

In this edition...

Which biotechs have cash assets greater than \$20 million? This is a question we answer this week, in conjunction with our regular analysis of biotechs that are required to report their cash position each quarter.

We also explain the Halcygen Pharmaceuticals investment proposition. Halcygen recently listed on the ASX. This company is aiming to win business in the Super Generics arena.

And we also update readers on recent events at Optiscan Imaging and Neuren Pharmaceuticals.

The editors

Companies covered: HGN, NEU, OIL, Cash Analysis

	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 (from 4 May '07)	-1.9%
Cumulative Gain	221%
Av Annual Gain (6 yrs)	26.8%

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Bioshares

3 August 2007
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Delivering independent investment research to investors on Australian biotech, pharma and healthcare companies.

Halcygen Pharmaceuticals – A Super Generics Play

Halcygen Pharmaceuticals (HGN: 52 cents) listed on the ASX in June this year at 50 cents a share, capitalising the company at \$38 million. Halcygen raised \$12.5 million through the IPO which was fully underwritten by Tolhurst.

The company has secured the rights to two 'super generics' from **Mayne Pharma** which last year was acquired by **Hospira Inc**. Mayne developed improved formulations of pharmaceutical compounds, itraconazole, which is a systemic antifungal agent, and minocycline, an antibiotic.

Mayne has developed and patented improved formulations of the two drugs that seek to increase bioavailability of the drugs and thereby reduce side effects and delivery limitations with the drugs. Both inventions are protected by granted patents in the US. Patents have also been granted or are under examination in other major regions.

Anti-infectives has not been a core area of strength for Mayne Pharma which is why Halcygen has been able to in-license the technologies that support its business. Halcygen Pharmaceuticals was formed in August 2005 by an experienced biotech entrepreneur, Roger Aston, who has previously been involved with several Australian biotechs, including **Peptech**, **Psivida** and **Australia Cancer Technology**. He is currently Chairman of **Clinuvel Pharmaceuticals** as well as being Chairman and CEO of Halcygen.

In-licensing agreement

Mayne began work on the reformulation of these compounds four years ago and has conducted four trials on its version of itraconazole, called SUBA-itraconazole. This compound has been tested in four clinical trials in about 40 healthy volunteers generating positive results. The drug has shown to be absorbed twice as effectively as the lead drug on the market, Sporanox.

There are a number of ways companies can access technology from originators including giving inventors an equity stake in the company for rights to the technology or a set royalty fee from sales. Halcygen has negotiated with Mayne a manufacturing contract to gain rights to the compound. Final contract terms have not been set, however if the two parties can not agree, then Mayne will receive 32% of Halcygen's revenues it receives from its distributors. In Australia and New Zealand, Mayne has the option to market the drug, in which case it would pay Halcygen a royalty from sales.

As an example, if Halcygen's first product generates sales of \$100 million a year, the distributor might receive between \$50 - \$70 million of sales revenue, Mayne would receive between \$10 - \$16 million and after third party manufacturing costs, we estimate Halcygen would enjoy a gross profit of between \$18 - \$32 million per \$100 million of sales.

Cont'd over

Halcygen's Drugs in Development

Product #1: SUBA-Itraconazole

Halcygen's lead compound in development is SUBA-Intraconazole. **Johnson & Johnson** developed the original itraconazole, marketed today as Sporanox, for the systemic treatment of fungal infections common in immuno-compromised patients. Generic versions of the drug reached the market five years ago of which at least three are available. The global market for itraconazole is in excess of US\$600 million with Johnson & Johnson maintaining a high market share of approximately 50% because of variance in performance between original and generic versions.

The issues with itraconazole are that it has poor bioavailability and that it needs to be taken (once daily) with high fat foods for one week. Mayne has developed a coated nanoparticulate powder dispersion of the drug that approximately doubles the absorption rate and does not need to be taken with food.

