

In this edition...

One of the challenges of investing in biotech is that minimising risk and maximising return does not come easily. It is possible to find lower risk investments. However, the upside is often a fraction of what is obtainable with a high risk investment. Tough disease areas such as stroke, or more precisely, neuroprotection are high risk. But then, this a great example of what biotech can be about, where the aim is to tackle a very poorly met need, and maybe, just maybe, generate a winning drug.

Our major focus in this edition is on Neuren Pharmaceuticals, from New Zealand, which is one of a small number of companies that are working on drugs for neuroprotection. This comprehensive analysis is well worth reading.

The editors

	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)	-7.9%
Cumulative Gain	156%
Average Annual Gain	22.6%

Bioshares is published by Blake Industry & Market Analysis Pty Ltd. The company also provides market and company analysis of the Australian pharmaceutical and biotech industries for local and international funds management institutions, venture capital funds and other related industry groups. For further details contact David Blake (see details below).

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) 9671 3633
Email: info@bioshares.com.au

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

Mark Pachacz
Ph: (03) 9671 3222
Email: pachacz@bioshares.com.au

Individual Subscriptions (48 issues/year)
\$320 (Inc.GST)
Edition Number 178 (4 August 2006)
ISSN 1443-850X

Copyright 2006 Blake Industry and Market Analysis Pty Ltd. ALL RIGHTS RESERVED.
Secondary electronic transmission, photocopying, reproduction or quotation is strictly prohibited without written consent of the publisher.

Bioshares

4 August 2006
Edition 178

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

Neuren Pharmaceuticals – Developing Broad Clinical Program; But Why the Discount?

Neuren Pharmaceuticals (NEU: 50 cents) is now making clear progress with its suite of neuroprotectant compounds. A Phase III trial in patients undergoing cardiac surgery (including coronary artery bypass graft surgery (CABG) and heart valve surgery) is set to begin in the next few months. Its second compound for treating traumatic brain injury has just completed Phase I safety studies. And the third most advanced program, a compound to potentially treat patients with Parkinson's disease, has just been selected and will move into the clinic next year after completing toxicology studies. For a company capitalised at \$56 million and with \$7 million in the bank, Neuren is a stock that is deserving of greater investor attention.

Parkinson's an attractive therapeutic space

Developing therapeutics for Parkinson's disease is an attractive drug development area. With at least 12 drugs currently on the market and the mechanism of action someone characterized and accepted - the damage or loss of dopamine producing cells that transmit signals to produce smooth movement of muscles - there is arguably less risk in progressing such a program where accepted animal models yields data that has shown to correlate with human use.

Existing drugs on the market are limited in their effect and improvements in current therapies are strongly needed. Levodopa, approved in 1970, is the gold standard treatment. The compound breaks down in the brain into dopamine, although the drug needs to be taken in large quantities and has side effects such as nausea and

involuntary movements. Many of the other existing drugs work to improve the action of levodopa and none of these therapies work to stop the progression of the disease.

Neuren's orally available lead compound just selected for its Parkinson's program has produced positive results recently in an accepted animal model and the drug may also have applications for the treatment of Alzheimer's disease.

Preclinical studies with Glypromate & NNZ-2566

Glypromate

One of the appealing features of Neuren is the extensive array of preclinical testing conducted with Glypromate and the company's lesser advanced compounds. Glypromate has shown to offer broad neuronal protection in rat models from several types of injuries. The company has established that protection is dose dependent, with a middle optimal dose. The compound has shown to offer protection for up to 11 hours after injury. It has shown to protect various regions of the brain. It has shown that Glypromate moves into the cerebral spinal fluid, although only when the brain is injured. It has shown the compound to offer long term recovery and to be effective against various toxins and under oxidative stress conditions.

Glypromate has also shown efficacy in preclinical models for multiple sclerosis, showing a pronounced reduction in severity of illness. Also it has shown to be effective in a Parkinson's rat model. The mechanism of action has been elucidated

Cont'd over

– Neuren cont'd

as acting on the NMDA receptor, the metabotropic glutamate receptor and the transcription factor CREB through the NMDA receptors.

In human (clinical) trials, Glypromate has been shown to be safe.

NNZ-2566

This peptide is an analogue of Glypromate that has displayed some improved qualities. It has shown to have a better stability profile than Glypromate, more potent as a neuroprotectant agent in *in vitro* studies. In *in vivo* trials, the compound has shown to block ischemic seizure activity. In May this year, the **US Army** presented results from trials with NNZ-2566 in reducing non-convulsive seizures in a rat model. The Army's **Walter Reed Army Institute of Research** had previously produced positive animal data in reducing traumatic brain injury through IV delivery of NNZ-2566. Neuren's in-house studies have also produced positive data with the compound's efficacy in an animal model in both oral and IV delivery forms.

