoSmithKline that Relenza sales for the March 2011 quarter were worth \$14.1m and royalties were \$1m.
Biota Holdings (BTA)		N/A	The company announced that sales of Inavir in Japan were JPY 3.9bn and royalties to Biota of \$A1.6m in the three months to 31 March 2011.
Bone Medical (BNE)		N/A	The company appointed CEO Peter Young to the board as an executive director.
CBio (CBZ)		N/A	Stephen Streeter has resigned as a director of the company.
ChemGenex Pharmaceuticals (CXS)		N/A	The company announced that Dan Janney, George Morstyn, Geoff Brooke, Jean-Luc Tétard and Elmar Schnee have resigned as non-executive directors. Kevin Buchi, Wilco Groenhuysen and Ron Kal have been appointed as directors of the company. Kal has also been appointed as joint company secretary.
Clinuvel Pharmaceuticals (CUV)		N/A	The company has relocated its head office which is also its registered office to Victoria, Australia.
Genetic Technologies (GTG)	Brevagen	Cancer	The company has processed its first Brevagen patient sample and successfully tested logistics, analytical, IT and billing systems.
Genetic Technologies (GTG)	Brevagen	Cancer	The company, through its north American division Phenogen Sciences, has launched the new Brevagen genetic test for assessing non-familial breast cancer risk.
HealthLinX (HTX)		N/A	The company has appointed US-based CPC Clinical Research as a contract research organisation to work with HealthLinX and manage its FDA submission.
HealthLinX (HTX)		N/A	The company announced that the uptake of OvPlex in Singapore has exceeded budget. This is a significant milestone for both Inex and distributors in Singapore.
Holista CollTech (HCT)		N/A	The company announced the appointment of Paul Anthony Rengel as non-executive chairman.
Holista CollTech (HCT)	Food grade Collagen	N/A	The company announced that it has completed the development of halal food grade collagen and it is ready for commercialisation.
Immuron (IMC)		N/A	The company has appointed Dr Arun J. Sanyal to be the global principal investigator for an upcoming clinical trial for the treatment of non-alcoholic steatohepatitis (NASH).
KarmelSonix (KSX)		N/A	Michael Thomas has been appointed as CEO of KarmelSonix.
Living Cell Technologies (LCT)		N/A	The company announced that it has changed its registered office address. However its GPO Box mailing address remains unchanged. Dr Ross Macdonald has resigned as CEO and as a director of the company and Professor Robert Elliott has been appointed as acting CEO.
Mesoblast (MSB)		N/A	The company has been included in the S&P/ASX 200 Index from Wednesday 27 April 2011.
Neuren Pharmaceuticals (NEU)		N/A	The company announced a 1:1 renounceable rights issue to its existing Australian and New Zealand shareholders at an offer price of A\$0.013 each.