This has two benefits. The first is that only half of the dose is required to achieve the same pharmacokinetics (including absorption into the bloodstream) thereby reducing gastro-intestinal side effects from the active drug that is not absorbed. The second benefit is that the drug does not need to be taken with fatty foods or with food at all, which should deliver an added benefit of more consistent absorption rates across patients.

Path to market

Mayne has conducted three separate trials with SUBA-Itraconazole and Halcygen is currently completing its second dose-finding study ahead of a larger registration trial due to start later this year. Halcygen expects to only need to show bio-equivalence with its dose of drug to that on itraconazole, which has been prescribed 70 million times worldwide. The unknown is whether a small bridging study may be required to show equivalent efficacy. However we expect that given the widespread use of itraconazole, if Halcygen can prove bioequivalence (i.e. that the same levels of active drug are absorbed into the blood stream) then its path to market should be relatively straightforward.

The company anticipates filing the drug for approval in 2008 and market launch at the latest in 2009.

Patent position

Mayne's granted patent relates to the improved absorption of 'azole' antifungal drugs that are coated with a polymer with an acidic functional group that allows the drug to be administered without food (for specific claims see US patent number 6,881,745).

It would appear that this patent covers not only itraconazole, which sells in excess of US\$600 million a year, but also Flucanazole, which is sold by **Pfizer** and generates sales in excess of US\$750 million. We can assume that Pfizer has acknowledged the threat from this patent, having unsuccessfully challenged Mayne over the patent claims.

Product #2: Minocycline

The other technology Halcygen has licensed in is controlled release versions of tetracycline antibiotics. Minocycline is a member of this family of antibiotics and Halcygen is developing a super generic version of this drug. The drug causes a number of side effects including vertigo and nausea and Mayne has reformulated the drug to reduce these unwanted characteristics.

Patent position

Mayne has two granted US patents over the technology - US patent numbers 5,277,916 and 6,958,161.

Path to market

Halcygen will conduct another PK study which is expected to begin this year, ahead of a registration PK study to be conducted in late 2008 or early 2009. The product is expected to reach the market in 2010 if all goes well. The company will seek to find a partner to sell and market this product.

– Halcygen cont'd

Virtual Pharmaceutical Company

Halcygen is a virtual biotech company. Its drug development and testing is outsourced to third parties and the company has a thin management team that will need to be strengthened over the next 18 months. The company will seek to license its products once registration has been completed, to large pharmaceutical marketing partners. The company is based in Melbourne with development work being continued by Mayne (Hospira) and pharmacokinetic studies done at IDT's CMax facility in Adelaide.

Other directors on the board include Bruce Mathieson, CEO of the **Australian Leisure and Hospitality Group**. Notable investors on the register include Thorney Investments, which owns 2% of the company.

Risks

There are a number of risks that should be acknowledged with this company. There is a low technical risk with the technologies, with the products under development being improved or 'super generic' versions of existing drugs on the market. The regulatory pathway for the company's lead product should become clearer and more secure towards the end of this year once the company confirms the path to market for this product, which preferably would not involve any bridging efficacy studies.

Halcygen has licensed its compounds from Mayne (Hospira) and a contract risk exists should Halcygen not fulfil its obligations or if the relationship encounters some obstacles following the acqui-

Cont'd over

– *Halcygen cont'd*

sition of Mayne by Hospira. Halcygen also has a reliance on Mayne for manufacturing of its compounds for clinical trials. There is a legal risk, that J&J could challenge the Mayne patent for itraconazole, although this has already been successfully defended against Pfizer. Lastly, a partnering risk exists, with Halcygen required to find a marketing partner to market and sell its drug.

Milestones

Key milestones over the next year include manufacture of three batches for the pivotal study for SUBA-itraconazole, start and completion of a registration study for SUBA-itraconazole, clarification of regulatory pathway for the lead compound, and completion of further PK studies for minocycline.

