

**In this edition...**

From our perspective it looks like stock prices for biotech have bottomed. The September quarter just ended saw the Bioshares Index increase by 5.2%, heavily influenced by one stock, Vision Systems. Adjusted for that stock's contribution, the sector stayed flat, moving a mere 0.5%, indicating a trough in activity.

Signs of vitality emerged this week with positive announcements emanating from Pharmaxis, Metabolic Pharmaceuticals, Optiscan Imaging, Starpharma Holdings and Prana Biotech and some favourable external events and news would appear to be of benefit to Alchemia, Sirtex and Avexa.

**The editors**

**Companies covered: ACL, AVX, MBP, SPL, SRX**

	Bioshares Portfolio
Year 1 (May '01 - May '02)	21.2%
Year 2 (May '02 - May '03)	-9.4%
Year 3 (May '03 - May '04)	70.0%
Year 4 (May '04 - May '05)	-16.3%
Year 5 (May '05 - May '06)	77.8%
Year 6 (from 5 May '06)	-12.7%
<b>Cumulative Gain</b>	<b>143%</b>
<b>Average Annual Gain</b>	<b>21.8%</b>

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# Bioshares

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*Delivering independent investment research to investors on Australian biotech, pharma and healthcare companies.*

## Quarterly Review

### **Biotech Sector Hits Bottom; Strong Inflow of Funds Continues**

Positive signs are emerging for the local biotech sector as across the board declines in the share prices of biotech companies in the June quarter 2006 appear to have been arrested in the quarter past; just over half of the companies in the sector (55%) recorded gains for the third quarter. Compared with only 13% of companies experiencing share price gains in the previous quarter, it appears the sector may well have bottomed in this current investment cycle.

#### **Strong inflow of funds continues**

Although market conditions remained difficult in the last quarter, the strong inflow of funds continued with \$194 million raised. The trend of international capital funding Australian biotech R&D continued with **Clinuvel Pharmaceuticals**, **Novogen** (through its subsidiary **Marshall Edwards**) and **Psivida** all sourcing capital for overseas markets.

#### **VC's enter listed equities**

This quarter witnessed the first sizable investment by venture capital funds into the listed biotech sector. **CM Capital** and **GBS Venture Partners** committed \$15 million to **Sunshine Heart**, which may herald the beginning of a new trend by local VCs.

#### **IPO market waits for upturn**

There was just one IPO in the quarter, bringing the total to two for the year, although investors can expect a barrage of new biotech floats, in the order of ten to 15 companies, as soon as the biotech investment cycle shifts into a positive phase.

#### **Index performance**

The performance of the indexes followed each quarter shows there has been a rebound in the biotech sector. The **Bioshares Index**, which is a weighted measure of performance of all stocks in the sector excluding the large cap stocks, gained 5.3% for the September quarter 2006. This was strongly influenced by **Vision Systems**, which is currently the subject of a takeover battle between several US firms. Vision Systems qualified for inclusion in the Bioshares Index following that company's divestment of its fire and safety business in the first half of 2006. Subtracting the influence of Vision Systems leaves the Biotech Index posting a 0.5% gain for the quarter. In the US, the **Nasdaq Biotech Index** was flat, increasing by only 1.5% over the quarter. The **ASX 300 Index** increased by 1.6% and the **Bioshares Large Cap Index** increased by 2.3%.

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#### **Index performances for last four quarters**

	Q4 2005	Q1 2006	Q2 2006	Q3 2006
Bioshares Index	-2.0%	1.4%	-18.3%	5.2%
Nasdaq Biotech Index	0.8%	6.4%	-11.7%	1.5%
Bioshares Large Cap Index	-1.5%	14.9%	-1.3%	2.3%
ASX 300 Index	2.6%	7.8%	-1.1%	1.6%

### Capital Raisings by Australian-listed Biotech Companies Q3 2006

Company	Investment manager	Type of raising	Funds raised (\$M)
Clinuvel Pharmaceuticals	Tolhurst Noall	Renounceable rights issue	\$25.0
Sunshine Heart Inc*	Wilson HTM & Intersuisse	Private placement	\$19.8
Marshall Edwards (Novogen)	Janney Montgomery Scott LLC	Private placement	\$18.0
Marshall Edwards (Novogen)	Cornell Capital Partners LP	Standby Equity Distribution Agreement	\$15.0
Mesoblast	Lodge Partners	Private placement	\$15.0
Psivida	Mercury Investments Ltd	Subordinated Convertible Debentures	\$8.5
Neuren Pharmaceuticals	Taylor Collison & Bell Potter Securities	Private placement	\$6.0
Life Therapeutics	eG Capital	Private placement	\$5.0
Bionomics	Intersuisse Corporate & Linwar Securities	Private placement	\$5.0
Proteome Systems	n/d	Private placement	\$3.8
Living Cell Technologies	n/d	Convertible note & Placement	\$2.8
Mesoblast	Lodge Partners	SPP	\$2.1
Bone Medical	n/d	Private placement	\$1.8
Avantogen	-	Loan facility	\$1.8
Colltech	BBY	Private placement	\$1.8
Phylogica	Cygnat Capital	Private placement	\$1.5
Premier Bionics	Corporate Synergy Plc	Private placement	\$1.1
Prima Biomed	Taylor Collison	Underwritten SPP	\$1.0
Salus Technologies	n/d	Private placement	\$0.8
Rockeby Biomed	Novus Capital	Private placement	\$0.5
<b>total</b>			<b>\$176.6</b>