Company	Product	Application	Comments
Novogen (NRT)		N/A	Novogen's subsidiary Marshall Edwards announced the appointment of William Rueckert to its board of directors. Marshall Edwards appointed Robert Mass as chief medical officer. Dr Mass has served as a consultant for Marshall Edwards since October 2010.
NuSep (NSP)		N/A	NuSep launched two new gel products at the US HUPO conference held in Raleigh, North Carolina.
NuSep (NSP)		N/A	The company has inducted Professor John Aitken into the Australian Academy of Science. Professor Aitken is the inventor of NuSep's Sperm Separation device and was honoured for his contribution in the IVF field.
NuSep (NSP)		N/A	Based on actual results to 30 April 2011, the company now expects that the full year results will show a loss of \$2.5m.
Patrys (PAB)		N/A	The company announced the appointment of Dr Marie Roskrow as CEO.
Pharmaxis (PXS)	Bronchitol	Cystic fibrosis	Listing of Bronchitol on the Australian Pharmaceutical Benefits Scheme (PBS) was delayed due to uncertainties raised by the PBAC. A resubmission was prepared to address the issues raised.
Pharmaxis (PXS)		N/A	The company has given an oral explanation to the Committee for Medicinal Products for Human Use (CHMP) as part of its European Union marketing application for Bronchitol. The committee voted against approval.
Phosphagenics (POH)	BodyShaper cellulite cream	Cellulite reduction	Phosphagenics launched its novel anti-cellulite technology in Australia after US studies produced good results.
Phylogica (PYC)		N/A	Greg MacMillan has resigned as company secretary and Graeme Boden has been appointed in his place.
Prana Biotechnology (PBT)		N/A	The company has received funding of approximately US\$1m by way of issue of shares to Quintiles.
Prima BioMed (PRR)		N/A	The company announced that Ian Bangs, CFO, has been appointed as joint company secretary.
Progen Pharmaceuticals (PGL)		N/A	The company announced that it has completed a major restructure as well as de-risking the business. As a consequence, Progen's board members will reduce from six to four and it will close its Toowong and North Carolina offices. All staff and activities will be consolidated into its upgraded Darra site. Further, CEO Sue MacLeman was to finish up with the company at the end of August but the CEO role would not be replaced. Paul Dixon, general manager of finance and company secretary, will move from an employed basis to a consultancy contract.
SciGen (SIE)		N/A	Following the resignation of Ryszard Krauze as chairman, the company appointed Slawomir Ziegert as the new chairman. He is also the CEO of the company.
Solagran (SLA)		N/A	The company is pleased to announce that Polyprenols has been officially recognised as an essential substance required for human health. Solagran's Bioeffectives A & B have significant levels of polyprenols.
Starpharma Holdings (SPL)		N/A	Dr John Raff has elected to retire as a director of the company.
Stirling Products (STI)	M3K	Anti-ageing	The company launched its scientifically formulated M3K anti-ageing cream in North America from April and its Canadian pharmaceutical plant commenced production from mid-April.
Stirling Products (STI)		N/A	The company announced the appointment of UK-based John Botten as an adviser and consultant to the company. Gulshan Jugroo resigned as a director of the company.
Stirling Products (STI)		N/A	The company has received and agreed to the terms of a conditional letter of intent for the first of a number of global TeleMedCare licensing agreements that is subject to a number of conditions.
Stirling Products (STI)		N/A	The company's new KidneyVital product has been awarded an "Innovative New Product" of 2011 award.
Telesso Technologies (TEO)		N/A	The company changed its registered office.
Viralytics (VLA)		N/A	Sarah Prince has resigned as company secretary and Jennie Yuen has been appointed in her place.
Medical Devices			Total 29
Anteo Diagnostics (ADO)		N/A	The company made a number of changes to strengthen the skills of the board and to ensure ADO has the best leadership team.
BioMD (BOD)		N/A	Christopher Catlow, Graeme Rowley, Lee Rodne and Jet Soedirdja have been appointed directors of BioMD. Robert Scott, chairman, has resigned as director of the company and Christopher Catlow has been appointed chairman of the new merged group.
Clover Corporation (CLV)		N/A	The company announced the appointment of Darren Callahan as CFO of the group.
CogState (CGS)	CogState Sports System	Concussion	The National Rugby League (NRL) adopted the CogState Sport system for management of concussed players to help manage their recovery.

