

In this edition...

With volatility creeping into equity markets in recent months, particularly in the biotech sector, it's important to monitor for changes in market sentiment very closely. For this reason, we have created a new index, called the Bioshares Top 20. This index will be updated in each weekly edition and will be a helpful gauge for investors to keep an eye on.

We have initiated our coverage of Brainz this week, a New Zealand company which listed on the ASX in December last year. It has developed a new EEG device for use primarily in neonatal ICUs. Judging by the sales growth record to date, it looks to be a company worth considering.

We also speculate on why Zenyth Therapeutics has gone into a trading halt. Is it about to be acquired by a larger player?

And please note, the next edition of Bioshares will be emailed to subscribers on Monday 24 July.

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)	-9.4%
Cumulative Gain	152%
Average Annual Gain	22.3%

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Bioshares

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

June Quarter Biotech Slide Ends

Equities and other asset markets are currently in a state of flux, causing investors to seek and use tools to identify changes in the condition of various investment classes. With this in mind, Bioshares has constructed the **Bioshares 20 Index** to enable investors to track weekly movements in investment activity in the Australia listed biotech sector.

The Bioshares 20 Index is a weighted index based on the the top twenty biotech stocks by capitalisation in the **Bioshares Index** as of June 30, 2006, valued at less than \$1 billion. These twenty companies represent 62% of the Bioshares Index, which comprises of 116 companies. It's a large enough spread to capture any trend of significance. A second aspect of the twenty companies is they offer diversity of business models, technology classes and applications, and stage of development consistent with that found in the complete Bioshares Index.

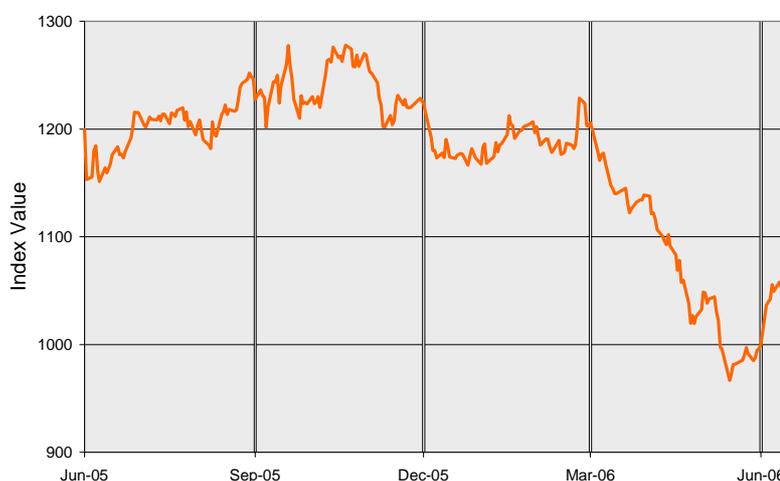
The Bioshares 20 Index chart indicates that the pronounced decline in biotech stock prices in the June quarter may have bottomed in the middle of the month of June. The Bioshares 20 Index has registered a 6.4% increase from its lowest recorded point at June 13, 2006. The index is up 2.9% from June 30, but is down 2.0% from a week ago. While it is too early to say that there is a convincing return of positive sentiment towards the small-to-medium cap biotech stocks, it is possible to say that the June decline has been arrested for the time being.

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The Bioshares 20 Index

Change from June 30, 2006	2.9%
Change - week ago	-2.0%
Change - 13 June	6.4%

The Bioshares 20 Index



Can Brainz Grow Sales of its EEG Device?

Brainz (BZI: 45.5 cents) is a New Zealand company that listed on the ASX in December last year, raising \$13 million. The company has developed a medical device that provides compressed EEG brain function monitoring primarily for the neonatal care market. The product has been sold into 16 countries, sells for a list price of \$25,000 (in Australia) and is being distributed by **GE Healthcare**.

What is the appeal of this technology?

