ISSN 1443-850X

In this edition...
For small biotechs cutting a development deal with a larger market-focused firm can provide not only cash but also validation of the firm's technology. This makes the Patrys licensing of two early stage antibodies to CSL a significant step forward.

Cogstate continues to power away in driving sales, with another strong half year just posted. In contrast, Atcor Medical half year sales fell although the company expects growth in the second half to revert upwards.

One company in the fundraising mode is Benitec, but that company may be more successful going forward now that it has re-written an agreement with the CSIRO.

The Editors

Companies Covered: ACG, BLT, CGS, PAB, CEO/MD Salaries Survey

	Bioshares Portfolio
Year 1 (May '01 - May '02)	21.2%
Year 2 (May '02 - May '03)	-9.4%
Year 3 (May '03 - May '04)	70.0%
Year 4 (May '04 - May '05)	-16.3%
Year 5 (May '05 - May '06)	77.8%
Year 6 (May '06 - May '07)	17.3%
Year 7 (May '07 - May '08)	-36%
Year 8 (May '08 - May '09)	-7.3%
Year 9 (May '09 - Current)	74.2%
Cumulative Gain	**247%**
Av Annual Gain (9 yrs)	**21.3%**

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

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

Enquiries for *Bioshares*
Ph: (03) 9326 5382
Fax: (03) 9329 3350
Email: info@bioshares.com.au
David Blake
Ph: (03) 9326 5382
Email: blake@bioshares.com.au
Mark Pachacz
Ph: (03) 9671 3222
Email: pachacz@bioshares.com.au

Individual Subscriptions (48 issues/year)
$350 (Inc.GST)
Edition Number 345 (29 January 2010)
ISSN 1443-850X

Bioshares

29 January 2010
Edition 345

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

Strong Outlook Maintained for 2010

It has been a positive start to 2010 for Australian biotech with the small to medium cap stocks look set for a good year, following on from the stellar performance from the Tier-1 late stage stocks in 2009.

Mesoblast has seen its share price this year following positive clinical data last year and major coverage emerge this month from two broking firms, RBS Equities and Southern Cross Equities, highlighting the market interest in that stock. **Genera Biosystems** has received TGA approval for its novel HPV test. **Bionomics** has started a 152 patient trial in kidney cancer in the US with its lead drug candidate. **Benitec** has importantly renegotiated its agreement with CSIRO over RNAi assets (see page 2). **Pharmaxis** will acquire a Canadian-based biotech company, **Topigen Pharmaceuticals**. **Acrux** has filed a New Drug Application for Axiron with the FDA. Universal Biosensors has seen its first product, an electronic glucose test, hit the market in the Netherlands. And **Patrys** has signed an R&D agreement with **CSL** for two of its early stage human antibody compounds.

At present there are very few sectors of appeal within the broader market, with the All Ordinaries Index off 7.7% in the last three weeks. If biotechs can continue to hit their milestones and generate tangible commercial outcomes, then the interest in the sector should be maintained. Major licensing deals or acquisitions will be at the top of that list.

Patrys Secures the Attention of CSL

Patrys (PAB: 16.5 cents) has struck an early stage R&D deal with CSL. The agreement gives CSL access to two Patrys human antibody compounds that it will conduct preclinical work on over the next 30 months. The two antibodies, sourced from human plasma and discovered by Patrys, have shown potential, in i*n vitro* and *in vivo* studies, as cancer cell inhibiting drug compounds on proprietary targets.

The deal is important for Patrys because it helps validate the commercial interest in the company's approach to developing cancer therapeutics; that of sourcing naturally occurring antibodies, growing those antibodies through genetic engineering, and then employing the antibodies as an off-the-shelf product to treat a range of cancers.

Patrys had forecast an early stage R&D deal last year and this achieves of the company's targets set. The deal also allows for CSL to select a two further antibody compounds from the Patrys library (excluding the leading drug candidates presumably), which would trigger a milestone payment. Access to all Patrys antibodies includes (undisclosed) upfront and development milestone payments, and royalties from sale of any future products incorporating the technology.

Patrys has several major milestones set for 2010. The second (following the CSL deal) is to move the company's lead compound, PAT-SM6 into the clinic. The program is awaiting final ethics approval at two sites in Australia with clinical data available as early as mid year.

