ISSN 1443-850X

Biosshares

18 July 2008
Edition 272

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

In this edition...
The way things stand for some biotechs is cause for concern when the obvious fact of life of insufficient funding or even impending insolvency does not trigger the necessary but painful survival moves that can be made through an M&A event. Yet the winds of consolidation are blowing through, with the reverse merger of PolyNovo with Metabolic Pharmaceuticals announced this week. There will more mergers to come in the second half of 2009, coupled to aggressive take-over bids of some of the better quality Tier-1 companies.

The editors
Companies covered: BOD, GIA, MBP

	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 - current)	-12.7%
Cumulative Gain	**82%**
Av Annual Gain (7 yrs)	**17.8%**

Bioshares is published by Blake Industry & Market Analysis Pty Ltd.

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Individual Subscriptions (48 issues/year)
$320 (Inc.GST)
Edition Number 272 (18 July2008)
ISSN 1443-850X

Credit Crisis Forces Rationality Into Biotech Sector

The Australian biotech sector has been fairly criticised in the past for an inability to deliver on a sensible consolidation process within the sector. Egos of directors and management have been part to blame, stubbornness and conflicting interests or views of shareholders have also contributed to a lack of M&A, as has the difficulty to fairly value biotech companies. However the current credit crisis is forcing a degree of rationality, to make a more efficient use of capital and technology assets. This week **Metabolic Pharmaceuticals** (MBP: 3.9 cents) and **Polynovo Biomaterials** announced their intention to merge the businesses having signed a binding term sheet. A due diligence process is expected to be completed by mid-August, with shareholder ratification to follow in October.

The combined businesses make a very natural fit. Metabolic Pharmaceuticals is the cash-box, with $17 million in cash at the end of last year. Polynovo possesses a platform technology base that offers a myriad of opportunities. Polynovo is a materials science company with collaborations with **Smith & Nephew**, **Biomet** and **Medtronic**, three of the major global medical device groups.

If the merger proceeds, the merged entity will be renamed PolyNovo Biomaterials Ltd. The CEO and MD will be the current CEO of Polynovo, Dr Ian Griffiths. Metabolic's previous management of Roland Scollay and Chris Belyea are no longer involved with the company. The concentration of the work will be almost entirely on the Polynovo technology.

Substantial current shareholders in Polynovo are **CSIRO** and **Xceed Capital Ltd**. It is expected that Xceed Capital will make an *in specie* distribution to its shareholders of Polynovo stock, leaving CSIRO as the largest shareholder, with around 16% of the company.

The Metabolic vehicle will acquire 100% of Polynovo by issuing 247 million shares, resulting in 549 million MBP shares on issue following the transaction. The transaction values Polynovo at $10 million. It's expected the transaction will take three months to complete, and Metabolic will provide Polynovo with a loan of $2 million to continue with commercialisation of the technologies.