#### Capital inflow from sale of investments

Cytopia	-	Sale of shares in Alchemia	\$15.0
<b>total</b>			<b>\$15.0</b>

#### IPOs

<b>Total raised in Q3 2006</b>	<b>\$194.1</b>
Total raised in Q2 2006	\$183.0
Total raised in Q1 2006	\$70.0
<b>Total raised to date in 2006</b>	<b>\$447.1</b>

Note that the \$63 million raising by Geneparm Australasia is not included in the table above. These funds were not raised for working capital expenditure but to fund the acquisition of Douglas Pharmaceuticals.

\* \$6 m is contingent on receiving FDA approval to commence US IDE trial

#### Capital raisings in Q3 2006

A positive feature of the Australian biotech sector is that while stock prices have fallen sharply over the last six months, capital has continued to flow into the sector. Funding was more difficult for biotechs and in some cases has been scaled down due to market conditions. However the last quarter saw \$194 million being raised to fund working capital expenditure, and this excludes the \$60 million raised by **Geneparm Australasia** to fund its acquisition of **Douglas Pharmaceuticals Australia**. This followed the \$183 million raised in the previous quarter. Funding in the first quarter of 2006 proved very difficult, with only \$70 million raised.

To date, \$447 million has been raised (or underwritten) this year, and if this rate of capital inflow continues, total funding for the year should approach last year's record raising of \$638 million.

Prior to that, \$534 million was raised in 2004 and \$532 million was raised in 2002.

Of significance is the continued interest in overseas funds in Australian biotech companies. **Clinuvel Pharmaceuticals** raised \$24 million mainly through European funds. Its offer is sub-underwritten by the UK group **Absolute Capital Management Funds**, which is an existing shareholder in Clinuvel. The funds raised will be used to conduct Phase II/III trials of the company's lead compound in treating Polymorphous Light Eruption, a skin reaction that recurs in some people when exposed to ultraviolet radiation.

Cont'd over

**Novogen's** subsidiary, **Marshall Edwards Inc** has raised \$18 million in a private placement to international funds. And using a less common product, Marshall Edwards has entered into a standby equity distribution agreement with **Cornell Capital Partners**, a US private equity fund, that will allow the company to raise \$15 million through the sale of shares.

A decision to enter the listed equity market space by leading biotech venture capital firms occurred this quarter confirming that the sector may very well have bottomed. **CM Capital**, making its first investment in a listed company, and **GBS Venture Partners** have agreed to invest \$8 million and \$7 million respectively into **Sunshine Heart** which will raise \$19.8 million. Part of this raising is contingent on the company meeting a major milestone (FDA approval of an IDE submission). This is a follow-on raising by GBS which is an earlier investor in the company.

Other large capital raisings included \$15 million raised by **Mesoblast**, although had market conditions been more receptive a larger sum would have been raised. A further \$2.2 million was raised by Mesoblast through a share purchase plan. Cytopia raised \$15 million by selling out of Alchemia. Other notable placements included the \$6 million raised by **Neuren Pharmaceuticals** and the \$5 million raised by **Bionomics**.

**Outperformers**

Four of the best performing stocks over the quarter were the result of takeover offers during the quarter. **Vision Systems** increased by 117% in the quarter as the takeover battle continues for that company. **Zenyth Therapeutics'** share price jumped by 76% when **CSL** announced its intention to acquire the company. **Bresagen** shares surged 71% following a takeover bid by **Hospira** in the US. And **Mayne Pharma** was up 65%, also following a takeover bid from Hospira. **IDT** increased by 44% in the last quarter and may be another stock that may be of interest to larger international competitors.

**Virax Holdings** was the best performing stock for the quarter, surging 150%, albeit from a low base. The company lodged an application to conduct a HIV vaccine trial in South Africa and is in the process of preparing a submission to the FDA to conduct trials in the US using its HIV vaccine.

**Prana Biotechnology** was the second best performing stock for the quarter, with its shares up 143% in value in the September quarter. Release of positive preclinical results attracted significant investor interest and the company has recently announced it has been granted approval to begin Phase II trials in Sweden in seven centers in patients with early stage Alzheimer's disease. It's welcome news for investors following the cancellation of the Phase II trials with the company's first compound in June 2005.