Lead Program - Phase III study with Glypromate

Neuren is anticipating commencement of its 520 patient Phase III trial by the end of this year. The trial will be conducted in Australia, New Zealand and the US, although predominantly in Australasia. An appealing aspect of this trial is that the company believes the Phase III study can be completed for approximately \$10 million.

There are three reasons for this. Firstly, trials conducted in Australasia will be approximately 70% of the cost of running a similar trial in the US. Further, recruitment of trial participants is not expected to be problematic because of the large numbers of patients each year undergoing cardiac surgery. For example, at the Alfred Hospital in Melbourne alone, each year about 1,000 people undergo coronary artery bypass graft surgery.

Trial design feature

Also, because each patient is their own control, smaller numbers of patients are required for this study than traditionally used in most Phase III trials. Patients will be tested for cognitive function before cardiac surgery and also monitored and tested after surgery to see what impact dosing has on preventing cognitive decline.

There is substantial evidence that small blood clots (emboli) form during the surgical procedure that lodge in the brain and damage neurons. These emboli form from particulate matter released when cutting the aorta and other arteries and when the arteries are rejoined, damage also occurs from the passage of oxygen bubbles into the blood stream and from cytokines released because of inflammation occurring during the procedure. A large study by others involving 261 patients showed that 24% of patients undergoing CABG experience cognitive decline six months after the surgery.

The first round of efficacy results from this Neuren's trial will take about 18 months to produce (mid 2008).

Cont'd over

A discounted stock?

Neuren has a number of appealing features with its structure and it's worth understanding the reasons for the stock being heavily discounted by the market. Companies with compounds moving into Phase III clinical studies that are seeking to enter markets valued in excess of \$1 billion are commonly valued in excess of \$250 million, both in Australia and the US. So why is Neuren being valued at only one fifth of that at present?

Why has the Neuren share price been discounted?

There are three likely reasons:

Being **based on the other side of the Tasman** introduces a higher level of risk for investors as there is a perceived difficulty in conducting regular site visits.

The **lead compound has moved** from clinical safety studies **without measuring any efficacy data**. This approach has been discussed with and accepted by the US FDA.

Thirdly, **developing neuroprotectant compounds** has been shown to be **very difficult**.

While there is a neuroprotectant drug, Memantine, that provides mild efficacy in patients with Alzheimer's disease, and Riluzole has been approved for treating amyotrophic lateral sclerosis, at least 14 compounds have failed in Phase III trials in protecting patients who have suffered acute ischemic stroke. There are currently no neuroprotectant drugs approved for the treatment of stroke or cognitive decline associated with cardiac surgery.

However, there are a number of factors that make Neuren an attractive investment consideration.

Firstly, the company has a **wide portfolio** of neuroprotective compounds (and an oncology program) in development.

Further, the company has brought in a **wealth of experience** that is playing an important role in helping to successfully negotiate the drug development process.

The company has a **secure and deep patent portfolio** underpinning its technologies (see page 4).

There have been **numerous preclinical studies** conducted and published that highlight the efficacy of the company's compounds. And the company has a number of programs advancing through the clinic.

By the end of 2007, it is anticipated the company will have **three compounds at the Phase I, Phase II and Phase III** stages of development.

– Neuren cont'd

Second Lead Program in TBI - Phase I underway (NNZ-2566)

Earlier this year, Neuren started a Phase I safety study for its second program with a compound called NNZ-2566 dosed as an intravenous solution. This compound is a synthetic analogue of Glypromate, a smaller version that may also be dosed orally. The first indication that this compound will be tested for is in treating moderate traumatic brain injury (TBI). This program is being conducted in conjunction with the US Army and to date this group has contributed to 50% of funding costs.