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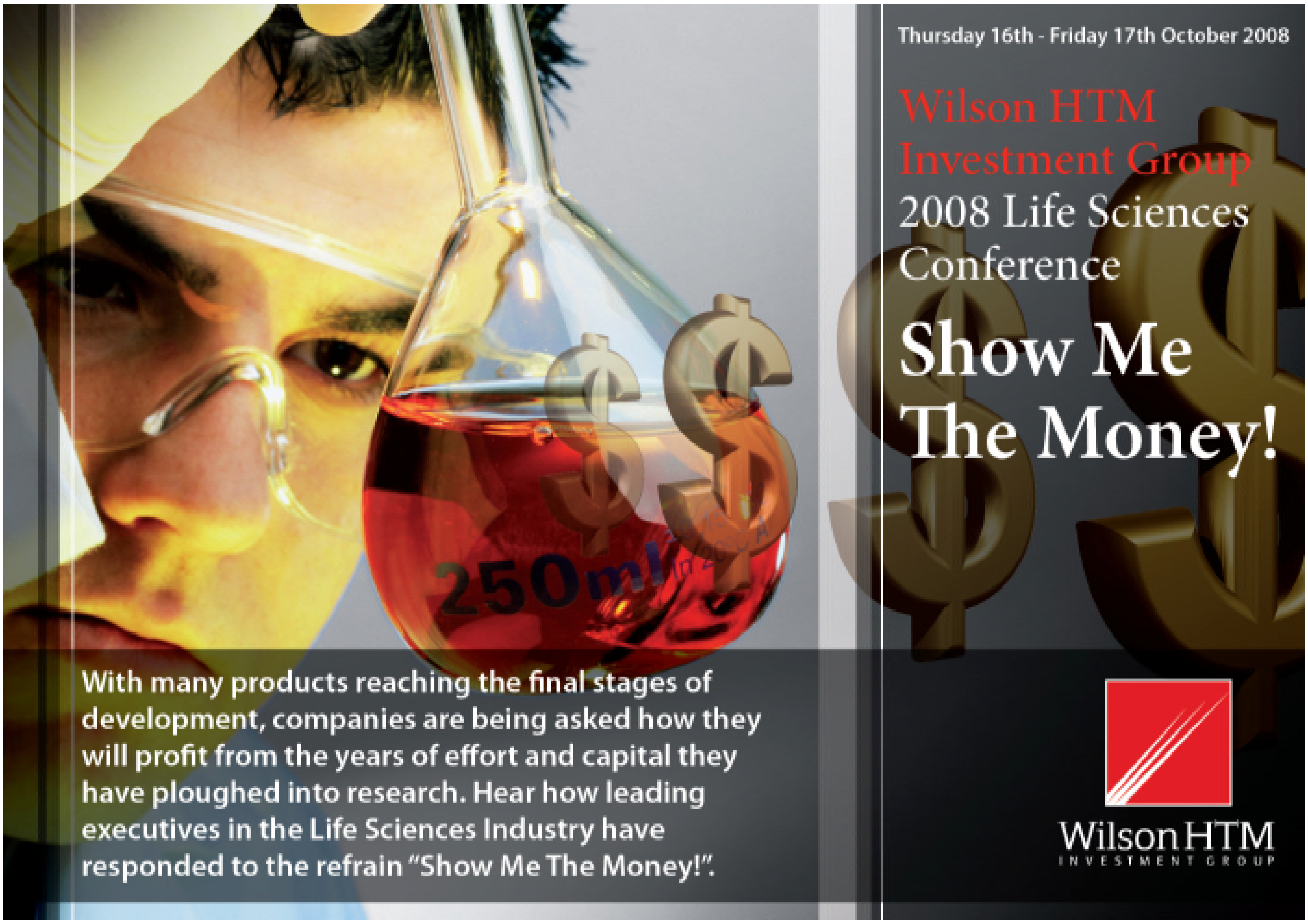

Previous mergers between listed Australian biotechs

- **Alchemia** & **Meditech Research** (2006)
- **CSL** & **Zenyth Therapeutics** (2006)
- **Arana Therapeutics** & **Evogenix** (2007)
- **Clinical Cell Culture** & **Visiomed Group** (2008)

The Metabolic/Polynovo transaction is the fifth M&A deal between two locally listed biotech companies. What sets this transaction aside from previous deals is that this was a deal that needed to happen, both for Metabolic and for Polynovo. According to the former CEO of Xceed Capital David Kenley (who was formerly Vice President - Corporate Development at Metabolic), the work on the deal commenced in mid-2007, with momentum building from April this year. In early 2007 in *Bioshares* 202 we flagged the possibility of an IPO of Polynovo and an IPO of Polynovo was a corporate objective of the Xceed group until market conditions deteriorated over the first half of 2008. Xceed Capital announced in May 2008 that it would no longer proceed with an IPO of Polynovo.

The deal is one indicator that shows how current dire financial conditions are spurring consolidation activities that should have been occurring much more regularly as part a natural progression for a maturing industry.