Company	Product	Application	Comments
CogState (CGS)		N/A	The company announced that Dr Michael Wooldridge and Richard Morgan have resigned as non-executive directors.
Compumedics (CMP)		N/A	The company announced the appointment of Bob Daspin as US national sales manager to expand its sales force.
Compumedics (CMP)		N/A	The company has secured a US\$800k order from Beijing Bestmed Tech Ltd (Bestmed), Compumedics' distributor to North China. This is another significant milestone as part of the company's stated objective to expand sales into its key target markets.
Cyclopharm (CYC)		N/A	Alexander (Sandy) Beard has been appointed as non-executive director of Cyclopharm. Mr Beard is the CEO of CVC Ltd. Cyclopharm issued its new constitution dated 26 May 2011. The company announced that it has changed its registered office address to Building 75, Business & Technology Park, New Illawarra Road, Lucas Heights, NSW 2234.
Eastland Medical Systems (EMS)		N/A	EMS's subsidiary Eastland Medical (WA) has been awarded a general medical contract for WA. This adds another \$1m to the company's revenue projections.
Ellex Medical Lasers (ELX)		N/A	Ellex Medical Lasers announced its plan to consolidate the manufacture of all Ellex laser and ultrasound products out of its facility in Adelaide, Australia to promote cost savings efficiencies.
HeartWare International (HIN)	Heart Ventricular Assist System	Cardiovascular disease	The company's Ventricular Assist System will be the subject of presentations at The International Society of Heart and Lung Transplantation's (ISHLT) 31st annual meeting and scientific sessions.
KarmelSonix (KSX)	PulmoTrack and WHolter devices	Respiratory illness	The company secured orders valued at US\$45k for its PulmoTrack and WHolter devices from respiratory units across Korea, including one of Korea's leading respiratory hospitals.
LBT Innovations (LBT)	Previ Isola	Efficiency of media processing tasks in microbiology labs	The company sold 100 units of Previ Isola, an automated plate streaker developed by LBT. The 100th system was installed at the Grady Health System in Atlanta.
Medical Australia (MLA)		N/A	The company has secured a new contract for supply of needle cutters to the United Nations International Children's Emergency Fund (UNICEF). This contract will generate immediate revenue.
Medigard (MGZ)		N/A	Dr Peter Clark has announced his intention to resign from his executive role at Medigard but will continue to act as a consultant to Medigard.
MediVac (MDV)		N/A	The company completed a roadshow in the US and received positive feedback from investors about its products and prospects.
MediVac (MDV)	MetaMizer 240 SSS	Clinical waste	The company has developed MetaMizer 240 SSS to convert all clinical waste in an environmentally friendly way.
Medtech Global (MDG)		N/A	Michael Gaylard was appointed as director of the company.
Nanosonics (NAN)		N/A	The company appointed McGregor Grant as CFO and company secretary and Gerard Putt as head of manufacturing. David Radford resigned as director and CFO and Dr Ron Weinberger has been appointed as interim CEO.
Nanosonics (NAN)	Trophon EPR	Ultrasounds	Nanosonics has received early positive feedback as several high profile customers have indicated that they will be adopting the product after the launch of Trophon EPR in US.
ResMed (RMD)	S9 VPAP	Respiratory disorders	ResMed released its new S9 VPAP series of bilevel devices. Based on ResMed's latest design and technology platform, the new bilevels include a range of sophisticated comfort technologies to promote long-term compliance.
ResMed (RMD)		N/A	ResMed announced changes to its management structure to meet the needs of its sleep-disordered breathing patients and its distributors.
Sunshine Heart (SHC)	C-Pulse Heart Assist System	Cardiovascular disease	The company announced that it has successfully implanted its C-Pulse Heart Assist System in 20 patients globally. The studies are primarily designed to assess safety and performance of this device in class III/ambulatory class IV heart failure patients.
Sunshine Heart (SHC)		N/A	Rowena Hubble has resigned as CFO and company secretary and Jeffrey Mathiesen has been appointed to both positions.
Unilife Corporation (UNS)		N/A	Unilife has realigned its operating infrastructure to prepare for full commercial production and sale of its drug delivery devices to healthcare and pharmaceutical customers. This realignment will reduce its expenditures by \$12m during 2011.
Unilife Corporation (UNS)	Unifill Syringes	N/A	The company completed the validation phase of Unifill ready-to-fill (pre-filled) syringes. This key milestone represents the final step in commercialising the syringes.
Universal Biosensors (UBI)	OneTouch Verio	Self- monitoring blood glucose	UBI announced that LifeScan has launched the OneTouch Verio product in Germany, the UK, Ireland, Spain and Portugal with technology developed by Universal Biosensors, which will be paid a fee for strips LifeScan sells in each market.
Uscom (UCM)		N/A	Uscom has appointed Inspired Medical Systems as its US medical device distributor, and two distributors in the Canadian market, Caster Medical Systems and Braemed Limited. All three distributors are well acquainted with servicing hospitals and will leverage their existing client sites for Uscom.
Uscom (UCM)	Distributors in Europe	N/A	The company has established a significant presence in Europe with the appointment of two distributors, Genesys Medical Solutions (UK) and DutchMed (Eastern Europe).