**Underperformers**

One of the worst performing stocks in the sector was **Psvida**, down 40%. The main reason for the sell down in this stock was the amendment to the company's subordinated convertible debentures issued in October 2005. The amendment reset the conversion price for the Notes from 98 cents to 27 cents.

**Phylogica** shares also fell considerably in the quarter (down 39%) although the shares have still appreciated 129% over the last 12 months. A capital raising conducted during the quarter at a 20% discount to the preceding average market price is likely to have contributed to its falling share price. The company is progressing well with its technology development.

**Alchemia** shares fell a similar 39% over the quarter following a decision by the company's partner, **Abraxis Biosciences**, to relinquish marketing rights to Alchemia's generic Arixtra. Alchemia has now reached an in-principle agreement with Abraxis Biosciences to sever this agreement and Alchemia is seeking a new marketing partner for the US and the rest of the world.

Other shares to be hit hard this quarter included **Somnomed**, **Norwood Abbey** and **Benitec**.

**IPO's**

There was one IPO for the quarter, by **Labtech Systems**. The company is commercialising technology that assists in the processing of diagnostic tests, in particular that of agar plates. The company raised \$2.5 million with a capitalisation of \$12 million. The stock listed at 20 cents and finished the quarter down 10% from its issue price.

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IPOs in Q3 2006

Company	Code	Funds Raised (M)	Issue price	Price 30/9/06	Gain/ loss
Labtech Systems	LBT	\$2.50	\$0.20	\$0.18	-10%

Bioshares Model Portfolio (6 October 2006)

Company	Price (current)	Price added to portfolio
Acrux	\$0.79	\$0.83
Alchemia	\$0.66	\$0.67
Avexa	\$0.225	\$0.15
Bionomics	\$0.15	\$0.210
Biosignal	\$0.18	\$0.22
Cogstate	\$0.24	\$0.20
Cytopia	\$0.750	\$0.46
Chemgenex Pharma.	\$0.46	\$0.38
Evogenix	\$0.450	\$0.47
Optiscan Imaging	\$0.500	\$0.35
Mesoblast	\$1.240	\$1.27
<i>Metabolic Pharmaceuticals</i>	\$0.530	\$0.53
Neuren Pharmaceuticals	\$0.44	\$0.70
Peptech	\$1.37	\$1.31
Pharmaxis	\$2.42	\$1.90
Prima Biomed	\$0.060	\$0.09
Sirtex Medical	\$2.50	\$1.95
Sunshine Heart	\$0.14	\$0.19

**Portfolio changes**

*Metabolic Pharmaceuticals* has been added to the portfolio at 53 cents.

## Stock Briefs

**Metabolic Pharmaceuticals (MBP: 53 cents) Interest set to Increase**  
Metabolic Pharmaceuticals should begin to receive considerable interest from investors once again as the company moves to complete its Phase II obesity trial. The stock has been in a holding pattern for the last 11 months, trading between 39 cents - 52 cents and has now broken this trading range on a reasonable volume.

Metabolic is conducting a 536 person Phase II study of its obesity treatment compound, AOD9604. The trial completed enrolment in May this year ahead of schedule and the first 100 trial participants have completed the full 32 week protocol.

The trial is due to be completed in December and results will be announced in March next year. The potential market for a safe and effective obesity treatment compound is massive, which explains the interest this stock can generate from investors. The company also has a compound in Phase II trials for the treatment of neuropathic pain, ACVI, and AOD9604 will also be progressed through the clinic as a treatment for osteoporosis.

Expect interest in this stock to escalate as investors anticipate a positive result from the current Phase II trial result due in March next year. A trading opportunity once again exists over this period and we have added the stock to the Bioshares Model Portfolio. We will provide a more extensive analysis in subsequent editions.

Metabolic is capitalised at \$151 million with \$23 million in cash.

*Bioshares* recommendation: **Speculative Buy Class B**

**Avexa (AVX: 22.5 cents) MK-0518 and Fuzeon Indicate Potential**  
Whilst Avexa's lead HIV program with apricitabine is commanding most of the investor attention for this stock, the company's integrase inhibitor program, which has yet to enter the clinic, may start to generate some greater interest. There are only two integrase inhibitors in clinical studies, and one of those, from **Merck**, has recently delivered some stunning results.

A combination therapy Phase IIB trial with a fusion inhibitor (Fuzeon from **Roche** and **Trimeris**) and Merck's integrase Inhibitor, MK-0518, have just achieved results that have never before been seen in clinical trials in patients with HIV drug-resistant virus. In 90-95% of the 32 patients who had never received this treatment, their HIV levels were reduced to undetectable levels. The combination of two new treatment approaches for HIV - fusion and integrase inhibitors - potentially adds a powerful additional treatment weapon to the treatment of HIV.