Summary

Mayne Pharma has developed considerable expertise in developing improved generic versions of oral pharmaceutical products. Anti-infectives are not a core area for Mayne, which has allowed Halcygen to access the technology applications in this field. The appeal of Halcygen is that there is a low technical risk for its super generic compounds and the path to market should be relatively short, between two to three years. The area of generic pharmaceuticals is an extremely competitive business and Halcygen will need to license its products to a major pharmaceutical player with a strong marketing capability.

Halcygen's lead compound will compete in an attractive market valued in excess of US\$600 million, with the potential to access other antifungal markets with what should be an improved delivery formulation with reduced side effects. The company will need to add depth to its management team over the coming 18 months with a separation of the roles of CEO and Chairman preferable.

Halcygen is capitalised \$39 million with an estimated \$14 million in funds, which may or may not be sufficient to bring its products to market.

Bioshares recommendation: **Speculative Buy Class B**

Bioshares

Optiscan: Hiccup for Short-term Sales of Endomicroscope Systems

Optiscan Imaging (OIL: 45 cents) saw its share price fall by 18% this week due to events unrelated by global sharemarket jitters. Its partner Pentax formally indicated that sales orders in the second half of 2007 for Optiscan's confocal endomicroscope systems would be significantly less compared to the first half of this year.

This should not be a complete surprise for investors, with Optiscan having earlier flagged that **Pentax** had a backlog of inventory that would likely result in slower sales this half. The concern for Optiscan is that there continues to be an apparent poor communication between the two companies. Although feedback from the US sales teams is very encouraging, there is a disconnect in follow through in demand expressed by Pentax.

Optiscan management will meet with the CEO and President of Pentax this month to discuss the current issues. Pentax has recently committed to further reimbursement studies and improvements in the software to the system, with \$7 million of future funding. It appears that Pentax may have become distracted with its ongoing merger plans with **Hoya Corporation**, another Japanese company, which has contributed to this current uncertainty.

Bioshares' view is that once the merger is completed, the merged business will be more focused on developing the confocal endomicroscope business. And if Hoya is successful in acquiring Pentax, the new management may seek to accelerate the development of the high growth endoscope business. Optiscan remains an acquisition target for Pentax and a weakened share price resulting from a soft sales period may make Optiscan more vulnerable to as a takeover target.

Optiscan is capitalised at \$47 million with an estimated \$6 million in cash. We recommend investors to take advantage of recent price weakness to increase their exposure to this stock.

Bioshares recommendation: **Speculative Buy Class A**

Bioshares

Funding Remains a Concern for Neuren Pharmaceuticals Following Motiva Acquisition

Neuren Pharmaceuticals (NEU: 35.5 cents) has acquired the rights to a new drug candidate, called **Motiva**, through the acquisition of **Hamilton Pharmaceuticals**. The drug has successfully progressed through two Phase II studies (involving 375 patients) for the treatment of post-stroke depression. Neuren will acquire the company for US\$4.4 million in a scrip-for-scrip transaction.

The key sellers of the business are three venture capital groups in the US and Switzerland, namely **Vivo Ventures** in California (US\$650 million under management), **CNF Investments** from Maryland (US\$125 million under management), and **Index Ventures** from Switzerland (US\$1 billion under management).

The transaction allows these investors to move the key asset into more capable management hands in Neuren Pharmaceuticals, with all of the previous management of Hamilton to leave the company. Neuren will conduct an additional Phase II study in 2008 with Motiva. The last Phase II study with Motiva was suspended because of poor trial design structure and unsuitable selection of target patient groups.

Neuren is developing a wealth of experience in conducting trials for the treatment of cognitive disorders. It is currently conducting a Phase III trial in 600 patients undergoing heart surgery (who have an increased chance of experiencing cognitive decline) and also two Phase II studies planned with the US Army in soldiers with mild-to-moderate and severe traumatic brain injury (TBI). The post stroke depression that will be measured in the Motiva trial is precisely one of the same endpoints to be measured in the TBI studies.

