

**In this edition...**

Biotech stocks have fallen hard for the second consecutive quarter, although these falls have been largely in line with the broader equity market, as global financial volatility and uncertainty continue to heavily influence the performance of investment markets. The good news for investors is that these falls have occurred following two very strong years in the sector, presenting many buying opportunities once again.

This week's edition provides a wrap of events in the last quarter in the sector. We also discuss Universal Biosensors' latest R&D deal with Lifescan.

**The Editors**

**Companies Covered: Quarterly Review, UBI**

	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 (May '06 - May '07)	17.3%
Year 7 (May '07 - May '08)	-36%
Year 8 (May '08 - May '09)	-7.3%
Year 9 (May '09 - May '10)	49.2%
Year 10 (May '10 - May '11)	45.4%
Year 11 now commenced	-25.6%
<b>Cumulative Gain</b>	<b>213%</b>
<b>Av. annual gain (10 yrs)</b>	<b>21.2%</b>

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Blake Industry & Market Analysis Pty Ltd  
ACN 085 334 292  
PO Box 193  
Richmond Vic 3121  
AFS Licence  
No. 258032

Enquiries for *Bioshares*  
Ph: (03) 9326 5382  
Fax: (03) 9329 3350  
Email: info@bioshares.com.au

**David Blake**  
Ph: (03) 9326 5382  
Email: blake@bioshares.com.au

**Mark Pachacz**  
Ph: 03 9348 9317  
Email: pachacz@bioshares.com.au

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# Bioshares

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

## Quarterly Review

### **Bioshares Index Slides 14% in Sept Qtr**

A prevailing weakness in local and international equity markets contributed to a 14% decrease in the **Bioshares Index** in the September quarter, 2011, from the previous quarter. The pronounced fall was consistent with falls in the Bioshares Large Cap Index (down 11.3%), the Nasdaq Biotech Index (down 12.5%) and the ASX 300 Index, which decreased by 13.1%.

Although equity markets were weak across the board, the slump in the **Bioshares Large Cap** index was also due to a dramatic 36% quarterly fall in the share price of Cochlear, which announced a recall of its relatively recently released new model cochlear implant, the Nucleus 5. Shares in Cochlear finished the quarter at \$46.39, 45% below an all time high of \$85.00 in April of this year. CSL shares declined by 10% for the quarter, with high Australian dollar and Swiss franc exchange rates playing against that company's bottom line result. CSL announced a net profit result of \$941 million for FY2011, a decrease of 11% from the previous year. However, in constant currency terms, but excluding one off revenues from sales of pandemic flu vaccine, net profit rose 14%.

There were only a handful of the 97 companies that comprise the Bioshares Index which recorded share price gains in the September quarter. Holista Colltech posted an 80% gain to close at 14 cents, followed by Isonex (formerly Karmelsonix) which recorded a 50% gain to finish at 2 cents. Optiscan Imaging performed strongly locking in a 43% increase in its share price to finish the quarter at 9 cents.

The top three stocks in the Bioshares Index by capitalisation, Mesoblast (\$2.3 billion), Heartware International (\$930 million) and Acrux (\$533 million) did not escape the influence of a bearish equities market, recording falls of -6%, -7% and -6% respectively. In contrast, complementary medicines company Blackmores share price increased 13% in the September quarter, closing at \$30.29.

Mid-cap biotech stocks that sustained pronounced falls in their share prices in the September quarter included Starpharma (-29%), new listing GI Dynamics (-27%), Reva Medical (-45%), QRxPharma (-29%) and Prima Biomed (-43%). Starpharma's share price was subject to selling pressure after it announced in August it had terminated a marketing deal with Reckitt Benckiser for Vivagel-coated condoms, citing under-performance by Reckitt Benckiser as the cause. Starpharma struck a new deal with Ansell for Vivagel-coated condoms. Whilst its share price was down for the quarter, it had increased by 91% over the last 12 months.