*Bioshares* recommendation: **Speculative Buy Class A**

**Sirtex Medical (SRX: \$2.50) Hunter Hall's Stake Now 23%**  
Whilst the legal and other battles at Sirtex Medical continue between the board and the founder Dr Bruce Gray, investors should not exclude this investment from their consideration. In the last financial year the company doubled sales to \$22.9 million with an impressive gross profit of \$17.9 million. The company delivered a pretax profit of \$5.4 million. Release of the company's third quarter cash flow statement is important to monitor, and is due out at the end of this month.

One of the company's largest investors, **Hunter Hall Investment Managers**, has been increasing its stake in this company over the last year, and now holds a 23% stake in the company. The increased stake will also give the investment group more influence in affecting a resolution of the current dispute.

Sirtex recently announced that two further clinical trials will be conducted in Australia to investigate the use of the company's SIR-Spheres in combination with existing chemotherapy treatments, rather than when chemotherapy fails, and also in patients with pancreatic cancer that has spread to the liver.

*Bioshares* recommendation: **Buy**

**Alchemia (ACL: 65 cents) GSK's Arixtra receives Priority Review**

It's worth noting that this week **GlaxoSmithKline's** Arixtra was granted priority review by the FDA for GSK's sNDA filing for the treatment indication of Acute Coronary Syndrome. Alchemia is commercialising a technology enabled generic version of this drug. ACS makes up approximately 30% of the overall heparin market. A Priority Review designation is given to drugs that "offer major advances in treatment, or provide a treatment where no adequate therapy exists. A Priority Review means that the time it takes FDA to review a new drug application is reduced. The goal for completing a Priority Review is six months." - FDA

That Arixtra is viewed as offering a major advance is a significant endorsement by the FDA for this product. It means Arixtra should be approved for the ACS indication by the end of January 2007, if all goes well, almost one year earlier than expected. A 20,000 patient study has shown that in every 10,000 patients treated with Arixtra, there were 80 fewer deaths than in a similar 10,000 patients treated with the market leading drug Lovenox.

Global Arixtra sales are currently tracking at just under US\$100 million a year. GSK results for the third quarter are expected to be released at the end of this month. Arixtra has the potential to generate peak sales in excess of US\$500 million a year.

*Bioshares* recommendation: **Speculative Buy Class A**

**Starpharma Holdings (SPL: 53 cents) To acquire Dendritic Nanotechnologies**

Starpharma Holdings has announced that it intends to acquire 67% of US based **Dendritic Nanotechnologies** that it does not already own. While the acquisition will provide Starpharma with royalties and income from the sale of research chemicals, a key benefit is that it will be able to drive the DNT business in a more focused manner. The Starpharma portfolio of therapeutic products and technologies under development will expand significantly, with DNT's earlier stage Priostar ovarian cancer diagnostic and therapeutic dovetailing with Starpharma's Vivagel microbicide for HIV and HSV infection.

An attractive feature of Priostar dendrimer scaffolds are that they are cheaper to manufacture. Starpharma is capitalised at \$78 million and held cash of \$14 million at June 30, 2006.

*Bioshares* recommendation: **Speculative Buy Class A**

## **The Australian Listed Life Sciences Sector**

**September 30, 2006: Capitalisation \$28.9 billion, 127 Companies**

### **Bioshares Large Cap. Index**

Company	Code	Cap. \$m	Principal Activities	Change Qtr	Price 30/09/06
CSL	CSL	9,853	Manufactures pharmaceutical products including vaccines and human plasma fractions.	1%	\$54.03
Resmed Inc.	RMD	3,819	Manufactures diagnostic and treatment equipment for sleeping disordered breathing.	-13%	\$5.40
Cochlear	COH	2,909	Manufactures cochlear hearing implants.	-3%	\$53.00
Mayne Group	MYP	2,748	Operates generic pharmaceuticals manufacturing business and wholesale distribution business.	65%	\$4.29
Sigma Pharmaceuticals	SIP	2,497	Pharmaceutical manufacturing and wholesaling.	0%	\$2.61
API	API	574	Pharmaceutical wholesaler.	-3%	\$2.23