The two US VCs will also make a US\$3 million investment into Neuren in the form of a convertible note, that will convert into shares at the next major capital raising on the same terms under the future capital raising.

The transaction is a sensible fit for Neuren given its expertise and focus in this field. It also adds some US venture capital groups onto its register. It helps broaden Neuren's pipeline which should see the company conducting one Phase III trial next year and three Phase II trials, with three different compounds in total.

However, one critical aspect the acquisition does not address is long term funding for the company's programs. Biotech companies with less than 12-18 months cash are increasingly being discounted by market for the additional perceived risk when an increasing proportion of funds entering the sector go towards the \$100 million-plus biotech stocks. Investors are acknowledging that biotech companies not only need quality assets, business plans and strong management, but the funding necessary to complete commercialisation of their respective technologies.

At the end of June this year, Neuren had approximately \$4.0 million in cash. Following this capital raising, the company will have an estimated \$6.5 million in funds, which will fund the company's activities for just over six months. Neuren is capitalised at \$47 million.

Bioshares recommendation: **Speculative Hold Class B**

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Bioshares Model Portfolio (3 August 2007)

Company	Price (current)	Price added to portfolio
Acrux	\$1.55	\$0.83
Alchemia	\$0.83	\$0.67
Biodiem	\$0.28	\$0.29
Biota Holdings	\$1.74	\$1.55
Circadian Technologies	\$1.22	\$1.45
Cytopia	\$0.68	\$0.46
Chemgenex Pharma.	\$0.90	\$0.38
Neuren Pharmaceuticals	\$0.36	\$0.70
Optiscan Imaging	\$0.45	\$0.35
Peplin	\$0.90	\$0.83
Peptech	\$1.39	\$1.31
Phylogica	\$0.32	\$0.42
Probiotec	\$1.21	\$1.12
Starpharma Holdings	\$0.38	\$0.37
Sunshine Heart	\$0.19	\$0.19
Tissue Therapies	\$0.51	\$0.58
Universal Biosensors	\$1.40	\$1.23

Portfolio Changes – 3 August 2007

IN:
No changes

OUT:
No changes

Financial Strength: Companies with Cash Assets Greater than \$20 million

An increasing number of Australian-listed biotech firms have assembled sizeable cash resources to support drug and device development activities. Currently seventeen companies with cash assets of more than \$20 million each, are holding an estimated \$880 million in cash resources, led by **Peptech** with \$170 million, an estimated figure that assumes the proposed merger with **Evogenix** goes ahead.

Of seventeen companies listed in the table below, two companies, **Peptech** and **Circadian Technologies**, have accumulated resources from the realisation of investments in other biotech firms. **Biota Holdings** has raised funds but has more recently received sizeable royalty income from the sale of **Relenza** by **GlaxoSmithKline**.

The principle driver for the increase in cash resources held by these companies is that a majority are undertaking or are set to undertake later stage clinical or registration trials. These companies have been effective in articulating their capital requirements to local and international investors. They have also understood the imperative that the commercialisation of their products and technologies will only occur if sufficient resources are available.

A lesson for biotech companies that intend to follow these current sector leaders is that accessing appropriate funding is not only achievable but a necessary step towards value creation and risk mitigation.

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Biotechs with Reported/Estimated Cash Resources > \$20 million (June-July 2007)