#### Index performances by Quarter

	Q3 2010	Q4 2010	Q1 2011	Q2 2011	Q3 2011
Bioshares Index	1.9%	19.3%	3.9%	-9.4%	-14.0%
Nasdaq Biotech Index	11.9%	8.4%	7.3%	6.5%	-12.5%
Bioshares Large Cap Index	-0.9%	8.7%	-3.1%	-7.2%	-11.3%
ASX 300 Index	6.8%	3.8%	1.9%	-5.0%	-13.1%

Tyrian Diagnostics suffered one of the largest share price falls for the quarter (-80%) when it appeared likely that Bayer Crop Science would terminate its agreements covering agricultural diagnostic products. Tyrian has indicated it expects to make all of its staff redundant and will terminate all material contracts.

### Capital Inflow

Financing inflows to ASX-listed biotech companies totalled \$129 million in the September quarter. Of this \$80 million was from the IPO of US company GI Dynamics, a developer of a polymer sleeve that is implanted within the gastro-intestinal tract to manage obesity and type 2 diabetes.

QRPharma secured \$25 million in placement funds, however, the rights issue it conducted was poorly supported raising \$1.5 million from a potential total of \$8.8 million.

Sunshine Heart struggled to raise a target of \$15 million, ultimately securing \$7.2 million in new funding.

One company that achieved some funding success was Neuren Pharmaceuticals which raised \$3.8 million from a rights issue. It successfully placed the shortfall of \$3 million with other investors.

Living Cell Technologies, Healthlinx and CBio began terminating convertible note financing arrangements in the September quarter, with Viralytics drawing down the last of its US\$6 million

convertible notes obtained from La Jolla Cove Investment Partners.

### Clinical Trial Activity

Clinical trial activity was sustained at a high level in the September quarter. Biota had commenced a Phase IIb study of BTA798 in subjects with chronic asthma subjects with rhinovirus infection (i.e. “the common cold”) in July 2010. However, the company revised down the number of patients it expects it needs to enroll from 400 to 300. Biotron completed dosing in its Phase IIa trial of BIT225 in HCV subjects and also commenced a Phase I trial in HIV subjects.

Bionomics discontinued enrolment in its trial of BNC105 in mesothelioma patients but said it would commence a Phase I/II trial in ovarian cancer, while still progressing its renal cancer trial.

Mesoblast received EMA approval to commence a 225 patient trial of Revascor, to prevent heart failure following heart attack, bringing the number of trials of planned or underway to 12.

### Outlook

We expect another soft quarter ahead for the ASX-listed biotech sector, as long as global economic conditions remain weak and uncertain. Several key announcements ahead include a CHMP decision on Pharmaxis’ Bronchitol, trial results for Clinuvel’s Scenesse and licensing deals from Tissue Therapies and Bionomics.

**Bioshares**

**Capital Raisings by Australian-listed Biotech Companies Q3 2011**

Company	Investment Manager or Investor	Type of raising	Funds raised (\$M)
QRxPharma		Placement	\$25.00
QRxPharma		Rights Issue	\$1.51
Neuren Pharm.		Rights Issue	\$3.80
Neuren Pharm.	Australian Ethical/Lang Walker	RI - Shortfall Placement	\$3.00
Sunshine Heart	RBS Morgans	Placement (Part 1 - Aust)	\$2.20
Sunshine Heart	Summer Street Research Partners	Placement (Part 1 - US/Can)	\$4.60
Sunshine Heart		Placement	\$0.60
Allied Medical	Bell Potter	Placement	\$2.00
NuSep		SPP	\$1.84
Prana Biotech	Quintiles	Placement	\$1.28
Isonoa	Bergen Global Opportunity Fund	Convertible Note (T1)	\$1.12
Helicon Group			\$0.90
Living Cell Technologies	Springtree Spec. Opp. Fund	Conv. Loan Funding	\$0.25
Eastland Medical Systems		Priority Entitlement Offer	\$0.23
Acuvax			\$0.16
Healthlinx		SPP	\$0.14
Viralytics		CN - part conversion	\$0.11
<b>Total</b>			<b>\$48.7</b>
IPOs			\$80.0
<b>Total raised in Q3 2011</b>			<b>\$128.7</b>
<b>Total raised in Q2 2011</b>			<b>\$99.8</b>
<b>Total raised in Q1 2011</b>			<b>\$168.2</b>
<b>Total - 2011 (to date)</b>			<b>\$396.8</b>