Cont'd on page 4

New Agreement Frees Up Commercial Pathway For Benitec

Benitec (BLT: 4.0 cents) has overcome one of its largest obstacles in commercialising is unique RNAi technology. Benitec and CSIRO had decided to share their intellectual property and commercial rights in this area through agreements formed in 2003 and 2006. Unfortunately for Benitec, these agreements were hindering any realistic commercialization of the technology on Benitec's part, certainly through any licensing or M&A transaction.

Under the terms of the previous agreement, CSIRO would have received 20% of any revenue derived sales of any treatments incorporating the technology, and as part of the Capital Growth Agreement, any acquiror of Benitec would have had to pay CSIRO US$100 million first. Benitec had previously come close to securing three international technology deals (licensing or M&A) only to be stymied by the poison pill provisions in these agreements.

That the Capital Growth Agreement was to expire in December 2010 and the main patent, the 'Graham patent' expires in nine years time were incentives to speed up the commercialisation of this technology.

Under the new agreement, CSIRO will be entitled to no royalties, but it will gain between a 10% - 12% equity stake in Benitec. Benitec maintains exclusive global rights to the technology for human applications while CSIRO will keep rights for animal and plant use. Benitec will regain any current revenue being derived from the technology (up to $1 million a year).

There have been some very large and significant deals concluded in the RNAi area, including the US$1.1 billion acquisition of **Sirna Therapeutics** by **Merck** in 2006 and the US$1 billion licensing deal in 2007 by **Roche** for **Alnylam Pharmaceuticals'** RNAi technology.

The Benitec technology is unique because it uses DNA-directed RNA interference to stop unwanted protein production in the body. In this process, a DNA construct is inserted in the target cell nucleus (using a viral vector such as the lentiviral vector) that produces small interfering RNA to shut down cell production by binding to the messenger RNA. The advantage of this approach is that the process is transferred to daughter cells when cells divide. It is suitable to diseases such as cancer, hepatitis and HIV, where it is desirable to maintain drug action.

The alternative approach used by most other groups is siRNA, where small interfering RNA is delivered directly into the cell cytoplasm to bind to the messenger RNA and also shutting down the gene function, thereby gene silencing.

Programs

Benitec is currently involved in four programs that are incorporating its technology. These are:

1. A clinical HIV program, using a lentiviral vector to deliver the Benitec ddRNA incorporated into patient stem cells in combination with two other gene silencing technologies. This trial is being conducted at the **City of Hope Hospital** in California. Early results from this trial have been described as encouraging by the company. This program is progressing to a second clinical study.

2. A HIV program where Benitec's ddRNA is to be incorporated with HIV T-cells. Similar to the trial above, the patient's cells (T-cells) will be removed from the blood stream, infected with the ddRNA using the same lentiviral vector, and then returned to the patient. A Phase I trial is due to begin, also at the City of Hope Hospital.

3. In October last year Benitec formed a collaboration with the **Children's Cancer Institute Australia for Medical Research** (CCIA) to develop a lung cancer therapy. The two groups will use Benitec's ddRNA technology to inhibit CCIA's patented beta-tubulin target. Successful inhibition of this target is expected to improve the effect of chemotherapy drugs for lung cancer that bind to tubulin (such as taxanes) but have problems with tumours becoming resistant to therapy. Further *in vitro* studies then *in vivo* studies will need to be completed before Phase I trials can start.

4. An early stage discovery program with **Biomics** in China to find a target for RNAi therapy for the treatment of hepatitis B infection.

Funding

Funding is an issue for Benitec, with the company due to raise funds (up to $5 million). At the end of last year the company had only $1.1 million in cash. It is currently spending $1.8 million a year, although this may increase as it needs to make licensing payments to secure ongoing access to technology. In the next three months an option fee is payable to the City of Hope for the HIV stem cell program.

Key risk

A key risk for Benitec is the re-examination of the company's core patent, the 'Graham patent', in the USA. The patent has been granted and successfully retested in eight regions around the world. A decision on this re-examination should be received by the end of 2010. Benitec has rights to 14 patent families covering its technology.

Summary

For Benitec, the first priority is to raise capital to fund its operations. The next hurdle is to successfully pass the Graham patent re-examination in the US. Following that, a very realistic option is to seek an M&A deal on very favourable terms. The CSIRO agreement has been a large obstacle to M&A considerations and that obstacle has now been removed.