SORT							
Code	Company	Cash	Source	Share Price	Capitalisation	Tech. Value	
1	PTD	Peptech***	\$170.0	Est.	\$1.39	\$325	\$155
2	PGL	Progen Pharmaceuticals	\$100.0	Approx.	\$3.64	\$217	\$117
3	AVX	Avexa	\$76.9	Rep.	\$0.59	\$237	\$161
4	PXS	Pharmaxis	\$76.2	Rep.	\$3.38	\$601	\$525
5	CUV	Clinuvel Pharmaceuticals	\$60.4	Rep.	\$0.79	\$239	\$178
6	BTA	Biota Holdings	\$50.0	Est.	\$1.74	\$318	\$268
7	VCR	Ventracor	\$49.0	Ann.	\$0.69	\$214	\$165
8	QRX	QRxPharma	\$46.0	Rep.	\$1.84	\$138	\$92
9	ACR	Acrux**	\$40.0	Rep.	\$1.55	\$242	\$202
10	CIR	Circadian*	\$40.0	Est.	\$1.22	\$49	\$9
11	HTW	Heartware	\$30.0	Rep.	\$0.63	\$116	\$86
12	CXS	ChemGenex	\$25.0	est.	\$0.90	\$167	\$142
13	ACL	Alchemia**	\$25.0	Rep.	\$0.83	\$133	\$108
14	PEP	Peplin	\$24.1	Rep.	\$0.90	\$166	\$142
15	FER	Fermiscan Holdings	\$23.8	Rep.	\$1.83	\$261	\$238
16	UBI	Universal Biosensors	\$22.2	Rep.	\$1.35	\$173	\$151
17	MBP	Metabolic Pharmaceuticals	\$20.0	Est.	\$0.13	\$38	\$18

SORT							
Code	Company	Cash	Source	Share Price	Capitalisation	Tech. Value	
1	PXS	Pharmaxis	\$76.2	Rep.	\$3.38	\$601	\$525
2	BTA	Biota Holdings	\$50.0	Est.	\$1.74	\$318	\$268
3	FER	Fermiscan Holdings	\$23.8	Rep.	\$1.83	\$261	\$238
4	ACR	Acrux**	\$40.0	Rep.	\$1.55	\$242	\$202
5	CUV	Clinuvel Pharmaceuticals	\$60.4	Rep.	\$0.79	\$239	\$178
6	VCR	Ventracor	\$49.0	Ann.	\$0.69	\$214	\$165
7	AVX	Avexa	\$76.9	Rep.	\$0.59	\$237	\$161
8	PTD	Peptech***	\$170.0	Est.	\$1.39	\$325	\$155
9	UBI	Universal Biosensors	\$22.2	Rep.	\$1.35	\$173	\$151
10	CXS	ChemGenex	\$25.0	est.	\$0.90	\$167	\$142
11	PEP	Peplin	\$24.1	Rep.	\$0.90	\$166	\$142
12	PGL	Progen Pharmaceuticals	\$100.0	Approx.	\$3.64	\$217	\$117
13	ACL	Alchemia**	\$25.0	Rep.	\$0.83	\$133	\$108
14	QRX	QRxPharma	\$46.0	Rep.	\$1.84	\$138	\$92
15	HTW	Heartware	\$30.0	Rep.	\$0.63	\$116	\$86
16	MBP	Metabolic Pharmaceuticals	\$20.0	Est.	\$0.13	\$38	\$18
17	CIR	Circadian*	\$40.0	Est.	\$1.22	\$49	\$9