## Selected Clinical Trial Developments - September Quarter 2011

Company	Code	Product/Therapeutic	Event
Antisense Therapeutics	ANP	ATL1103 (antisense to IGF-1) (acromegaly)	Completed dosing in final stage of Phase I trial in healthy adult males
Bionomics	BNO	BNC105 (mesothelioma)	Trial discontinued following interim analysis of 24 pts
Bionomics	BNO	BNC105 (met. renal cancer)	Phase I/II trial, 152 pts, in combination with Afinitor. Dose escalation stage revealed BNC105 was well tolerated at 16mg/sq m.
Biota	BTA	BTA798 (human rhinovirus infection - chronic asthma pts )	Revised patient recruitment numbers in Phase II b study from 400 pts to 300 pts. First season enrolled 232 pts.
Biotron	BIT	BIT225 (HIV)	Commenced Phase I/II trial in 18 HIV positive treatment naïve patients
Biotron	BIT	BIT225 (HCV)	Completed dosing Phase IIa trial; 24 pts. In combination with ribavarin.
Calzada	CZD	Novosorb (wound treatment)	Approval granted for human study of Novosorb in surgically created full thickness wounds. Trial start anticipated for 2011 Q4.
CBio	CBZ	Xtoll (Rheumatoid arthritis)	Completed Phase I study in 155 pts with moderate to severe RA. The primary endpoint of the trial (%age of pts with ACR20 response at week 12) was not met. A finding was that the highest dose (75mg) was sub-optimal.
Living Cell Technologies	LCT	DIABECCELL	Implanted first two patients in 8 pt Phase II trial in Argentina
Mesoblast	MSB	Revascor (Mesenchymal pre-cursor stem cells)	Received EMA clearance to commence Phase II trial (225 pts) to prevent heart failure following heart attack ( in conj with angioplasty and stent procedures.
Mesoblast	MSB	Mesenchymal pre-cursor stem cells	Commenced Phase II trial for the treatment of degenerative disc disease (lower back pain) (100 pts)
Mesoblast	MSB	Mesenchymal pre-cursor stem cells	Received FDA approval to commence Phase III trial for bone marrow regeneration in patients with blood cancers. (240 pts)
Novogen	NRT	ME-143 (cancer)	Subsidiary Marshall Edwards (59%) commenced Phase I trial; 24 pts with refractory solid tumours
Patrys	PAB	PAT-SC1 (IgM antibody) (gastric cancer)	Reported significant survival benefit for treated pts at 10yrs; 50% of treated pts survived versus 30% of control group
Patrys	PAB	PAT-SM6 (natural human antibody targeting GRP78; melanoma)	Phase I trial; Reported detection of PAT-SM6 in two post-treatment tumour biopsies
Pharmaxis	PXS	ASM8 (antisense compound; asthma)	Completed enrollment in Phase II trial of 16 patients with allergic asthma.
Prima Biomed	PRR	CVac (dendritic cell vaccine) (ovarian cancer)	Completed enrollment in Phase IIb (61 pts)
Progen Pharm.	PGL	PG545 (cancer)	Terminated Phase I trial of PG545, the second generation (improved) version of PI-88 because of "injection site" reactions
pSivida	PVA	Iluvien (uveitis)	Announced commencement of investigator sponsored Phase I/II study in pts with uveitis affecting the back of the eye
Starpharma	SPL	Vivagel	Commenced Phase II study of Vivagel for the prevention of bacterial vaginosis; 200 pts