EEG machines measure brain function and are commonplace. The challenge with analysing output from these devices, is that physicians or specialists must read a hardcopy output that could stretch for tens of metres from just one day's output. What the Brainz instrument (called the BRM2) does is to compress this data. It also provides functional information from both hemispheres of the brain.

Competitors

The company currently has two competitors although arguably the BRM2 has advantages over its competitors' devices. A product being sold by **Viasys** is more expensive than the BRM2 and only gives a compressed readout in remote locations (rather than at the bedside). It also requires multiple leads to be attached to the infant.

A product being sold by **Olympic Medical** is only a single channel device (the BRM2 is a two channel instrument, compared with 16 channels for a standard EEG instrument) that may be less accurate in providing information from disturbances in both sides of the brain.

History

The technology was originally developed at the **Liggins Institute** in New Zealand and subsequently by Neuronz (now Neuren Pharmaceuticals) prior to being sold to a private New Zealand company, Tru-Test, in 2002. After listing, Tru-Test owns 56% of the company.

Commercialisation approach

Brainz is selling the product either directly in some countries, or through GE Healthcare in the US and Europe. Part of the company's business plan is to not only sell the monitoring device, but also gain ongoing revenue from the sale of consumables (electrodes), program upgrades, and after sales service.

In the 12 months to the end of May this year, the company sold approximately 70 devices generating a total of \$1.5 million. The product was first released in Australia in 2003 and in Europe and the US in 2005.

Weaknesses

One of the weaknesses of this company is it has limited patent protection over its lead product. With competing products on the market, there is some but not a large amount of product differentiation. Brainz has developed an additional function for

its product that can provide an alert for seizures, which would be the first seizure detection device available for infants. It has filed a patent over this technology, which has not yet been granted, and the company has submitted a 510k pre-market notification with the FDA.

The company has a heavy reliance on its marketing partner, GE Healthcare, and this contract will need to be extended after October 2007. There is also a reliance on the one product sold into one market (neonatal care) at this stage of the company's development.

Strengths

Brainz appears to be a well structured company with an intelligent business plan and solid board of directors and management. By installing (selling) its device into hospitals around the world, the company is also ensuring ongoing sales from consumables and product upgrades, which will generate in the order of \$3000 a year per device. Future upgrades will allow the company to differentiate itself further from its competitors whilst strengthening its intellectual property position.

According to the company, feedback from users has been exceptionally positive, which suggests there is a good demand for the company's device. One factor that may restrict usage is the lack of neuroprotectant compounds that could be administered to minimize brain injury. Specialised hypothermia products are emerging however that seek to prevent brain injury. Anticonvulsants are currently available which suggests a strong need for a device that can detect seizures.

Brainz plans to expand the use of its devices from the neonatal setting to adult intensive care settings and for adults undergoing cardiac surgery.

Summary

Brainz is capitalised at \$27 million and had \$11 million in cash at the end of May this year. The company's product is now on the market in 16 countries with modest sales that are displaying strong growth. The company has an important relationship with GE Healthcare although is also supplementing this distribution with a direct sales force in other countries and sales support staff in the US and Europe. Brainz is a company that deserves to be monitored closely and considered as an investment proposition. An established sales record will significantly reduce the risk with this stock.

Bioshares recommendation: **Speculative Buy Class B**

Bioshares

Next Bioshares out Monday 24 July

Zenith Pharmaceuticals Enters Trading Halt

Zenith Pharmaceuticals and Circadian both went into trading halts today. In edition #163 of Bioshares, we discussed the merits of a merger of Zenith Pharmaceuticals (ZTL: 54 cents) and Peptech. While that outcome has a low probability of occurring, there is a possibility that Zenith Pharmaceuticals may be subject to a friendly takeover bid. CSL has been rumoured to be a possible suitor, to add Zenith as part of gathering assets in advance of a more comprehensive restructuring and spin out of its non-blood products business.