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Appendix

Companies in the PwC Life Sciences Index

		Closing MCap (A\$m)	Quarterly return	Annual return (June 10 - June 11)
Medical device				
ACG	ATCOR MEDICAL HOLDINGS LIMITED	20.11	52%	27%
ADO	ANTEO DIAGNOSTICS LIMITED	53.36	0%	30%
AMT	ADVANCED SURGICAL DESIGN & MANUFACTURE LIMITED	8.12	-10%	-47%
AYX	AUSTOFIX GROUP LIMITED	7.68	0%	-23%
AHZ	ALLIED HEALTHCARE GROUP LTD	34.69	47%	161%
BRC	BRAIN RESOURCE COMPANY LIMITED (THE)	29.35	-10%	49%
CBB	CORDLIFE LIMITED	15.09	-69%	-73%
CGS	COGSTATE LTD	11.31	-6%	-32%
CLV	CLOVER CORPORATION LIMITED	47.08	-5%	2%
CMP	COMPUMEDICS LIMITED	13.28	-32%	-37%
COH	COCHLEAR LIMITED	4,085.64	-13.2%	-3%
CXD	CATHRX LTD	15.04	-45%	-60%
CYC	CYCLOPHARM LIMITED	8.21	-4%	-38%
ELX	ELLEX MEDICAL LASERS LIMITED	15.28	-10%	20%
EMS	EASTLAND MEDICAL SYSTEMS LTD	14.26	-31%	-29%
GBI	GENERA BIOSYSTEMS LIMITED	12.61	-29%	-60%
HIN	HEARTWARE INTERNATIONAL, INC	994.00	-16%	-18%
IPD	IMPEDIMED LIMITED	89.20	-24%	1%
ITD	ITL LIMITED	9.22	-13%	23%
KSX	KARMELSONIX LIMITED	10.58	-41%	-44%
LBT	LABTECH SYSTEMS LIMITED	4.47	-18%	-23%
MDG	MEDTECH GLOBAL LIMITED	4.01	-38%	-31%
MDV	MEDIVAC LIMITED	8.32	0%	-29%
MGZ	MEDIGARD LIMITED	2.55	-30%	-71%
MLA	MEDICAL AUSTRALIA LIMITED	10.42	-6%	152%
NAN	NANOSONICS LIMITED	176.33	-18%	44%
NDL	NEURODISCOVERY LIMITED	3.88	-9%	24%
OBJ	OBJ LIMITED	25.27	5%	-5%
OIL	OPTISCAN IMAGING LIMITED	8.20	31%	21%
RMD	RESMED INC	4,388.66	-1%	-21%
RVA	REVA MEDICAL	329.39	0%	-
SHC	SUNSHINE HEART, INC.	50.94	31%	53%
SOM	SOMNOMED LIMITED	50.43	14%	57%
SFP	SAFETY MEDICAL PRODUCTS LIMITED	6.34	-11%	-
TDX	TYRIAN DIAGNOSTICS LIMITED	5.09	-17%	-41%
UBI	UNIVERSAL BIOSENSORS, INC.	162.11	-18%	-34%
UCM	USCOM LIMITED	11.47	-27%	-65%
UNS	UNILIFE CORPORATION	296.91	-10%	-31%