**Bioshares Model Portfolio (14 October 2011)**

Company	Price (current)	Price added to portfolio	Date added
Mayne Pharma Group	\$0.400	\$0.435	September 2011
Genetic Technologies	\$0.15	\$0.18	August 2011
Acrux	\$3.48	\$3.37	June 2011
Psivida	\$4.40	\$3.95	May 2011
Bioniche	\$0.70	\$1.35	March 2011
Somnomed	\$1.08	\$0.94	January 2011
Phylogica	\$0.056	\$0.053	September 2010
Biota Holdings	\$0.84	\$1.09	May 2010
Tissue Therapies	\$0.49	\$0.21	January 2010
Atcor Medical	\$0.07	\$0.10	October 2008
Impedimed	\$0.52	\$0.70	August 2008
Bionomics	\$0.44	\$0.42	December 2007
Cogstate	\$0.16	\$0.13	November 2007
Sirtex Medical	\$4.80	\$3.90	October 2007
Clinuvel Pharmaceuticals	\$1.50	\$6.60	September 2007
Pharmaxis	\$0.86	\$3.15	August 2007
Universal Biosensors	\$0.90	\$1.23	June 2007
Alchemia	\$0.29	\$0.67	May 2004

**Portfolio Changes – 14 October 2011****IN:**

No changes.

**OUT:**

No changes

**UBI Commences New Project with LifeScan**

Universal Biosensors (UBI: 90 cents) has started another R&D project with Lifescan, also in the area of a glucose diagnostic test and also using the UBI strip technology. UBI will receive US\$4.5 million for conducting the feasibility work which is expected to take around 12 months.

Whilst there are few details about the actual project, the key message from this latest deal is that the relationship with Lifescan (Johnson & Johnson) is on a very good footing and the tie-up between the two companies is strengthening. Lifescan is obviously very comfortable in the R&D skill base that UBI provides it on an exclusive basis in the glucose area and its ability to deliver cutting edge diagnostic products.

In the latest agreement, UBI will receive a bonus over the approximate one cent per strip it currently receives for strips sold with the OneTouch Verio product (until a set threshold of strip sales is achieved), regardless of who manufactures the strips. Currently UBI is the only manufacturer of the existing OneTouch Verio diagnostic strips.

Last month the OneTouch Verio system was approved for sale in the US and is currently being sold into Europe and Australia.

Last month the company also entered into a development alliance with Siemens Healthcare Diagnostics to commercialise a diagnostic for use in measuring blood coagulation levels in patients on warfarin therapy. Siemens has exclusive global rights to the test for use in the point-of-care hospital setting. UBI CEO said the collaboration is going well with Siemens being a great company to work with.

UBI retained \$17.5 million in cash at June 30. Milestone payments from the company's two collaborations will help reduce the company's burn rate while the company waits for increasing revenue from the manufacturing of glucose strips and service fees from sales to bring it to profitability, in CY2013. In the six months to June UBI delivered a net loss of \$8.0 million.

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

**Bioshares**

## The Australian Listed Life Sciences Sector

September 30, 2011: Capitalisation \$31.8 billion, 102 companies

### Bioshares Large Cap. Index

Company	Code	Cap. \$m	Principal Activities	Change - Quarter	Change - Year	Price 30/9/11
CSL	CSL	15,582	Manufactures pharmaceutical products including vaccines and human plasma fractions	-10%	-10%	\$29.68
Resmed Inc.	RMD	4,512	Manufactures diagnostic and treatment equipment for sleeping disordered breathing	2%	-13%	\$2.94
Cochlear	COH	2,639	Manufactures cochlear hearing implants	-36%	-34%	\$46.39
Sigma Pharmaceuticals	SIP	766	Pharmaceutical manufacturing and wholesaling	23%	35%	\$0.65