**Capitalisation Total** 22,400

### **Bioshares Index**

Company	Code	Cap. \$m	Principal Activities	Change Qtr	Price 30/09/06
Vision Systems	VSL	528	Manufactures and markets automated instruments and biochemical reagents for the detection of cancer and infectious diseases	118%	\$3.16
Pharmaxis	PXS	398	Developing a lung function test, Aridol, and a treatment, Bronchitol, for bronchiectasis and COPD, and compounds for multiple sclerosis.	9%	\$2.25
Novogen	NRT	301	Developing analogues of naturally occurring phenolic hormones to treat cancers and other conditions.	30%	\$3.09
Cellestis	CST	256	Marketing a diagnostic for latent tuberculosis.	-32%	\$2.67
Biota	BTA	239	Commercialised Relenza anti-flu drug and flu diagnostic kits. Now developing an improved version.	10%	\$1.33
Blackmores	BKL	235	Manufactures vitamin, mineral and herbal supplements and skin & hair products in Australia and N.Z.	6%	\$14.68
Peptech	PTD	215	Develops treatments for animal health care products using peptides. Holds patent relating to anti-inflammatory compound.	7%	\$1.31
Ventracor	VCR	205	Developer of Ventrassist, an artificial heart assist device.	19%	\$0.79
Phosphagenics	POH	202	Commercialising a drug delivery technology improving the delivery of vitamin E and existing pharmaceutical products through phosphorylation.	32%	\$0.37
GenePharm Australasia	GAA	153	An emerging generic pharmaceutical manufacturer and distributor.	3%	\$1.10
Metabolic Pharmaceuticals	MBP	151	Developing therapies for obesity, other metabolic diseases and pain.	10%	\$0.53
Life Therapeutics	LFE	149	R&D of industrial and research grade protein, DNA and viral separation equipment. Acquired Seralogicals plasma therapeutics business in 2004.	-13%	\$1.52
Heartware	HTW	149	Developing a mechanical heart pump (LVAD).	-12%	\$0.80
Genetic Technologies	GTG	129	Provides DNA paternity testing services and holds broad patents relating to the use of non-coding DNA.	1%	\$0.36
Sirtex Medical	SRX	128	The company's core technology uses radioactive particles to irradiate tumours in the liver. Approved for use in most major regions.	-1%	\$2.30

## Bioshares Index

Company	Code	Cap. \$m	Principal Activities	Change Qtr	Price 30/09/06
pSiVida	PSD	123	Developing and marketing drug delivery technologies, with a special focus ophthalmic applications.	-40%	\$0.31
Progen Industries	PGL	119	Developing oncology therapeutics, including an anti-angiogenesis compound.	9%	\$2.94
Peplin	PEP	112	Developing plant based compounds for topical applications to treat skin cancers, and bladder cancer and leukemia.	18%	\$0.68
Mesoblast	MSB	110	Developing therapies based adult stem cells called mesenchymal stem cells, with applications in cartilage regrowth and bone repair.	-23%	\$1.18
Acrux	ACR	107	A Pooled Dev. Fund commercialising a drug delivery technology that uses sunscreen penetration enhancers to aid transdermal drug delivery.	7%	\$0.80
Zenyth Therapeutics	ZTL	104	Commercialising cytokine-based drugs for asthma and other inflammatory diseases.	77%	\$0.83
GroPep	GRO	94	Sale and manufacture of cell culture products and other reagents to the biotech industry. Developing drugs for recurrent miscarriage and psoriasis.	25%	\$2.01
Alchemia	ACL	92	Commercialising new solid phase carbohydrate synthesis technology. First product, a synthetic heparin, to be launched by partners in 2008.	-40%	\$0.65
Southern Dental Industries	SDI	88	Manufacture & distribution of amalgam (fillings) & other dental materials and product R&D.	19%	\$0.75
Clinival Pharmaceuticals	CUV	85	Clinival is a Melbourne-based specialty pharmaceutical company with a focus on niche prescription dermatology products.	24%	\$0.46
ChemGenex Pharmaceuticals	CXS	73	Genomics/theranostics company with projects in obesity, diabetes, oncology and hypertension.	14%	\$0.48
Starpharma Holdings	SPL	71	Developer of pharmaceutical applications of chemical scaffolds known has 'dendrimers'.	14%	\$0.48
Institute of Drug Technology	IDT	69	Manufacturer of pharmaceutical ingredients to international standards for major pharmaceutical groups.	44%	\$1.61
Lipa Pharmaceuticals	LIP	68	A contract manufacturer of complementary healthcare products.	9%	\$0.73
Apollo Life Sciences	AOP	58	Developing portfolio of protein drugs to treat various disorders and diseases using human proteins and treatment of effects of ageing.	0%	\$0.37
Prana Biotechnology	PBT	58	Developing drugs to treat CNS diseases such as Alzheimer's and Parkinson's.	143%	\$0.45
Evogenix	EGX	58	Commercialising a next generation antibody optimisation and humanisation technology.	-18%	\$0.46
Neuren Pharmaceuticals	NEU	53	Developing therapeutics in area of neuroprotection and metabolic disorders.	6%	\$0.42
Cytopia	CYT	51	Small molecule drug development company. Has PDF status.	-14%	\$0.70
Ellex Medical Lasers	ELX	47	Develops, manufactures and markets solid state ophthalmic lasers used to treat secondary cataracts and retinal disorders.	22%	\$0.77
Portland Orthopaedics	PLD	46	Developer, manufacturer and marketer of surgical hip and knee implants	-1%	\$0.34
Avexa	AVX	46	Developing antiviral therapies for HIV and Hepatitis B and a novel antibiotic.	0%	\$0.23
Optiscan Imaging	OIL	45	Manufacture of confocal microscopes for clinical diagnosis including endoscopes through alliance with Pentax.	-6%	\$0.45