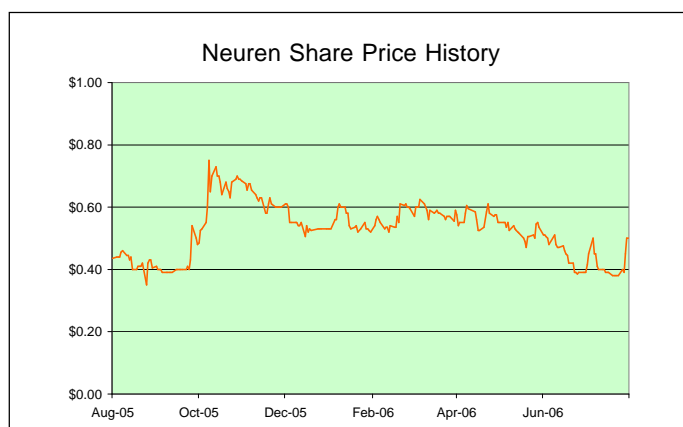
This study should be completed shortly and a Phase II study is expected to commence and be completed in 2007. A second Phase I study will begin later this year in patients with severe TBI and this will move into a Phase II program that should also be completed next year. The US Army will play an important role in helping to facilitate this clinical program. Whilst the US Army will have rights to use this compound if it gains approval, Neuren will be free to commercialise the drug in global markets.

Third Program in Parkinson's and Alzheimer's programs - Due to begin Phase I in 2007

As mentioned above, Neuren has recently selected a lead compound (NNZ-2591) that will be trialed in patients afflicted with Parkinson's disease. This compound is an analogue of a group of compounds that have been well studied and documented by others (diketopiperazine compounds) and have been shown to induce neurite growth, positively effect memory function and act as neuroprotective agents. The mechanism of action is not well understood. Neuren believes it has improved the drugability of this group of compounds through its analogue which can be orally dosed and has an improved half life in the body.

Small batch quantities have been manufactured and this will now need to be scaled up further prior to clinical trials. A US contract manufacture for the active pharmaceutical ingredient has been selected and toxicology studies in two species will need to be conducted before Phase I trials can begin towards the end of 2007. The cost of goods for manufacture is well within the limits for commercial viability.

The compound may have three applications. These being for treatment of dementia associated with Parkinson's disease, treating the tremors associated with the same disease, and potentially as a therapeutic for Alzheimer's disease.



The NNZ-2256 compound (discussed earlier) is also expected to move into the clinic next year (Phase I study) for chronic treatment of degenerative diseases such as Alzheimer's and Parkinson's diseases, as an oral formulation. Progression of this compound into the clinic should occur earlier than with NNZ-2591 above because toxicology studies have been completed (for the TBI application).

At this stage, it is expected that one of the programs for chronic disorders such as Alzheimer's and Parkinson's will be developed in house and the second (NNZ-22591 or oral NNZ-2256) will be partnered out.

By the end of next year, Neuren may have three compounds in clinical studies for five different applications. Currently, it has once compound approaching Phase III trials and a second compound undergoing Phase I safety studies.

Competitive landscape for neuroprotectant compounds

As mentioned, there are no neuroprotectant drugs approved for the treatment of stroke, TBI or cognitive decline associated with cardiac surgery. Below is a list of some of the neuroprotectants in later stage clinical trials.

NXY-059, being developed by **Renovis/AstraZeneca**, has recently produced strong evidence of efficacy in a Phase III trial in treating acute ischemic stroke. NXY-059, is a 'free radical trapping' agent. Enrolments in these companies' second Phase III trial in 3,200 patients have been completed and Renovis/AstraZeneca expect to file an NDA in 2007.

Citicoline has been on the market in Europe and Japan for sev-

Neuren's expected clinical program in December 2007

Compound	Application	Stage of development	Partners
Glypromate	Neuroprotection in patients undergoing coronary surgery	Phase III trials underway	Independent
NNZ-2566	Moderate TBI	Phase II underway	US Army
NNZ-2566	Severe TBI	Phase II underway	US Army
NNZ-2591	Parkinson's disease	Phase I underway	Independent/partner
NNZ-2566 oral	Parkinson's or Alzheimer's	Phase I underway	Independent/partner

– Neuren cont'd

eral years. Four Phase III studies have been completed although the results have been variable and inconclusive and an additional Phase III trial is planned. The compound works by reducing lipid metabolism after an ischemic stroke, which is believed to reduce the level of free acids and thereby cutting the level of free radical production.

Glypromate works as an antagonist of the NMDA receptor. Magnesium ions are known to gate the NMDA receptor channel as well and currently magnesium sulphate is in a Phase III study sponsored by the NIH as a neuroprotectant in stroke and CABG surgery.

Alexion Pharmaceuticals recently completed has a Phase III trial in patients undergoing angioplasty with its antibody drug, Pexelizumab. The drug did not achieve statistical significance in reducing mortality.