Acquisition Targets

Mel Bridges, a director of Benitec, sits on six biotech company boards (**Benitec**, **Alchemia**, **Genera Biosystems**, **Incitive**, **Impedimed** and **Tissue Therapies**). At an AGM last year, he commented that several of the boards he sits on are in transition to a trade sale. Benitec, Genera Biosystems and Tissue Therapies are three likely candidates on that list.

Bioshares recommendation: **Speculative Buy Class C**

Cogstate Posts Another Strong Performance

It has been a very strong 12 months for Cogstate (CGS: 29 cents). Measured in US dollars – the US is where most of the company's business is sourced – earnings increased from US$4.9 million in CY2008 to US$7.8 million in CY2009, an increase of 58% (or in Australian dollars from $6.0 million to $9.6 million).

The company is expected to report a net profit after tax for the first half of this financial year of $0.5 million. In the last six months the company generated sales of $5.1 million, and signed contracts worth $6.3 million, some of which may take more than 12 months to recognise.

The appeal with this stock is that with the consistent and strong growth shown over the last three years, we estimate that sales of $20 million per annum are achievable within three years. From those sales the company should be able to deliver a net profit of at least $3 million a year.

Based on a price-earnings ratio of 20 times, the company should be valued in excess of $60 million (or three times sales). That translates to a share price of 92 cents or over a 200% potential share price gain over three years.

More certainty is emerging from within the Cogstate business. It is signing contracts at a rate of around 50 a year, based on the last six months, up from 38 on the previous corresponding period. It is currently operating in 800 sites around the world in 35 countries, with its programs having been translated into 40 languages. A year ago the company appointed an operations manger in the US, a former Pfizer employee, to co-ordinate the supply of the clinical trial testing services.

While Cogstate is expanding its customer base and likely taking some market share away from its competitors (this can be difficult to measure), the market for electronic-based cognitive testing services for pharmaceutical trials continues to enjoy solid growth.

Cogstate is expanding its offering to existing clients with modest additional services. And there is still the application of the cognitive testing outside of clinical trials, such as concussion management in athletes, and cognitive testing for the workplace, which as the company grows it will be able to invest more into these new markets.

At the end of last year, the company held $2.5 million in cash, with a further $1.3 million outstanding in net current assets. Cogstate offers a good investment opportunity where a 30% plus annual growth in sales is realistically achievable over three years that should translate into an even stronger improvement in the bottom line result and very healthy share price performance. Cogstate does have a currency risk, where an appreciating Australian dollar impacts negatively on top and bottom line results.

Bioshares recommendation: **Buy**

Atcor Medical Confronts Sales Slowdown

Atcor Medical (ACG: 17.5 cents) has developed and sells the Sphygmocor device used to measure central blood pressure. The scientific literature continues to highlight the benefit of measuring central blood pressure with the standard cuff blood pressure measurement. Central blood pressure gives clinicians distinct information on the health of the arteries that cuff blood pressure measurement does not. Atcor has established a proprietary position where its device has become the gold standard for central blood measurement, with more than 400 scientific publications covering the technology.

Easing in Sales

Sales of its product in the first half of this financial year were down 13% on the previous corresponding period in constant currency terms, to $4.4 million. The reason for the fall was a delay in spending out to 2010 by pharmaceutical customers, which use the device in the clinical trial setting. The company also had a very strong corresponding half in 2009, where sales increased by 64% in constant currency terms to $5.4 million over the same period in 2008.

The decline in pharmaceutical spending is anticipated to reverse in this half, with deal flow returning according to the company. Sales in the full financial year are expected to increase (in constant currency) over FY2009. Pharmaceutical company sales account now for about 50% of sales. The remainder are generated from sales to research groups and to practising clinicians, particularly specialists at this stage.

Key Drivers for Accelerated uptake of Sphygmocor Technology

There are a number of key developments that could drive a step change in increased demand for the Sphygmocor product. The first is the receipt of a national US Category 1 reimbursement coding, that if received, would deliver specific reimbursement from private health insurers for procedures using the Sphygmocor device to measure central blood pressure. Atcor is considering filing is application as early as November this year.