## Bioshares Index

Company	Code	Cap. \$m	Principal Activities	Change Qtr	Price 30/09/06
Proteome Systems	PXL	45	Developing proteomics hardware and software for drug development and diagnostic applications.	7%	\$0.32
Scigen	SIE	43	Developer and manufacturer of biopharmaceuticals. Company is based in Singapore and was spun out of Sonic Healthcare in 2002.	26%	\$0.08
Phylogica	PYC	42	Developing phylomer (protein fragment shapes) compound libraries for use in human therapeutics.	-40%	\$0.39
Brainz	BZI	42	Develops non-invasive brain monitors for the detection of brain injury designed for use at the patient's bedside. A NZ company.	19%	\$0.50
CathRx	CXD	39	Developing novel modular cardiac catheters for the diagnosis and treatment of abnormal heart rhythms	-19%	\$1.30
ITL	ITD	39	Develops and distributes medical devices such as safety equipment to prevent needle stick injuries and sterile preparation kits.	9%	\$0.37
Agenix	AGX	30	Manufacture and sale of diagnostics and animal health products. Developing Thromboview, a blood clot diagnostic imaging agent	-13%	\$0.14
Bionomics	BNO	29	Developing drugs to treat cancer and CNS diseases, and has also developed a gene diagnostic for epilepsy.	-3%	\$0.17
Psiron	PSX	29	Developing a cancer treatment based on the application of viruses (oncolytic virus technology).	-19%	\$0.13
Solagran	SLA	28	Developing compounds called Bioeffectives, designed in Russia, and have medicinal properties.	9%	\$0.19
Medical Developments	MVP	27	Commercialising the Penthrax inhaler for temporary pain relief. Used widely in ambulances across Australia.	54%	\$0.47
Chemeq	CMQ	26	Manufactures and markets antimicrobials for use in livestock industry.	-21%	\$0.26
Norwood Abbey	NAL	26	A drug delivery company that uses laser skin ablation technology. Has investment in Norwood Immunology.	-39%	\$0.14
Living Cell Technologies	LCT	25	Developing cell therapies for diabetes, haemophilia and Huntington's disease.	43%	\$0.20
Anadis	ANX	25	Specialises in R&D of bovine colostrum products for therapeutic use in animals and humans.	16%	\$0.25
Unilife Medical Solutions	UNI	24	Developer of retractable syringes.	-5%	\$0.19
Clovercorp	CLV	22	Development and production of omega-3 food additives from tuna oil.	-4%	\$0.14
Clinical Cell Culture	CCE	22	Development of skin treatment products for use in burns and other skin damage. Lead product is CellSpray.	-11%	\$0.10
Biotron	BIT	22	Commercialising early stage projects emanating from the John Curtin School of Medical Research.	23%	\$0.24
Cygenics	CYN	21	Developing tools used in stem cell proliferation, and conducts a tissue banking operation.	35%	\$0.31
Giaconda	GIA	20	Developed novel (patented) combinations of registered drugs for the treatment of gastrointestinal disorders.	-30%	\$0.28
Brain Resource Corp	BRC	20	Development and commercialisation of functional brain analysis techniques.	0%	\$0.22
Virax	VHL	20	Bio-pharmaceutical R&D company developing a therapeutic and prophylactic vaccine for HIV.	150%	\$0.17
Atcor Medical	ACG	20	Markets the SphygmoCor device, a noninvasive technology that provides information regarding the functioning of the cardiovascular system	0%	\$0.20
Bresagen	BGN	19	Contract bio-pharmaceutical manufacturer.	71%	\$0.14