Giaconda

Another company that initiated a funding round at a difficult time is **Giaconda** (28 cents), a developer of the novel combinations of established antibiotic drugs that are being developed to treat MAP infection in Crohns Disease and resistant *H. pylori* infection.

As of June 30, 2008, Giaconda reported a cash balance of $281,000 a sum that would not have supported the company's operations much past September, based on June quarter spending patterns.

The company has announced that **Australian Medical Therapy Investments Pty Ltd** will subscribe for up to 100 million shares at 40 cents, or $40 million, by way of a series of tranches. The company currently has 73.5 million ordinary shares on issue. Founder Professor Thomas Borody holds 50.6 million shares, or 69% of current issued shares.

AMTI must satisfy Giaconda by August 15 that it has the required financial capacity to support its investment. However, what should be of concern to Giaconda shareholders is in fact whether the company is solvent. The slowness with which the company has addressed its funding requirements is alarming. We point out to investors the risk that can arise from certain companies which are dominated by significant shareholder who are reluctant to support crucial funding rounds that are necessarily dilutive.

Bioshares

Director Share Purchases – Conviction Lacking

With the **Bioshares Index** having fallen by 40% since the start of the year, it is of interest to look at whether this exceptional value proposition is prompting directors of biotech companies to increase their holdings. This is a natural expectation. In the table included, we have listed purchases by directors in their own companies this year, where the aggregate total for the board exceeds $10,000. The results were somewhat surprising and it is worthy to note just where the confidence in these mostly speculative companies is matched at the board level through individual director share purchases.

Of the 130 companies in the sector, only in 13 companies have cumulative director share purchases exceeded $100,000 this year, with directors at 44 companies purchasing more than $10,000 in stock in the year to date. To put it another way, the sector has fallen by 40% over the year and yet at 86 companies directors did not purchase more than $10,000 of stock in their own companies. Investors could view this with some disappointment.

The Opes Prime fiasco caught several biotechs in its chaotic web. The most prominently effected was **Starpharma** director and **Acrux** chairman, Ross Dobinson. Dobinson lost his full and significant stake in Acrux (14.3 million shares) which were sold by ANZ and similarly his 2.8 million shares in Starpharma. Last month Dobinson repurchased 3.3 million shares at 90 cents a share for $3 million. A substantial portion of his stake in Starpharma was acquired by Starpharma founder John Raff, for $249,000.

In a sign of commitment and belief in the technology value at **Alchemia**, the partner of CEO Pete Smith acquired $250,000 of shares in Alchemia in January this year at 50 cents a share. It was also positive to see the Chairman Mel Bridges increase his stake by acquiring an additional $20,000 of shares in Alchemia. Bridges, also Chairman of Impedimed, also purchased $57,000 of **Impedimed** stock. Mel Bridges looks to be a chairman who puts his money where his mouth is.

Healthlinx was seeking to raised $4 million through a rights issue earlier this year although fell well short, raising just over $500,000. It's impressive to see that directors contributed $400,000 of that amount raised.

In other CEO share purchases, Justus Homburg from **Progen Pharmaceuticals** acquired $50,000 of stock in on-market purchases. The directors at **Karmelsonix** have collectively purchased $484,000 of shares in that company over the year. Other companies where director share purchases totalled in excess of $100,000 over the year included **Nusep**, **Solagran**, **Polartechnics**, **Halcygen Pharmaceuticals**, **RTL Corporation**, **CathRx**, **Imugene** and **Medical Therapies**.