A second major driver would be guidelines put in place by one or more cardiovascular societies that would recommend the regular testing of central blood pressure. A third driver would be a recommendation from the FDA that central blood pressure changes should be routinely measured to help assess cardiovascular safety in clinical trials of experimental drug candidates. And a fourth driver would be the inclusion of the test with new blood pressure medications where the Sphygmocor test was used in clinical trials to bring that drug to market and would be recommended as part of patient management with those medications.

One of the clearest benefits of testing central blood pressure was acknowledged last October in an article in the *Journal of the American College of Cardiology*. In a NIH (National Institutes of Health in the US) funded trial in 2,400 people followed for five years, it found that when central blood pressure exceeded 50mm Hg, there

Cont'd on page 4

– Atcor cont'd

was a 70% increased chance of a cardiovascular event. The trial used the Sphygmocor device. No similar predictive outcome was seen with measuring only cuff pressure.

For the company the challenge is to continue to grow sales (we estimate at a rate of 30% a year over the next three years) whilst it waits for a step change in demand for the company's product. Over this time it also needs to become profitable or it will need to return to the market for further funding, which would place a downward pressure on the share price. At the end of last year the company had just short of $2.0 million in cash and it maintains that it will not need to raise further money to fund operations based on current projections. Operating cash outflow for the last six months was $2.2 million. Atcor is capitalised at $18 million.

Bioshares recommendation: **Speculative Buy Class B**

Bioshares

CEO Salaries Survey FY2009

Our survey of CEO/MD Salaries for FY2009 shows that the median base salary of CEOs of ASX-listed small cap life science firms was $274,087, up 21.1% from $226,417 in the previous year. The median packaged increased by 6.3% to $319,000, from $300,000 in FY2009.

The data was compiled from annual reports and 59 companies were included in the survey. Companies undertaking a change in management were excluded. Non- June 30 and US reporting entities were excluded as were a number of other companies for various reasons.

The survey data can be found in an Appendix to this report.

– Patrys cont'd

The second compound in development is PAT-LM1, which is about six months behind the lead program, and the company has forecast clinical data by year's end. The key business development goal for the company is to license this compound.

The third program, PAT-SC1, is about another year behind. The company needs to move this compound to be made using its new manufacturing platform. Previously the compound had generated positive results from a Phase II study in 35 patients with gastric cancer.

Patrys had $10.2 million in cash at the end of last year, which is sufficient funding for about 18 months on its current spend. The company is capitalised at $31 million. The company is well managed and is now achieving key milestones which should generate further shareholder value in 2010.

Bioshares recommendation: **Speculative Buy Class B**

Bioshares

Bioshares Model Portfolio (29 January 2010)

Company	Price (current)	Price added to portfolio	Date added
Tissue Therapies	$0.19	$0.21	January 2010
Biodiem	$0.20	$0.15	October 2009
QRxPharma	$0.84	$0.25	December 2008
Hexima	$0.40	$0.60	October 2008
Atcor Medical	$0.18	$0.10	October 2008
CathRx	$0.43	$0.70	October 2008
Impedimed	$0.75	$0.70	August 2008
Mesoblast	$2.10	$1.25	August 2008
Circadian Technologies	$0.65	$1.03	February 2008
Patrys	$0.17	$0.50	December 2007
Bionomics	$0.34	$0.42	December 2007
Cogstate	$0.29	$0.13	November 2007
Sirtex Medical	$6.27	$3.90	October 2007
Clinuvel Pharmaceuticals	$0.23	$0.66	September 2007
Starpharma Holdings	$0.71	$0.37	August 2007
Pharmaxis	$2.65	$3.15	August 2007
Universal Biosensors	$1.72	$1.23	June 2007
Probiotec	$2.24	$1.12	February 2007
Chemgenex Pharma.	$0.91	$0.38	June 2006
Acrux	$2.00	$0.83	November 2004
Alchemia	$0.74	$0.67	May 2004

Portfolio Changes – 29 January 2010

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

Corporate Subscribers: Pharmaxis, Cytopia, Starpharma Holdings, Cogstate, Bionomics, ChemGenex Pharmaceuticals, Circadian Technologies, Biota Holdings, Halcygen Pharmaceuticals, Peplin, Impedimed, QRxPharma, Patrys, Labtech Systems, Hexima, Tyrian Diagnostics, Mesoblast, Atcor Medical, CathRx, BioMd, Tissue Therapies (commencing February 2010)

Subscription Rates (inc. GST)

48 issues per year (electronic distribution): **$350**

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