The Neuren team

Neuren has enlisted a particularly impressive team to commercialise its products. The company's Chief Medical Officer and Director, Doug Wilson, has brought 10 drugs to market in his career with **Boehringer Ingelheim** in the US and globally. He has been involved in over 100 US FDA meetings and has presented at five FDA Advisory Committee meetings. He is playing a leading role in guiding the company's clinical trial design and in conjunction with the FDA. This experience is unparalleled in any Australian biotech company.

The head of the company's US operations is Lawrence Glass. He formerly ran a 250 person contract research organization and has a long and close relationship with the US Army, which has been particularly useful in furthering the company's traumatic brain injury clinical program with the US Army.

The company also employs a team us US-based consultants to help the company with issues relating to reimbursement, toxicology work, regulatory affairs and manufacturing. The Neuren team is confidently led by the company's CEO, David Clarke.

The Neuren patent estate

Neuren has a very tight patent portfolio surrounding its leading program with Glypromate. Glypromate is a naturally occurring enzyme found in the brain so it is not possible to secure composition of matter claims for this compound. However Neuren has seven 'use' patents granted in the US (Patent numbers: 6,365,573; 5,804,550; 6,187,906; 6,812,208; 6,780,848; 6,617,311; 6,933,282), which expire between 2014 - 2019, that relate to its lead program. In other regions, patents have either being granted or are awaiting examination.

Neuren was recently granted a US patent for its second leading program, NNZ-2566 (Patent Number 7,041,314) which expires in 2021. This patent covers composition of matter and therapeutic uses of Glypromate analogues.

For its other programs, the company has US patents in the examination phase. The company has also in-licensed intellectual property from the University of Auckland which includes two US granted patents (Patent numbers: 6,933,278; 5,858,966) in other program areas.

Summary

Neuren is making solid progress in developing its suite of neuroprotectant agents. This strong progress is expected to continue into 2007, with three compounds scheduled to be in clinical trials in five separate programs. The company has a secure patent estate, strong management, and a broad suite of products in its area of expertise, neuroprotection.

Over the next 18 months several significant milestones will occur that should elevate investor interest in this stock. A key risk for the company remains funding, with only \$7 million in cash. The area of focus for the company also presents an additional risk, with few neuroprotectant drugs on the market and the field littered with an array of late stage clinical failures.

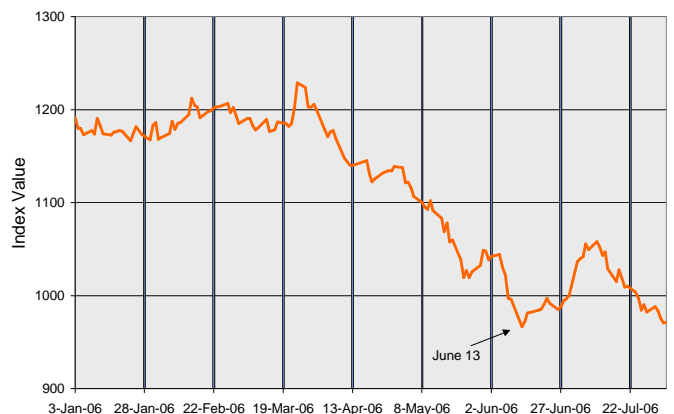
Bioshares recommendation: **Speculative Buy Class A**

Bioshares

Bioshares Model Portfolio (4 August 2006)

Company	Price (current)	Price added to portfolio
Acrux	\$0.86	\$0.83
Agenix	\$0.16	\$0.22
Alchemia	\$0.96	\$0.67
Avexa	\$0.245	\$0.15
Biolayer	\$0.16	\$0.195
Bionomics	\$0.17	\$0.210
Biosignal	\$0.17	\$0.22
Cytopia	\$0.705	\$0.46
Chemgenex Pharma.	\$0.51	\$0.38
Evogenix	\$0.575	\$0.47
GroPep	\$1.47	\$1.43
Optiscan Imaging	\$0.545	\$0.35
Neuren Pharmaceuticals	\$0.50	\$0.70
Pharmaxis	\$1.98	\$1.90
Prima Biomed	\$0.069	\$0.09
Sirtex Medical	\$2.35	\$1.95

The Bioshares 20 Index



Change from June 30, 2006 **-2.9%**
 Change - week ago **-1.1%**
 Change - 13 June (Low) **0.5%**

4.7B Reporting Companies – Cash Balances June 30, 2006 Commentary

The majority of listed life science companies are required to file cash flow statements with the ASX on a quarterly basis. This provides investors with a means to monitor the financial health of cash depleting biotech firms on more timely basis than is available through half yearly and annual reporting requirements.