**Capitalisation Total**                      23,499

### Bioshares Index

Company	Code	Cap. \$m	Principal Activities	Change - Quarter	Change - Year	Price 30/9/11
Mesoblast	MSB	2,269	Developing therapies based on mesenchymal pre-cursor stem cells, with applications in cartilage regrowth and heart and bone repair.	-6%	215%	\$8.09
Heartware International	HIN	930	Developing a mechanical heart pump (LVAD)	-7%	-10%	\$1.89
Acrux	ACR	533	Developer of the transdermal drug products Axiron and Evamist	-6%	34%	\$3.20
Blackmores	BKL	508	Manufactures vitamin, mineral and herbal supplements and skin & hair products in Australia and N.Z.	13%	7%	\$30.29
Unilife Corporation	UNS	269	Developer of retractable syringes	-7%	-31%	\$0.72
Starpharma Holdings	SPL	265	Developer of pharmaceutical applications of chemical scaffolds known as 'dendrimers'.	-29%	91%	\$1.07
Sirtex Medical	SRX	240	The company's core technology uses radioactive particles to irradiate tumours in the liver. Approved for use in most major regions.	-12%	-12%	\$4.30
GI Dynamics*	GID	225	Commercialising the Endobarrier, an implantable polymer liner for the management of obesity and diabetes	-27%		\$0.80
Reva Medical	RVA	197	Developing a bioresorbable coronary stent	-45%		\$0.60
QRxPharma	QRX	170	Developing a 'dual opioid' drug to treat moderate to severe pain.	-29%	18%	\$1.18
Prima Biomed	PRR	167	Developing the CVac immunotherapy.	-43%	65%	\$0.17
Pharmaxis	PXS	166	Marketing a lung function test, Aridol, and developing the Bronchitol product to treat cystic fibrosis, bronchiectasis and COPD.	-14%	-67%	\$0.73
Bionomics	BNO	165	Developing drugs to treat cancer and CNS diseases, and has also developed a gene diagnostic for epilepsy.	-14%	75%	\$0.48

## Bioshares Index

Company	Code	Cap. \$m	Principal Activities	Change - Quarter	Change - Year	Price 30/9/11
Universal Biosensors	UBI	147	Development, manufacture and commercialisation of a range of in vitro diagnostic tests for point-of-care use	-9%	-36%	\$0.93
Biota	BTA	146	Developer of anti-infective drugs, including the flu drug Relenza. Inavir, developed with Daiichi Sankyo, a long acting flu drug now approved in Japan.	-16%	-16%	\$0.81
Phosphagenics	POH	124	Commercialising a platform technology (alpha-tocopherol) that improves the delivery of pharmaceutical and other products across the skin.	20%	61%	\$0.15
Nanosonics	NAN	120	Developing a novel disinfection technology, the first product is a point of care ultrasound probe disinfection unit	-32%	-34%	\$0.52
API	API	110	Pharmaceutical wholesaler	-20%	-57%	\$0.23
pSiVida	PVA	91	Developing drug delivery technologies, with a special focus on ophthalmic applications	10%	-10%	\$4.39
Bioniche	BNC	72	Developing bladder cancer treatment and food safety vaccine; sale of veterinary products	-22%	0%	\$0.70
Impedimed	IPD	70	Develops devices that aid the diagnosis of secondary lymphoedema, muscle wasting and other disorders	-21%	-44%	\$0.45
Alchemia	ACL	69	Oncology drug developer. Has partnered a generic anti-coagulant drug with Dr Reddys	-41%	-26%	\$0.36
Genetic Technologies	GTG	65	Provides DNA paternity testing services and holds broad patents relating to the use of non-coding DNA.	-24%	515%	\$0.16
Tissue Therapies	TIS	64	Developing the VitroGro product for ulcer and wound healing	-20%	96%	\$0.46
Sunshine Heart	SHC	57	Developing the C-Pulse heart assist device. The C-Pulse wraps around and compresses the aorta, increasing blood flow through the body.	-6%	57%	\$0.05
Mayne Pharma Group	MYX	56	Developing an improved dosing anti-fungal drug, Subazole and operating manufacturing services	-29%	-37%	\$0.37
Clovercorp	CLV	50	Development and production of omega-3 food additives from tuna oil.	5%	-13%	\$0.30
Clinuvel Pharmaceuticals	CUV	46	Developing an analogue of the alpha-MSH protein, named Scenese, as a photo-protective agent	-9%	-27%	\$1.50
Somnomed	SOM	45	Markets an oral device for the treatment of sleep apnea and snoring.	-10%	19%	\$1.12
Anteo Diagnostics	ADO	45	Developer of a biological coatings technology that can be applied to immunoassays, bio-separations, drug delivery and other medical devices	-16%	16%	\$0.06
Prana Biotechnology	PBT	43	Developing drugs to treat CNS diseases such as Alzheimer's and Parkinson's	-21%	24%	\$0.16