## Bioshares Index

Company	Code	Cap. \$m	Principal Activities	Change Qtr	Price 30/09/06
Biosignal	BOS	19	Developing compounds that interrupt the colonisation of bacteria. Applications in contact lenses and anti-fouling for marine paints.	9%	\$0.18
Medec	MAA	17	Developing energy medicine products, including the Medec Pulse to alleviate localised pain.	0%	\$0.24
Bone Medical	BNE	17	Developing treatments for bone and joint degenerative diseases such as arthritis and osteoporosis.	6%	\$0.26
USCOM	UCM	16	Marketing a non-invasive heart output function monitor.	-7%	\$0.42
RiTract	RTL	15	Developing a spring-loaded retractable syringe.	-21%	\$0.15
Compumedics	CMP	15	Develops, manufactures and markets sleep diagnostic and monitoring equipment.	108%	\$0.11
Imugene	IMU	15	Developing animal products such as antibiotic alternatives used in the stock feed industry using a vaccine and gene therapy approach.	5%	\$0.12
Eastland Medical Systems	EMS	15	Developing retractable syringes and other surgical products.	-31%	\$0.11
PanBio	PBO	15	Develops and markets vector born infectious diseases diagnostic eg Dengue fever.	7%	\$0.24
Advances Ocular Systems	AOS	14	Developing a steroid - triamciolone acetomide - for treatment of back of the eye diseases.	-22%	\$0.07
Avantogen	ACU	14	Has a p53 cancer vaccine program, natural products business for cancer patients, and vaccine adjuvant business in the US.	-9%	\$0.05
Biodiem	BDM	14	Has partnered nasal flu vaccine and is developing other technologies emanating from the St Petersburg Instit. of Exp. Medicine, Russia	-5%	\$0.27
Occupational & Medical Innovations	OMI	14	Developing safety devices used in the healthcare industry, including safety syringes.	-27%	\$0.40
Colltech	CAU	14	Has developed a novel technology for the extraction of collagen from sheepskins.	25%	\$0.10
Antisense Therapeutics	ANP	13	Developing antisense compounds to treat multiple sclerosis and acromegaly.	12%	\$0.03
Solbec Pharmaceuticals	SBP	13	Developing plant-based compounds for the treatment of melanomas and asbestos related lung cancers.	-6%	\$0.06
Medical Therapies	MTY	13	Developing therapies to treat inflammatory diseases, using copper- and zinc- indomethacin	-18%	\$0.24
Narhex Life Sciences	NLS	13	Developed a low cost protease inhibitor for treatment of HIV in Chinese market.	-15%	\$0.08
Sunshine Heart	SHC	12	Developing the C-Pulse heart assist device. The C-Pulse wraps around and compresses the aorta, increasing blood flow through the body.	7%	\$0.15
Medical Monitors	MDM	12	Develops and manufactures cardiac monitoring and diagnostic devices.	-24%	\$0.19
IM Medical	IMI	12	Markets the Intelliheart Cardiovascular Diagnostic System	56%	\$0.01
Labtech	LBT	11	Developing the MicroStreak technology for the automation of microbiology laboratory processing	-10%	\$0.18
Biolayer	BLS	10	Developer of a biological coatings technology that can applied to immunoassays, bio-separations, drug delivery and other medical devices.	-30%	\$0.14
Polartech	PLT	10	Develops and commercialises medical instruments to diagnose pre-cancer and cancer, in particular cervical cancer and melanomas.	58%	\$0.10

## Bioshares Index

Company	Code	Cap. \$m	Principal Activities	Change Qtr	Price 30/09/06
Biopharmica	BPH	10	Managing cancer treatment and detection and bacterial DNA diagnostic projects. Portfolio investment approach.	29%	\$0.16
PharmAust	PAA	9	Its subsidiary, Epichem, provides chemistry services to biotech and pharma companies. Developing a drug discovery program.	-21%	\$0.11
Cogstate	CGS	9	Marketing cognitive performance diagnostic products.	25%	\$0.20
Tissue Therapies	TIS	9	Commercialising growth factors for spray-on skin product, other wound healing and in research and industrial cell growth applications.	7%	\$0.44
Prima Biomed	PRR	9	Commercialising research from the Austin Research Institute, Melbourne, relating to auto-immune diseases and cancer.	-11%	\$0.06
Avastra	AVS	9	Proposing to engage in consolidation of sleep disorder centres in the USA	47%	\$0.28
Probiomics	PCC	8	A probiotics company that has launched a range of products to aid management of irritable bowel syndrome, diarrhoea and intestinal health.	24%	\$0.05
Resonance Health	RHT	8	Commercialising non-invasive iron liver diagnostic product.	5%	\$0.02
Healthlinx	HTX	8	Detecting novel functions of known and new protein and peptides for therapeutic purposes.	-17%	\$0.04
Stirling Products	STI	8	Commercialising a production animal growth promotant and meat finisher.	-17%	\$0.08
Inctive	ICV	7	Development of compounds to to treat cancers and anti-immune diseases.	-24%	\$0.18
BioMD	BOD	7	Acquired an interest in a tissue engineering technology company, Celxcel.	109%	\$0.10
NeuroDiscovery	NDL	7	Provides electrophysiology services to biotech and pharma, and is developing range of compounds for treating neuropathic pain.	6%	\$0.17
Rockeby Biomed	RBY	6	Developed tests for the detection of Candida (Thrush and Systemic Candidiasis).	-29%	\$0.02
Ambri	ABI	6	Developing rapid diagnostic tests bases on mimicking natural biological sensing processes	0%	\$0.04
Medigard	MGZ	6	Developed retractable syringe technology and other safety medical products.	76%	\$0.09
Eqitx	EQX	6	Developing therapeutic drugs for chronic diseases and disorders affecting the aged patients.	0%	\$0.13
Analytica	ALT	5	Acquired Brewer Retractable Technologies. Contract manufacturer of diagnostic products.	35%	\$0.03
Cryosite	CTE	5	Building a business in the provision of services for storing umbilical cord blood through cryopreservation and ultracold technologies.	25%	\$0.15
Visiomed Group	VSG	5	Commercialising a device, the Funhaler, used to aid asthma medication for children.	0%	\$0.02
Genesis Research & Development Corp.	GEN	5	NZ developer of RNAi therapeutics, particularly for allergic diseases	-22%	\$0.20
BioProspect	BPO	5	Developing insecticides from naturally occurring molecules	23%	\$0.02
Dia-B Tech	DIA	5	Developing therapeutics and diagnostics in the area of diabetes.	-16%	\$0.05
Benitec	BLT	4	R&D company focusing on gene silencing, specifically DNA delivered RNAi, technology.	-35%	\$0.03