A key analytical measure we present is the 'Survival Index' (SI). The index is derived by dividing a company's annual or annualised net operational cash into the company's cash balance. The index measures how many years those cash reserves will last, based on the company's recent spending patterns. It is limited because it does not account for companies that may ramp up spending in the next period of activity.

As a rule of thumb, companies that present with an SI of less than one are likely to be raising funds to support their activities, or are in the process of doing so. A healthy SI is either two or more. Companies with SIs of less than 0.5 may be in positions of funding stress and should therefore be investigated cautiously by investors.

For the June quarter 2006, we have tabulated the cash positions of 88 listed life science companies. One company, **Panbio** has moved out of this list, as it has satisfied the ASX requirement of posting four consecutive quarters of positive operational cash flows. One other company, **Denx**, has been excluded as it is in the process of transferring its principle asset to a US company, **Actuality Systems**, in exchange for a shareholding. In our last analysis of company cash positions (Bioshares 165) we calculated a Survival Index for Denx of 0.2, or a little more than 2 months of cash to cover net operational spending based in recent spending patterns. It therefore comes as no surprise that the company has opted to sell its dental implant technology to another party, after exhausting other funding avenues.

Of the 88 companies, 41 recorded SIs of less than one, with 18 having less than 6 months cash at hand.

Receipts

Several companies are worth noting for the income they have been generating. (Please note that cash flow statements do not distinguish sales from other revenue). **Sirtex Medical** tops the list with annual cash receipts for the year of \$21 million. **Genetic Technologies** with receipts of \$8.9 million was mentioned in last week's Bioshares. **Medec**, **Cygenics**, and **Eastland Medical Systems** posted receipts of \$8.5 million, \$8 million and \$7.4 million respectively. These full results will be worth examining when released.

Top Ten 4.7B Companies Ranked by Receipts

Code	Company	Receipts	Cash End	Survival Index
			30/06/06	
1	SRX Sirtex Medical	\$21.0	\$10.8	Not App
2	GTG Genetic Technologies	\$8.9	\$11.9	2.0
3	MAA Medec	\$8.5	\$5.7	5.2
4	CYN Cygenics	\$8.0	\$5.7	1.1
5	EMS Eastland Medical Systems	\$7.4	\$0.9	Not App
6	SIE Scigen	\$7.4	\$5.7	0.7
7	PAA Pharmaust	\$5.6	\$0.3	0.1
8	BGN Bresagen	\$5.5	\$0.2	0.1
9	CST Cellestis	\$5.4	\$13.9	4.9
10	PXL Proteome Systems	\$5.0	\$6.1	0.7

Also worth noting are two companies with what appears to be very low SIs, **Pharmaust** and **Bresagen**. Cash generating companies such as these can often run much lower cash balances, so their SI figures are not necessarily reliable indicators of their financial health.

Stressed Companies

There are a number of companies that according to our Survival Index calculations are facing either very difficult or uncertain futures. **Rockeby biomed** and **Norwood Abbey** had, as of June 30, effectively run out of cash, with both companies registering '0' SIs. Rockeby has informed the market that it has access to a \$600,000 banking facility. Norwood Abbey plans to sell-off or licence its eyecare division, sell part of its holding in **Norwood Immunology**, "aggressively" commercialise its needle-free drug delivery technology and also plans to finalise a funding package.

Probiomics, with an SI of 0.1 has, since June 30, raised \$850,000. **Benitec**, also with an SI of 0.1, has announced a share purchase plan to raise a minimum of \$500,000. The directors of **RiTract** (SI - 0.2) have announced plans to issue convertible notes for up to \$2.5 million, to be partially underwritten by the directors. **Resonance Health** (SI - 0.2) launched a right issue to raise \$1.5 million, but this has subjected to a stop order by ASIC. **Bone Medical** (SI - 0.2) plans to raise \$2 million through a placement. Another convertible note was issued by **Living Cell Technologies** (SI - 0.5) to raise \$1.2 million, with a further \$0.8 million raised through a placement.

Other companies to raise funds since June 30 include **Mesoblast**, which raised \$15 million through a placement, **Psivida** (SI - 0.7), which issued \$8.5 million in subordinated convertible debentures and **Premier Bionics** (SI - 0.2), which raised \$1.1 million through a placement in the UK.