Bioshares

Share purchases by directors of ASX-listed life science companies in 2008

Company	Director	Value of shares acquired by director	Value of shares acquired by board
Acrux	Ross Dobinson	$3,000,000	**$3,000,000**
Karmelsonix	Noam Gavriely	$221,000	**$484,000**
	Henry Pinskier	$250,000	
	Peter Marks	$13,000	
Healthlinx	Nick Gatosios	$53,000	**$404,000**
	John Evans	$6,000	
	Stephen Copoulos	$315,000	
	Greg Rice	$30,000	
Nusep	John Manusu	$286,000	**$286,000**
Alchemia	Pete Smith (partner)	$250,000	**$281,600**
	Mel Bridges	$20,000	
	Carlo Montagner	$11,600	
Starpharma Holdings	John Raff	$249,000	**$259,600**
	Peter Bartels	$6,000	
	Jackie Fairley	$4,600	
Solargran	Peter Stedwell	$41,000	**$250,000**
	Vagif Soultanov	$209,000	
Polartechnics	Benjamin Dillon	$250,000	**$250,000**
Halcygen Pharmaceuticals	Bruce Mathieson	$205,000	**$205,000**
RTL Corp	Robert Hemphill	$43,000	**$176,000**
	Alex Neuling	$30,000	
	Ashley Pattison	$103,000	
CathRx	Geoffrey Goodman	$125,000	**$131,500**
	Jane Wilson	$6,500	
Imugene	Graham Dowland	$101,000	**$119,000**
	Warwick Lamb	$18,000	
Medical Therapies	David King	$108,000	**$108,000**
Impedimed	Greg Brown	$42,000	**$99,000**
	Mel Bridges	$57,000	
Sunshine Heart Corporation	Crispin Marsh	$41,000	**$92,000**
	Malcolm McComas	$16,000	
	Will Peters	$35,000	
PharmAust	Bryant McLarty	$83,000	**$83,000**
QRx Pharma	Gary Pace	$11,000	**$63,000**
	Peter Farrell	$10,000	
	Peter Campbell	$22,000	
	Michael Quinn	$20,000	
Progen Pharmaceuticals	Justus Homburg	$50,000	**$50,000**
Anadis	Roman Zwolenski	$13,000	**$49,000**
	Roy Robbins-Browne	$10,000	
	Arie Nudel	$10,000	
	Peter Jenkins	$16,000	
Avita Medical	Ian Macpherson	$49,000	**$49,000**
Circadian Technologies	Donald Clarke	$24,000	**$46,000**
	Tina McMeckan	$22,000	
Arana Therapeutics	Chris Harris	$23,000	**$38,000**
	Robin Beaumont	$15,000	
Medical Developments Int.	Harry Oxer	$10,000	**$36,000**
	Maurice Van Ryn	$17,000	
	Anthony Coulepis	$9,000	
Agenix	Stephen Phua	$35,000	**$35,000**
OMI	Terence Skene	$33,000	**$33,000**
Probiotec	Maurice Van Ryn	$24,000	**$24,000**
Rockeby Biomed	Lim Chong Kiat	$20,000	**$20,000**
Virax Holdings	Albert Ting	$20,000	**$20,000**
Biosignal	Bruce Foy	$20,000	**$20,000**
Clovercorp	David Wills	$19,000	**$19,000**
CSL	Elizabeth Alexander	$19,000	**$19,000**
Metabolic Pharmaceuticals	Ian Kirkwood	$18,000	**$18,000**
Uscom	Robert Phillips	$12,000	**$18,000**
	Bruce Rathie	$60,000	
Helicon Group	Peter Abrahams	$10,000	**$18,000**
	Saliba Sassine	$8,000	
Resonance Health	Ian Anderson	$14,000	**$14,000**
Ellex Medical	Alex Sundich	$13,000	**$13,000**
Avastra	Stephen Hull	$13,000	**$13,000**
Analytica	RJ Heckathorn	$12,000	**$12,000**
Tissue Therapies	Steven Mercer	$10,000	**$10,000**
Probiomics	Pat Ford	$10,000	**$10,000**
Portland Orthopedics	Ron Sekel	$10,000	**$10,000**
ITL	William Mobbs	$10,000	**$10,000**
Phosphagenics	Harry Rosen	$10,000	**$10,000**
Universal Biosensors	Jane Wilson	$10,000	**$10,000**

BioMD Progresses Towards Partnering

BioMD (BOD: 7 cents; Cap'n $6 million) is a stock that has lain at the periphery of the sector despite the successful advance of its ADAPT technology towards commercial outcomes. The company, which is based in Perth, has developed a technology invented by **Fremantle Heart Institute** scientist, Dr William Neethling.