		Closing MCap (A\$m)	Quarterly return	Annual return (June 10 - June 11)
Pharma and Biotech				
ACL	ALCHEMIA LIMITED	117.10	-12%	18%
ACR	ACRUX LIMITED	564.42	12%	87%
ACU	ACUVAX LIMITED	2.10	0%	-70%
ACW	ACTINOGEN LIMITED	1.53	-52%	-10%
AGX	AGENIX LIMITED	10.46	-30%	9%
ALT	ANALYTICA LIMITED	12.33	18%	27%
ANP	ANTISENSE THERAPEUTICS LIMITED	7.61	-38%	-28%
AOP	APOLLO CONSOLIDATED LIMITED	4.20	-25%	-25%
APH	ASCENT PHARMAHEALTH LTD	-	-100%	-100%
AVH	AVITA MEDICAL LTD	23.12	0%	-4%
AVX	AVEXA LIMITED	35.60	-16%	27%
BDM	BIODIEM LIMITED	8.12	-56%	-27%
BIT	BIOTRON LIMITED	15.54	0%	59%
BLT	BENITEC LIMITED	25.94	23%	8%
BNC	BIONICHE LIFE SCIENCES	-	0%	-
BNE	BONE MEDICAL LIMITED	1.56	-60%	-84%
BNO	BIONOMICS LIMITED	191.33	7%	106%
BPO	BIOPROSPECT LIMITED	8.93	-47%	-22%
BTA	BIOTA HOLDINGS LIMITED	173.25	-9%	-6%
CBZ	CBIO LIMITED	98.19	-7%	144%
CDY	CELLMID LIMITED	8.71	-8%	21%
CIR	CIRCADIAN TECHNOLOGIES LIMITED	26.91	-17%	16%
CSL	CSL LIMITED	17,454.39	-7%	1%
CST	CELLESTIS LIMITED	305.76	7%	16%
CTE	CRYOSITE LIMITED	3.96	-10%	-21%
CUV	CLINUVEL PHARMACEUTICALS LIMITED	50.28	-9%	-26%
CXS	CHEMGENEX PHARMACEUTICALS LTD	219.49	8%	136%
CZD	CALZADA LIMITED	22.53	27%	160%
GEN	GENESIS RESEARCH AND DEVELOPMENT CORPORATION LIMITED	1.82	54%	60%
GTG	GENETIC TECHNOLOGIES LIMITED	84.97	139%	500%
HCT	HOLISTA COLLECH LIMITED	9.72	-17%	-35%
HTX	HEALTHLINX LIMITED	5.09	-48%	-70%
HXL	HEXIMA LIMITED	-	-100%	-100%
IDT	INSTITUTE OF DRUG TECHNOLOGY AUSTRALIA LIMITED	15.12	-30%	-44%
IMC	IMMURON LIMITED	20.52	-7%	-9%
IMU	IMUGENE LIMITED	4.31	-19%	-12%
LCT	LIVING CELL TECHNOLOGIES LIMITED	21.61	-19%	-70%
MSB	MESOBLAST LIMITED	2,419.70	19%	368%

		Closing MCap (A\$m)	Quarterly return	Annual return (June 10 - June 11)
Pharma and Biotech (continued)				
MVP	MEDICAL DEVELOPMENTS INTERNATIONAL LIMITED	23.08	-4%	88%
MYX	MAYNE PHARMA GROUP LIMITED	78.92	-21%	-7%
NEU	NEUREN PHARMACEUTICALS LIMITED	17.30	-3%	-23%
NLS	NARHEX LIFE SCIENCES LIMITED	12.47	45%	-
NRT	NOVOGEN LIMITED	19.91	-28%	18%
NSP	NUSEP LIMITED	6.95	-53%	-54%
PAB	PATRY'S LIMITED	22.43	-22%	-10%
PBP	PROBIOTEC LIMITED	18.79	-38%	-73%
PBT	PRANA BIOTECHNOLOGY LIMITED	52.51	-22%	26%
PCC	PROBIOMICS LIMITED	2.65	-25%	-18%
PGL	PROGEN PHARMACEUTICALS LIMITED.	5.68	-28%	-43%
POH	PHOSPHAGENICS LIMITED	102.95	14%	25%
PRR	PRIMA BIOMED LTD	262.15	5%	176%
PVA	PSIVIDA CORP.	82.56	14%	13%
PXS	PHARMAXIS LTD	191.76	-69%	-59%
PYC	PHYLOGICA LIMITED	29.17	7%	4%
QRX	QRXPHARMA LIMITED	210.13	8%	42%
SIE	SCIGEN LIMITED	41.42	-30%	-73%
SLA	SOLAGRAN LIMITED	44.66	24%	4%
SPL	STARPHARMA HOLDINGS LIMITED	371.62	21%	178%
SRX	SIRTEX MEDICAL LIMITED	273.26	-8%	0%
STI	STIRLING PRODUCTS LIMITED	4.45	-60%	-67%
TEO	TELESSO TECHNOLOGIES LIMITED	1.08	-26%	67%
TIS	TISSUE THERAPIES LIMITED	97.03	-17%	224%
VHL	VIRAX HOLDINGS LIMITED	5.47	-24%	-69%
VLA	VIRALYTICS LIMITED	43.10	66%	97%