Total **\$878.5** **\$3,634.2** **\$2,755.7**

*includes share of cash in 67% owned Vegenics

** adjusted for recent capital raising

*** assumes merger with EGX

Tech. Value = Cap'n - Cash

Reported (Rep.) figures are for June 30, 2007

4.7B Reporting Companies – Cash Balances June 30, 2007 Sorted by Survival Index

Code	Company	Cash End 30/06/07 (\$M)	Survival Index	Change in cash - Year (\$M)	Comments, significant events since 30/6
1	BRC Brain Resource Corp	\$21.3	Not App.	\$17.4	
2	LBT Labtech Systems	\$9.0	Not App.	\$8.1	
3	AVS Avastra	\$8.1	Not App.	\$4.3	
4	GTG Genetic Technologies	\$13.8	Not App.	\$1.9	
5	SIE Scigen	\$9.63	Not App.	\$1.8	
6	CTE Cryosite	\$1.6	Not App.	\$0.3	
7	EMS Eastland Medical Systems	\$0.8	Not App.	-\$0.1	
8	SRX Sirtex Medical	\$10.7	Not App.	-\$0.2	
9	GAA Genepharma	\$13.5	Not App.	-\$1.5	
10	CUV Clinuvel Pharmaceuticals	\$60.4	7.4	\$51.8	
11	CST Cellestis	\$12.1	6.4	-\$1.7	
12	AVX Avexa	\$76.9	4.9	\$56.6	
13	UBI Universal Biosensors	\$22.2	3.7	-\$5.9	
14	PXS Pharmaxis	\$76.2	3.7	-\$21.7	
15	FER Fermiscan	\$23.8	3.0	\$17.8	
16	ANP Antisense Therap.	\$7.6	2.8	-\$0.6	
17	SPL Starpharma	\$10.1	2.7	-\$4.2	
18	BLT Benitec	\$5.0	2.6	\$4.1	
19	RHT Resonance Health	\$2.4	2.3	\$1.8	
20	XBL Xceed Biotech	\$5.5	2.3	\$0.3	To demerge and float Polynovo
21	ACR Acrux	\$17.2	2.3	-\$2.5	18/7 completed \$22.5M placement
22	OBJ OBJ	\$2.0	2.2	\$1.5	
23	BPO BioProspect	\$2.0	2.1	\$0.1	
24	BPH Biopharmica	\$1.8	2.1	-\$1.2	
25	BNO Bionomics	\$12.8	2.1	\$8.1	
26	SBP Solbec Pharm.	\$3.1	2.0	\$1.8	
27	ALT Analytica	\$0.4	2.0	\$0.3	
28	BZI Brainz	\$5.2	1.9	-\$1.1	
29	VSG Visiomed	\$2.2	1.8	\$1.2	
30	ABI Ambri	\$4.9	1.6	-\$1.2	
31	ACG Atcor	\$7.0	1.5	-\$4.8	
32	BOD BioMD	\$2.1	1.5	-\$0.6	
33	MSB Mesoblast	\$12.1	1.5	\$4.2	
34	NDL NeuroDiscovery	\$1.9	1.4	-\$0.9	
35	CCE Clinical Cell Culture	\$12.3	1.4	\$3.7	

The Survival Index

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 for this quarter by dividing a company's annual net operational cash into the company's June 30 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 increase 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.

The SI calculation is based on full year figures, except for Brainz, Select Vaccines, Heartware, Neuren Pharmaceuticals and Universal Biosensors, for which the latest quarterly or half-yearly figures are annualised.

Recently listed companies including QRxPharma, NuSep, Stem Cell Sciences and Halcygen Pharmaceuticals have not been included in the latest analysis.

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, Cyclopharm, Cytopia, Eiffel Technologies, Ellex Medical Lasers, IDT Australia, ITL Corp, Life Therapeutics, Metabolic Pharmaceuticals, Medical Developments International, Novogen, Optiscan Imaging, Panbio, Progen Pharmaceuticals, Polartechnics, Phosphagenics, Peptech, Sirtex Medical, Ventracor and Virax Holdings - (26 companies).