The technology can be applied to many bio-prostheses, which are typically tissues from a bovine (cow) or porcine (pig) source. These tissues are currently treated with the chemical glutaraldehye (GA) to extract cellular proteins (and viruses), and leave a 'neutral' and natural bio-matrix that can incorporate with living cells and tissue. However, over the longer term, these GA treated tissues tend to calcify or harden and their therapeutic benefit deteriorates. In contrast, the ADAPT process is able to overcome the hardening problem

Treated animal tissue products are widely used, especially in heart repair. Examples include the **St Jude Medica**l Toronto SPV valve (porcine) and the **Medtronic** Mosaic product. The Medtronic product is interesting because the company claims that its AOA 1,2 (alpha amino oleic acid) treatment and the Medtronic Physiologic Fixation together limit the calcification problem fro GA treatment of animal tissue.

Recent Publication

BioMD's prospects have been advanced by the recent publication of data in the *Journal of Heart Valve Disease* from research conducted by Neethling and associates, which has shown in animal studies extensive infiltration of fibroblast cells in ADAPT plus GA treated tissue. Fibroblast cells are the most common cells in connective tissue

South African Trial

The company's 50 patient Phase II trial of ADAPT- treated patches for the repair of holes in the heart (the CardioCel product) is progressing well in South Africa. Six patients have been treated to date, although one patient has died but not from patch -related causes.

The Covidien Transaction

A fairly clear marker of the potential value contained in BioMD can be found in the acquisition of **Tissue Science Laboratories** by **Covidien** (formerly Tyco Healthcare) for $US80 million in March 2008. TSL has developed the Permacol Surgical Implant, which has been approved for complex and recurrent hernia repair.

Summary

A key point to understand about BioMD is that it is not developing a new product per se. Rather it is has developed a method to make existing tissue implant products better. Hence the company's risk profile is significantly less than companies such as Mesoblast that are developing new products in the cardiac regeneration space.

The company is set to embark on business development visits in international markets. The company views the further development of ADAPT-derived products as a task for sophisticated medical device firms to undertake. We expect that visits to potential partners could yield positive outcomes in the near term. BioMD is an attractive investment opportunity at current prices with a lower relative-risk profile.

Bioshares recommendation: **Speculative Buy Class B**

Bioshares Model Portfolio (18 July 2008)

Company	Price (current)	Price added to portfolio	Date added
Avexa	$0.31	$0.32	Jun-08
Cellestis	$2.27	$2.27	April 2008
IDT	$1.63	$1.90	March 2008
Circadian Technologies	$0.89	$1.03	February 2008
Patrys	$0.28	$0.50	December 2007
NeuroDiscovery	$0.10	$0.16	December 2007
Bionomics	$0.32	$0.42	December 2007
Cogstate	$0.12	$0.13	November 2007
Sirtex Medical	$2.70	$3.90	October 2007
Clinuvel Pharmaceuticals	$0.31	$0.66	September 2007
Starpharma Holdings	$0.26	$0.37	August 2007
Pharmaxis	$1.52	$3.15	August 2007
Universal Biosensors	$0.76	$1.23	June 2007
Biota Holdings	$0.78	$1.55	March 2007
Probiotec	$1.45	$1.12	February 2007
Peplin Inc	$0.34	$0.83	January 2007
Arana Therapeutics	$1.01	$1.31	October 2006
Chemgenex Pharma.	$1.00	$0.38	June 2006
Cytopia	$0.21	$0.46	June 2005
Optiscan Imaging	$0.24	$0.35	March 2005
Acrux	$1.12	$0.83	November 2004
Alchemia	$0.30	$0.67	May 2004

Portfolio Changes – 18 July 2008

IN:
No changes.

OUT:
No changes.

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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Subscription Rates (inc. GST)

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

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