## Bioshares Index

Company	Code	Cap. \$m	Principal Activities	Change - Quarter	Change - Year	Price 30/9/11
Scigen	SIE	38	Developer and manufacturer of biopharmaceuticals. Company is based in Singapore and was spun out of Sonic Healthcare in 2002.	-9%	-61%	\$0.07
Avexa	AVX	36	Programs suspended. Direction of company being debated by shareholders.	0%	35%	\$0.04
Viralytics	VLA	29	Developing a cancer treatment based on the application of viruses (oncolytic virus technology)	-33%	48%	\$0.49
Cbio	CBZ	27	Drug development company, focus is on Xtoll product for rheumatoid arthritis	-69%	11%	\$0.20
Solagran	SLA	24	Developing complementary medical compounds called Bioeffectives.	-46%	-53%	\$0.07
Medical Developments	MVP	23	Commercialising the Penthrax inhaler for temporary pain relief. Used widely in ambulances across Australia.	11%	73%	\$0.45
Phylogica	PYC	23	Developing peptide compound libraries for use in human therapeutics.	-21%	12%	\$0.06
Avita Medical	AVH	23	Markets ReCell, a skin repair product	-14%	-5%	\$0.10
Circadian Technologies	CIR	22	Developing drugs, including antibodies, around the VEGF C and VEGF D targets	-19%	-16%	\$0.47
Calzada	CZD	21	Holds a 100 % stake in PolyNovo, a polymer chemistry company.	-8%	150%	\$0.06
CathRx	CXD	21	Developing novel modular cardiac catheters for the diagnosis and treatment of abnormal heart rhythms	38%	-47%	\$0.15
Brain Resource Corp	BRC	20	Development and commercialisation of functional brain analysis techniques	-33%	2%	\$0.22
Immuron	IMC	19	Specialises in R&D of hyper-immune bovine colostrum products for therapeutic use in animals and humans.	-10%	-32%	\$0.06
Living Cell Technologies	LCT	19	Developing cell therapies for diabetes, haemophilia and Huntington's disease	-15%	-69%	\$0.06
Benitec	BLT	19	R&D company focusing on gene silencing, specifically DNA delivered RNAi, technology	-29%	-50%	\$0.02
OBJ	OBJ	18	Developing transdermal drug delivery technologies	-24%	-38%	\$0.02
Allied Health Group	AHZ	18	Formed through the merger of Allied Medical and BioMD. Diversified medical products group.	-60%	52%	\$0.03
Probiotec	PBP	18	Manufacturer, marketer and distributor of a range of over the counter (OTC) pharmaceuticals, complementary medicines and speciality ingredients	-3%	-64%	\$0.35