4.7B Reporting Companies – Cash Balances June 30, 2007 Sorted by Survival Index

Code	Company	Cash End 30/06/07 (\$M)	Survival Index	Change in cash - Year (\$M)	Comments, significant events since 30/6
36	EGX Evogenix	\$6.1	1.3	\$0.3	Merger proposed with PTD
37	SOM Somnomed	\$3.2	1.3	\$0.9	
38	BLS Biolayer	\$1.3	1.3	\$0.0	
39	UCM USCOM	\$4.4	1.3	-\$2.9	
40	GBL Genesis Biomedical	\$1.2	1.3	-\$1.0	
41	SLT Select Vaccines	\$2.6	1.3	\$0.0	
42	HTW Heartware	\$30.0	1.2	\$8.9	
43	AOS Advanced Ocular Systems	\$1.0	1.2	\$0.5	Suppended from trading
44	MAA Medec	\$1.8	1.2	-\$3.8	
45	BOS Biosignal	\$3.5	1.1	-\$1.4	
46	ICV Incitive	\$1.5	1.1	-\$1.4	
47	CYN Cygenics	\$4.4	1.1	-\$1.3	
48	PYC Phylogica	\$3.4	1.1	\$0.7	
49	AOP Apollo Life Sciences	\$8.7	1.1	\$3.7	
50	PEP Peplin	\$24.1	1.0	-\$7.1	
51	HTX Healthlinx	\$2.0	1.0	\$0.6	
52	CGS Cogstate	\$1.3	1.0	-\$1.4	
53	SLA Solagran	\$2.2	0.9	\$1.2	
54	PBT Prana Biotechnology	\$7.4	0.8	-\$2.7	
55	BDM Biodiem	\$3.0	0.8	\$0.1	
56	CXD CathRx	\$4.2	0.8	-\$6.2	3/8 ann \$26.8M ren. rights issue
57	SHC Sunshine Heart	\$7.7	0.8	\$3.2	To receive \$6M on FDA OK of IDE appn
58	PAA Pharmaust	\$3.3	0.7	\$3.0	
59	IMU Imugene	\$1.1	0.7	-\$1.6	
60	ACL Alchemia	\$9.7	0.7	-\$16.6	19/7 completed \$15.2M placement
61	MTY Medical Therapies	\$1.8	0.7	-\$0.6	
62	OMI Occup.& Medical Innov.	\$1.4	0.6	\$0.2	
63	GIA Giaconda	\$1.7	0.6	-\$2.6	
64	PLD Portland Orthopaedics	\$3.9	0.6	-\$0.6	Has continued to invest in inventory
65	CAU Colltech	\$1.7	0.6	-\$0.1	
66	NLS Narhex Life Sciences	\$2.4	0.6	-\$2.4	
67	PCC Probiomics	\$0.8	0.6	\$0.1	
68	UNI Unilife	\$4.2	0.6	-\$0.8	
69	DIA Dia-B Tech	\$1.8	0.6	-\$1.0	
70	VLA Viralytics	\$1.9	0.6	-\$1.5	
71	MVH Medic Vision	\$2.3	0.6	\$1.6	
72	BNE Bone Medical	\$1.5	0.5	\$1.3	Will need to raise funds for clinical pgm/s
73	ACU Avantogen	\$1.8	0.5	-\$1.0	Suppended from trading
74	PXL Proteome Systems	\$3.2	0.5	-\$2.9	Upfront pmt for TB DX deal with B/Dickinson
75	LCT Living Cell Technologies	\$2.4	0.4	-\$0.5	Commenced ADR program with BNY
76	NEU Neuren Pharmaceuticals	\$4.09	0.4	-\$5.5	To receive \$US4M convertible note
77	RBY Rockeby Biomed	\$1.3	0.4	\$1.3	
78	BIT Biotron	\$1.4	0.4	-\$3.2	Will need to raise funds for clinical pgm/s
79	TIS Tissue Therapies	\$1.9	0.4	-\$2.0	Raised \$2M
80	STI Stirling Products	\$0.8	0.4	-\$1.0	Ann placement to raise ~\$780k
81	KSX KarmelSonix	\$0.6	0.2	\$0.2	Raising >\$5.5M
82	PRR Prima Biomed	\$0.7	0.2	-\$2.5	PRR expects cash to last 6 months
83	MGZ Medigard	\$0.1	0.2	\$0.0	
84	PSD pSiVida	\$3.1	0.1	-\$12.3	Raised \$21.4M during July
85	IMI IM Medical	\$0.3	0.1	-\$2.2	Completed \$3.1M placement
86	RTL RiTract	\$0.05	0.0	-\$0.4	Suppended from trading
87	NAL Norwood Abbey	\$0.05	0.0	-\$0.6	20/7 drew down from equity line of credit
Total		\$663.5			
Average		\$7.6			
Median		3.1			

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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