There are several drivers on the Zenith side to see the company absorbed into a stronger, larger company. Zenith's five largest shareholders are respectively Circadian (23%), the **State Government of Victoria** (16%), **Thorney Pty Ltd** (13%), **Queensland Investment Corporation** (10%) and **Merck, Sharp and Dohme** (2%). Together they account for 63% of the Zenith stock. It is a possibility that these shareholders have not always shared the same vision for Zenith. Exiting a substantial holding through on market selling of Zenith stock is not likely to have been a preferred option for any shareholder.

By effecting a merger with a stronger, larger company, current Zenith shareholders, would be in a position to satisfactorily liquidate their holdings without unduly affecting the share price of the stronger, larger acquiror. The ratio of Zenith to CSL shares needed to facilitate the merger would be in the order of 70:1, assuming a Zenith share priced at 73 cents (representing a 100% premium to the implied technology valuation of Zenith of \$23 million).

A recent trigger?

Another reason for Zenith Pharmaceuticals to push for a merger with a stronger, larger company is that its co-development collaboration with **Cambridge Antibody Technology**, recently acquired by **AstraZeneca** (see Bioshares #167), now has an increased degree of uncertainty about it. The usual custom follow-

ing such acquisitions is that portfolios are subject to review and re-prioritisation. It may be that the Zenith/CAT GM-CSF antibody (CAM 3001) is downgraded. If so, the question would be could Zenith take back the project. The answer is dependent on Zenith's capacity to fund such a project. CAM3001 is targeted for a Phase I trial in 2007. Clinical trial costs would rapidly erode Zenith's current funds that we estimate to be at \$45 million.

Another facet

Recently Circadian concluded due diligence on the VEGF-C and VEGF-D deal it entered into with the **Ludwig Institute for Cancer Research** (LICR) (see Bioshares #165), which has resulted in the creation of **Vegenics** which may list within 12 months. Zenith is currently collaborating with the LICR on VEGF-B. It may be that Circadian and Zenith have reached an agreement with the LICR and the **Queensland Institute of Medical Research** to assign the VEGF-B assets and arrangement to Vegenics. This could significantly enhance the value of Vegenics. Such an arrangement may be timed to occur at the announcement of a proposed merger with a stronger, larger company.

Zenith Pharmaceuticals is capitalised at \$68 million, with \$45 million in cash assets at hand.

Bioshares recommendation: **Under Review**

Correction

Please note that the capitalisation of Antisense Therapeutics listed in the last Bioshares was incorrect. Antisense Therapeutics had a capitalisation of \$12 million at June 30, 2006.

Bioshares Model Portfolio (14 July 2006)

Company	Price (current)	Price added to portfolio
Acrux	\$0.73	\$0.83
Agenix	\$0.17	\$0.22
Alchemia	\$1.20	\$0.67
Avexa	\$0.24	\$0.15
Biolayer	\$0.20	\$0.195
Bionomics	\$0.17	\$0.210
Biosignal	\$0.17	\$0.22
Cytopia	\$0.75	\$0.46
Chemgenex Pharma.	\$0.38	\$0.38
Evogenix	\$0.48	\$0.47
GroPep	\$1.54	\$1.43
Optiscan Imaging	\$0.56	\$0.35
Neuren Pharmaceuticals	\$0.40	\$0.70
Pharmaxis	\$1.85	\$1.90
Prima Biomed	\$0.075	\$0.09
Sirtex Medical	\$2.44	\$1.95

Cytopia Completes Exit from Alchemia

Cytopia (CYT: 75 cents) announced that it fully divested its stake in Brisbane-based carbohydrate technology company Alchemia. The company sold 11 million shares prior to June 30, and has now offloaded the remaining 3.4 million, receiving \$15 million for the entire holding. The company now in a comfortable cash position with \$22 million in the bank.

Cytopia is capitalised at \$68 million. It represents very attractive buying at current prices, with additional licensing deals a potential source of positive news flow and value creation for the company over the next 12 months.

Bioshares recommendation: **Speculative Buy Class A**

Bioshares

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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