## Bioshares Index

Company	Code	Cap. \$m	Principal Activities	Change - Quarter	Change - Year	Price 30/9/11
Neuren Pharmaceuticals	NEU	17	Developing neuroprotective therapeutics	7%	-12%	\$0.02
Asian Ctr for Liver Diseases and Transpl.	AJJ	17	Manages liver treatment centres in Asia. Not previously included in these tables. Made a backdoor listing through Costarella Design in 2009.	7%	0%	\$0.09
Isona	ISN	17	Respiratory and pulmonary devices company. (Name changed from Karmelsonix)	50%	15%	\$0.02
Vita Life Sciences	VSC	16	Development, manufacture and distribution of prescription and OTC medicines as well as complementary and alternative medicines, dietary supplements and health foods	6%	47%	\$0.28
Southern Dental Industries	SDI	15	Manufacture & distribution of amalgam (fillings) & other dental materials and product R&D.	-26%	-35%	\$0.13
IDT Australia	IDT	15	Manufacturer of pharmaceutical ingredients to international standards for major pharmaceutical groups.	-1%	-43%	\$0.35
Novogen	NRT	15	Developing analogues of naturally occurring phenolic hormones to treat cancers and other conditions.	-26%	16%	\$0.15
Biotron	BIT	15	Developing a compound to treat HCV	-7%	53%	\$0.10
Patrys	PAB	13	Developing human antibody therapies for the treatment of lung, pancreatic, gastric and colon cancers	-40%	-28%	\$0.05
Agenix	AGX	12	Developing a compound to treat Hepatitis B, AGX1009. Also seeking a partner in China to develop Thromboview, an imaging agent.	14%	0%	\$0.02
Cogstate	CGS	12	Marketing cognitive performance diagnostic products	-6%	-38%	\$0.16
Compumedics	CMP	12	Develops, manufactures and markets sleep diagnostic and monitoring equipment.	-11%	-48%	\$0.07
Optiscan Imaging	OIL	12	Manufacture of confocal microscopes for clinical diagnosis	43%	105%	\$0.09
Bluechiip	BCT	12	Developer tracking and receival systems for biological samples	-40%		\$0.15
ITL	ITD	11	Develops and distributes medical devices such as safety equipment to prevent needle stick injuries and sterile preparation kits.	21%	70%	\$0.09
Helicon Group	HCG	11	Asset development company, with interests in Vibrovein, Linguet, and BreatheAssist.	-14%	36%	\$0.02
Cordlife	CBB	11	Rolling out tissue banking services in Australia and Asia	-30%	-78%	\$0.07
NuSep Holdings	NSP	10	Manufacture and sale of protein separations technologies	16%	-54%	\$0.11