Note: Small cap life science companies that are not required to comply with the 4.7B Rule include:

Agenix, Anadis, Biota, Circadian, Clovercorp, Compumedics, Chemgenex Pharmaceuticals, Cytopia, Eiffel Technologies, Ellex Medical Lasers, Gropep, IDT Australia, ITL Corp, Life Therapeutics, Metabolic Pharmaceuticals, Meditech Research, Medical Developments International, Novogen, Optiscan Imaging, Panbio, Progen Industries, Polartechnics, Phosphagenics, Peptech, Ventracor, Virax Holdings and Zenyth Therapeutics - (27 companies)

4.7B Reporting Companies – Cash Balances June 30, 2006

Sorted by Survival Index

Life Science Companies - Cash Balances June 30, 2006

Code	Company	Cash End 30/06/06 (\$M)	Survival Index
1	NDL NeuroDiscovery	\$2.8	Not App
2	EMS Eastland Medical Systems	\$0.9	Not App
3	SRX Sirtex Medical	\$10.8	Not App
4	PXS Pharmaxis	\$97.8	7.1
5	CTE Cryosite	\$1.3	6.4
6	BZI Brainz**	\$9.0	5.4
7	MAA Medec	\$5.7	5.2
8	CST Cellestis	\$13.9	4.9
9	BOD BioMD	\$2.7	4.8
10	CXD CathRx	\$10.4	4.6
11	BOS Biosignal	\$4.9	4.4
12	HTW Heartware	\$34.3	3.7
13	GAA Genepharm	\$15.0	3.3
14	GIA Giaconda	\$4.3	3.1
15	BPH Biopharmica	\$2.7	3.1
16	PEP Peplin	\$31.2	2.6
17	ACG Atcor	\$11.8	2.6
18	BIT Biotron	\$4.6	2.6
19	NLS Narhex Life Sciences	\$4.8	2.6
20	BRC Brain Resource Corp	\$3.9	2.6
21	MSB Mesoblast	\$7.9	2.5
22	BPO BioProspect	\$1.8	2.4
23	ACR Acrux	\$19.7	2.4
24	AVX Avexa	\$20.2	2.3
25	DIA Dia-B Tech	\$2.8	2.3
26	UCM USCOM	\$7.2	2.3
27	ANP Antisense Therap.	\$8.2	2.1
28	NEU Neuren Pharmaceuticals	\$7.4	2.0
29	XBL Xceed Biotech	\$5.2	2.0
30	GTG Genetic Technologies	\$11.9	2.0
31	AVS Avastra	\$3.7	1.9
32	SPL Starpharma	\$14.3	1.9
33	CGS Cogstate	\$2.7	1.8
34	GBL Genesis Biomedical	\$2.2	1.8
35	TIS Tissue Therapies	\$3.9	1.6
36	IMU Imugene	\$2.7	1.6
37	ACL Alchemia	\$26.2	1.6
38	CMQ Chemeq	\$28.8	1.5
39	EGX Evogenix	\$5.8	1.4
40	SLT Select Vaccines	\$0.9	1.4
41	PLD Portland Orthopaedics	\$4.6	1.4
42	ABI Ambri	\$6.2	1.3
43	CYN Cygenics	\$5.7	1.1
44	IMI IM Medical	\$2.4	1.1
45	BNO Bionomics	\$4.7	1.1
46	BDM Biodiem	\$2.9	1.0
47	CAU Colltech	\$1.7	1.0
48	PYC Phylogica	\$2.6	0.9
49	SBP Solbec Pharm.	\$1.3	0.9
50	MTY Medical Therapies	\$2.4	0.9
51	CCE Clinical Cell Culture	\$8.6	0.9
52	PBT Prana Biotechnology	\$10.1	0.9
53	AOP Apollo Life Sciences	\$5.0	0.8
54	STI Stirling Products	\$1.8	0.8
55	AOS Advanced Ocular Systems	\$1.7	0.8