**Bioshares Index**

Company	Code	Cap. \$m	Principal Activities	Change Qtr	Price 30/09/06
Somnomed	SOM	3	Commercialising an oral device for the treatment of sleep apnea and snoring.	-57%	\$0.03
Eiffel Technologies	EIF	3	Developing Super Critical Fluid technology to improve the extraction process of compounds from raw materials.	33%	\$0.01
Acuron	AVP	3	Development and marketing of wound-care products	-13%	\$0.01
Select Vaccines	SLT	2	Development and commercialisation of infectious diseases diagnostics, vaccines and therapeutics specialising in area of hepatitis diseases	-38%	\$0.04
Salus Technologies	SAH	2	Developing wound healing and tissue engineering technologies, emanating from Singapore.	-35%	\$0.04

**Capitalisation Total** 6,431

**Listed Biotech Investment Funds**

Company	Code	Cap. \$m	Principal Activities	Change Qtr	Price 30/09/06
Circadian	CIR	56	Management and funding of R&D projects with Australian and NZ universities. Holds investments in Optiscan, Metabolic Pharmaceuticals, Zenyth Therapeutics, Antisense Therapeutics and Avexa.	32%	\$1.40
Biotech Capital	BTC	38	A Pooled Development Fund investing in unlisted Australian biotech companies or in public biotechs, including Starpharma, Prima Biomed, Clinical Cell Culture, Phylogica and Stem Cell Sciences.	-1%	\$0.43
Xceed Biotech	XBL	20	Holds an 60% stake in Polynovo, whichj is developing biodegradable polyurethane-based polymers. Intends to sell subsidiary Boron Molecular, a chemistry services company.	0%	\$0.24
Premier Bionics	PBI	14	A listed venture capital group that invests in medical device companies, including Medec Vision, a medical simulation tools and education company.	5%	\$0.21
Genesis Biomedical	GBL	6	Venture capital company with an investment in a fertility diagnostic	-6%	\$0.03

**Capitalisation Total** 128

**Capitalisation Total - All Indexs** 28,959

**How Bioshares Rates Stocks**

For the purpose of valuation, *Bioshares* divides biotech stocks into two categories. The first group are stocks with existing positive cash flows or close to producing positive cash flows. The second group are stocks without near term positive cash flows, history of losses, or at early stages of commercialisation. In this second group, which are essentially speculative propositions, *Bioshares* grades them according to relative risk within that group, to better reflect the very large spread of risk within those stocks.

**Group A**

Stocks with existing positive cash flows or close to producing positive cash flows.

- Buy** CMP is 20% < Fair Value
- Accumulate** CMP is 10% < Fair Value
- Hold** Value = CMP
- Lighten** CMP is 10% > Fair Value
- Sell** CMP is 20% > Fair Value  
(CMP–Current Market Price)

**Group B**

Stocks without near term positive cash flows, history of losses, or at early stages commercialisation.

**Speculative Buy – Class A**

These stocks will have more than one technology, product or investment in development, with perhaps those same technologies offering multiple opportunities. These features, coupled to the presence of alliances, partnerships and scientific advisory boards, indicate the stock is relative less risky than other biotech stocks.

**Speculative Buy – Class B**

These stocks may have more than one product or opportunity, and may even be close to market. However, they are likely to be lacking in several key areas. For example, their cash position is weak, or management or board may need strengthening.

**Speculative Buy – Class C**

These stocks generally have one product in development and lack many external validation features.

**Speculative Hold – Class A or B or C**

**Sell**

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