## Bioshares Index

Company	Code	Cap. \$m	Principal Activities	Change - Quarter	Change - Year	Price 30/9/11
Medical Australia	MLA	10	Manufacture and supply of medical devices and equipment. Not previously included in these tables. Previously known as BMDI Tuta and IMD Group	-22%	31%	\$0.02
Ellex Medical Lasers	ELX	9	Develops, manufactures and markets solid state ophthalmic lasers used to treat secondary cataracts and retinal disorders.	-39%	-67%	\$0.11
Genera Biosystems	GBI	9	Develops, manufactures and distributes advanced molecular diagnostic tests, with a particular focus on women's health.	-28%	-70%	\$0.13
Biodiem	BDM	9	Focused on the development of LAIV influenza vaccines	10%	-37%	\$0.09
Atcor Medical	ACG	9	Markets the SphygmoCor device, a noninvasive technology that provides information regarding the functioning of the cardiovascular system	-57%	-46%	\$0.07
Antisense Therapeutics	ANP	9	Developing an antisense compound to treat acromegaly	13%	-36%	\$0.01
Eastland Medical Systems	EMS	8	Developing the anti-malarial product ArTiMist.	-42%	-69%	\$0.01
Analytica	ALT	8	A medical devices company that has developed a retractable syringe	-33%	-9%	\$0.02
Progen Pharmaceuticals	PGL	8	A developer of cancer therapeutics	-41%	-61%	\$0.14
USCOM	UCM	8	Marketing a non-invasive heart output function monitor	-34%	-55%	\$0.15
Cellmid	CDY	7	Developing therapies that target the midkine protein. Recently launched a range of hair loss products.	-17%	-5%	\$0.02
Holista Colltech	HCT	7	Has developed a novel technology for the extraction of collagen from sheepskins	80%	35%	\$0.14
Cyclopharm	CYC	6	A nuclear medicine company that markets the Technegas lung imaging system	-25%	-46%	\$0.04
Resonance Health	RHT	5	Marketing the FerriScan technology, a non-invasive tool for measuring liver iron levels	-12%	-6%	\$0.02
Advanced Surgical Design & Manufacture	AMT	5	A developer and manufacturer of prosthetic implants and medical devices	-35%	-59%	\$0.15
Cryosite	CTE	5	Provides specialised storage services, especially for umbilical cord blood	18%	0%	\$0.10
Healthlinx	HTX	4	Detecting novel functions of known and new protein and peptides for therapeutic purposes.	-35%	-76%	\$0.02
LBT Innovations	LBT	4	Developed the MicroStreak technology for the automation of microbiology laboratory processing	-9%	-53%	\$0.04

## Bioshares Index

Company	Code	Cap. \$m	Principal Activities	Change - Quarter	Change - Year	Price 30/9/11
Austofix	AYX	4	Manufacturer and developer of orthopaedic fixation devices	-51%	-70%	\$0.29
Virax Holdings	VHL	3	Developing a therapeutic and prophylactic vaccine for HIV	-10%	-40%	\$0.02
NeuroDiscovery	NDL	3	Focusing on pain drug development following management buyout of electrophysiology business	-18%	10%	\$0.03
Imugene	IMU	3	Developing animal products such as antibiotic alternatives used in the stock feed industry using a vaccine and gene therapy approach	-33%	-78%	\$0.02
Leaf Energy	LER	3	Plant genetic technologies business, lead product is vitronectin.	-21%	-57%	\$0.10
Medigard	MGZ	2	Developed retractable syringe technology and other safety medical products.	-7%	-50%	\$0.03
Acuvax	ACU	2	Holds interests in various therapeutics and vaccines	0%	-67%	\$0.001
Bone Medical	BNE	2	Developing treatments for bone and joint degenerative diseases such as arthritis and osteoporosis.	14%	-71%	\$0.02
Probiomics	PCC	2	Proprietary ownership of a unique probiotic strain	-33%	-40%	\$0.01
OMI Holdings	OMI	1	Commercialising a safety syringe	0%	-94%	\$0.00
Actinogen	ACW	1	Early stage developer of antibiotics that show activity against MRSA and VRE bacteria	-29%	-80%	\$0.02
Tyrian Diagnostics	TDX	1	Developer of diagnostic products, including the ReadRite-Alpha Amylase test ( a wheat quality test)	-80%	-93%	\$0.00
<b>Capitalisation Total</b>		<b>8,337</b>				

## Listed Biotech Investment Funds or Companies

Company	Code	Cap. \$m	Principal Activities	Change - Quarter	Change - Year	Price 30/9/11
Biotech Capital	BTC	7	The entity is now engaged in the orderly sale of assets.	12%	1%	\$0.09

**Capitalisation Total** 7

**Capitalisation Total - All Indices** 31,842

*IM Medical, Stirling Products, Genesis Research & Development Corp, Atos Wellness have been removed from the Bioshares Index while they are either being re-structured, re-capitalised, sit as a shell vehicle pending new business being sourced or have entered administration.*

*\* GID price change is from IPO price*

**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. For both groups, the rating “Take Profits” means that investors may re-weight their holding by selling between 25%-75% of a stock.

**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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