Notes:

APH	Company will be removed from the index next quarter following delisting from the ASX at the end of this quarter.
BOD	BioMD (BOD) changed its name to Allied Healthcare Group Ltd (AHZ).
BPH	Removed from index. Company has moved into the energy sector.
FLS	Company will be removed from the index next quarter following divestment from the sector at the end of this quarter.
GIA	Removed from index. Company has been placed into administration.
HXL	Company will be removed from the index next quarter following delisting from the ASX at the end of this quarter.
NLS	Reinstated to index following compliance with the listing rules.
SFP	Reinstated to index following recapitalisation.

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Methodology

Methodology

Sources

BioForum draws on historical data from the following sources:

- Bloomberg
- Connect 4
- The ASX
- Company websites
- PwC Global Pharma and Life Science Quarterly Newsbriefs

Market performance

The Australian life sciences sector's market performance is tracked through two indices:

1. PwC Life Sciences Index
2. PwC Life Sciences Index ex majors (CSL, ResMed and Cochlear)

Analysis is provided without the large-capitalisation stocks (majors) so the performance of smaller-capitalisation stocks can be observed.

The PwC Life Sciences Index is based on the performance of life sciences companies listed on the Australian Securities Exchange (ASX). It comprises two subsectors:

1. Pharmaceutical / biotechnology
2. Medical devices

These sectors have been classified according to the Global Industry Classification Standard. The index includes life sciences companies primarily involved in research, development, commercialisation and manufacturing of pharmaceutical and biotechnology products and medical devices. It excludes healthcare, medical software and distribution companies. Companies included in the PwC Life Sciences Index are listed at the end of each issue of BioForum.

The PwC Life Sciences Index is based on the combined market capitalisation of the listed companies and calculates the change of their value over the quarter and change over the previous year. These changes are compared to the changes in the market performance of the following indices:

- ASX All Ordinaries
- NASDAQ Composite
- NASDAQ Biotech

Different formulae are used to calculate the value of these indices and track their performance. These formulae use a combination of company market prices and a weighted average of market capitalisation. Because of these different methods of calculating value, the absolute value of the indices cannot be directly compared. Only their changes over time can be sensibly compared.

Top and bottom performers

Annual data on these companies is sourced from Bloomberg each quarter. Company announcements are sourced from the ASX or directly from company websites.

IPO and secondary finance markets

IPO and secondary financing data is sourced from the Connect 4 database's health-care industry category. We include data from companies on the PwC Life Sciences Index only. Data on options, rights and bonus issues is excluded. The US IPO and secondary financing data is sourced from our quarterly PwC Global Pharma and Life Sciences Newsbrief.

Announcements

These are from companies listed on the PwC Life Sciences Index only. They are sourced from Connect 4 using the health-care industry category. We include announcements on partnerships, mergers and acquisitions and divestments, clinical results, regulatory activity and other information. Examples of other information include management and board changes, the closing or opening of offices, and successful grant applications.

Announcements on the following are excluded:

- trading halts
- capital raisings
- proposed (versus actual) mergers, acquisitions and partnerships
- progress reports on clinical trials (results only are included)
- market registration approval

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