Life Science Companies - Cash Balances June 30, 2006

Code	Company	Cash End 30/06/06 (\$M)	Survival Index
56	CUV Clinuvel Pharmaceuticals	\$8.6	0.8
57	PRR Prima Biomed	\$3.2	0.7
58	PSD pSiVida	\$15.5	0.7
59	HTX Healthlinx	\$1.4	0.7
60	SHC Sunshine Heart	\$4.5	0.7
61	SIE Scigen	\$5.7	0.7
62	PXL Proteome Systems	\$6.1	0.7
63	SLA Solagran	\$1.1	0.7
64	OBJ OBJ	\$0.6	0.7
65	AVP Acuron	\$1.5	0.6
66	UNI Unilife	\$4.0	0.6
67	PSX Psiron	\$3.4	0.6
68	SAH Salus Technologies	\$0.4	0.6
69	SOM Somnosed	\$2.3	0.6
70	OMI Occup.& Medical Innov.	\$1.2	0.6
71	BLS Biolayer	\$1.3	0.5
72	VSG Visiomed	\$0.9	0.5
73	LCT Living Cell	\$3.0	0.5
74	EQX Eqitx	\$0.7	0.4
75	ACU Avantogen	\$2.1	0.2
76	PBI Premier Bionics	\$0.8	0.2
77	BNE Bone Medical	\$0.5	0.2
78	RHT Resonance Health	\$0.6	0.2
79	MGZ Medigard	\$0.1	0.2
80	RTL RiTract	\$0.4	0.2
81	BGN Bresagen	\$0.2	0.1
82	MDM Medical Monitors	\$0.1	0.1
83	BLT Benitec	\$0.9	0.1
84	PAA Pharmaust	\$0.3	0.1
85	PCC Probiomics	\$0.2	0.1
86	ALT Analytica	\$0.1	0.1
87	NAL Norwood Abbey	\$0.7	0.0
88	RBV Rockeby Biomed	\$0.042	0.0
Total Average		\$590.9 \$6.7	1.6

**BZI net operational cash flow figure is nine months annualised

4.7B Reporting Companies – Cash Balances June 30, 2006 Sorted by Cash

Life Science Companies - Cash Balances June 30, 2006

Code	Company	Cash End 30/06/06 (\$M)	Survival Index
1	PXS Pharmaxis	\$97.8	7.1
2	HTW Heartware	\$34.3	3.7
3	PEP Peplin	\$31.2	2.6
4	CMQ Chemeq	\$28.8	1.5
5	ACL Alchemia	\$26.2	1.6
6	AVX Avexa	\$20.2	2.3
7	ACR Acrux	\$19.7	2.4
8	PSD pSiVida	\$15.5	0.7
9	GAA Genepharma	\$15.0	3.3
10	SPL Starpharma	\$14.3	1.9
11	CST Cellestis	\$13.9	4.9
12	GTG Genetic Technologies	\$11.9	2.0
13	ACG Atcor	\$11.8	2.6
14	SRX Sirtex Medical	\$10.8	Not App
15	CXD CathRx	\$10.4	4.6
16	PBT Prana Biotechnology	\$10.1	0.9
17	BZI Brainz**	\$9.0	5.4
18	CUV Clinuvel Pharmaceuticals	\$8.6	0.8
19	CCE Clinical Cell Culture	\$8.6	0.9
20	ANP Antisense Therap.	\$8.2	2.1
21	MSB Mesoblast	\$7.9	2.5
22	NEU Neuren Pharmaceuticals	\$7.4	2.0
23	UCM USCOM	\$7.2	2.3
24	ABI Ambri	\$6.2	1.3
25	PXL Proteome Systems	\$6.1	0.7
26	EGX Evogenix	\$5.8	1.4
27	SIE Scigen	\$5.7	0.7
28	CYN Cygenics	\$5.7	1.1
29	MAA Medec	\$5.7	5.2
30	XBL Xceed Biotech	\$5.2	2.0
31	AOP Apollo Life Sciences	\$5.0	0.8
32	BOS Biosignal	\$4.9	4.4
33	NLS Narhex Life Sciences	\$4.8	2.6
34	BNO Biomomics	\$4.7	1.1
35	BIT Biotron	\$4.6	2.6
36	PLD Portland Orthopaedics	\$4.6	1.4
37	SHC Sunshine Heart	\$4.5	0.7
38	GIA Giaconda	\$4.3	3.1
39	UNI Unilife	\$4.0	0.6
40	TIS Tissue Therapies	\$3.9	1.6
41	BRC Brain Resource Corp	\$3.9	2.6
42	AVS Avastra	\$3.7	1.9
43	PSX Psiron	\$3.4	0.6
44	PRR Prima Biomed	\$3.2	0.7
45	LCT Living Cell	\$3.0	0.5
46	BDM Biodiem	\$2.9	1.0
47	NDL NeuroDiscovery	\$2.8	Not App
48	DIA Dia-B Tech	\$2.8	2.3
49	BOD BioMD	\$2.7	4.8
50	IMU Imugene	\$2.7	1.6
51	BPH Biopharmica	\$2.7	3.1
52	CGS Cogstate	\$2.7	1.8
53	PYC Phylogica	\$2.6	0.9
54	MTY Medical Therapies	\$2.4	0.9
55	IMI IM Medical	\$2.4	1.1

Life Science Companies - Cash Balances June 30, 2006

Code	Company	Cash End 30/06/06 (\$M)	Survival Index
56	SOM Somnomed	\$2.3	0.6
57	GBL Genesis Biomedical	\$2.2	1.8
58	ACU Avantogen	\$2.1	0.2
59	BPO BioProspect	\$1.8	2.4
60	STI Stirling Products	\$1.8	0.8
61	CAU Colltech	\$1.7	1.0
62	AOS Advanced Ocular Systems	\$1.7	0.8
63	AVP Acuron	\$1.5	0.6
64	HTX Healthlinx	\$1.4	0.7
65	CTE Cryosite	\$1.3	6.4
66	BLS Biolayer	\$1.3	0.5
67	SBP Solbec Pharm.	\$1.3	0.9
68	OMI Occup.& Medical Innov.	\$1.2	0.6
69	SLA Solagran	\$1.1	0.7
70	VSG Visiomed	\$0.9	0.5
71	EMS Eastland Medical Systems	\$0.9	Not App
72	SLT Select Vaccines	\$0.9	1.4
73	BLT Benitec	\$0.9	0.1
74	PBI Premier Bionics	\$0.8	0.2
75	EQX Eqitx	\$0.7	0.4
76	NAL Norwood Abbey	\$0.7	0.0
77	RHT Resonance Health	\$0.6	0.2
78	OBJ OBJ	\$0.6	0.7
79	BNE Bone Medical	\$0.5	0.2
80	RTL RiTract	\$0.4	0.2
81	SAH Salus Technologies	\$0.4	0.6
82	PAA Pharmaust	\$0.3	0.1
83	PCC Probiomics	\$0.2	0.1
84	BGN Bresagen	\$0.2	0.1
85	MDM Medical Monitors	\$0.1	0.1
86	ALT Analytica	\$0.1	0.1
87	MGZ Medigard	\$0.1	0.2
88	RBV Rocheby Biomed	\$0.04	0.0
Total		\$590.9	
Average		\$6.7	1.6
Average (less top 10)		\$3.7	1.1

**BZI net operational cash flow figure is nine months annualised

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

Corporate Subscribers: Phylogica, Neuren Pharmaceuticals, Pharmaxis, NeuroDiscovery, Prima Biomed, Biotech Capital, Cygenics, Psivida, Cytopia, Biodiem, Peptech, Starpharma Holdings, Cogstate, Xceed Biotechnology, Healthlinx, Incitive, Optiscan Imaging, Bionomics

Disclaimer:

Information contained in this newsletter is not a complete analysis of every material fact respecting any company, industry or security. The opinions and estimates herein expressed represent the current judgement of the publisher and are subject to change. Blake Industry and Market Analysis Pty Ltd (BIMA) and any of their associates, officers or staff may have interests in securities referred to herein (Corporations Law s.849). Details contained herein have been prepared for general circulation and do not have regard to any person's or company's investment objectives, financial situation and particular needs. Accordingly, no recipients should rely on any recommendation (whether express or implied) contained in this document without consulting their investment adviser (Corporations Law s.851). The persons involved in or responsible for the preparation and publication of this report believe the information herein is accurate but no warranty of accuracy is given and persons seeking to rely on information provided herein should make their own independent enquiries. Details contained herein have been issued on the basis they are only for the particular person or company to whom they have been provided by Blake Industry and Market Analysis Pty Ltd.

The Directors and/or associates declare interests in the following ASX Healthcare and Biotechnology sector securities: ACL, ACR, AVX, BLS, BOS, BTC, CCE, CGS, CYT, CXS, EGX, GRO, OIL, PXS, PRR, SPL, SLT, SRX. These interests can change at any time and are not additional recommendations. Holdings in stocks valued at less than \$100 are not disclosed.

Subscription Rates (inc. GST)

48 issues per year (electronic distribution): **\$320**

For multiple email distributions within the same business cost centre, our pricing structure is as follows:	\$520	2-3 email addresses
	\$620	4-5 email addresses
	\$750	6-10 email addresses

To subscribe, post/fax this subscription form to:

Bioshares
PO Box 193 Richmond VIC 3121
Fax: 61 3 9671 3633

I enclose a cheque for \$ _____ made payable to **Blake Industry & Market Analysis Pty Ltd**, or

Please charge my credit card \$ _____ MasterCard Visa

Card Number

Signature _____ Expiry date _____

Subscriber details

Name _____

Organisation _____

Ph () _____

Emails _____

