ISSN 1443-850X

In this edition...
This edition of Bioshares is certainly worth reading front to back. It provides coverage of the Wilson HTM life sciences conference held in Sydney this week. Wilson HTM has been arguably the strongest supporter of the biotech sector in Australia as measured by capital raised.

The conference provides, in a snap shot, the reasons why people invest in the biotech sector and why the Australian biotech sector is offering such compelling investment options. Most companies that presented are extremely well fund, close to market or have just reached the market, and with exceptionally strong management. The future promise of the Australian biotech sector, which has performed dismally according to share prices over the last two year, has never looked stronger at the head of the pack.

Companies covered: Wilson Conference

	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)	-28.5%
Cumulative Gain	**49%**
Av Annual Gain (7 yrs)	**17.8%**

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)
$320 (Inc.GST)
Edition Number 285 (17 October 2008)
ISSN 1443-850X

Bioshares

17 October 2008
Edition 285

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

Wilson HTM Conference Coverage – 'Show Me The Money'

Wilson HTM held its annual life sciences conference in Sydney this week. While there appears to be almost complete chaos in equity markets, the take-home message from the event is that there is an impressive line-up of biotech companies in Australia that are now set to launch their products onto world markets over the next three years. Their progress in no way reflects their share price performance over the last two years and this sector will almost certainly deliver, in *Bioshares'* estimates, a very credible number of successful, international life science businesses that will be immune from an expected global economic slowdown, for those that are well funded.

A question of survival

One of the key dynamics that has changed in the sector, as pointed out by Shane Storey, Senior Research Analyst with Wilson HTM, was that the question of survival has come to prominence. Since November 2007 there has been a radical change in sentiment towards better stocks in the sector. A fear factor has been emerging with companies that will run out of cash and that are reliant on completing commercial deals to survive the market turbulence and restrictive capital markets. Storey was optimistic in closing, pointing to the busy years ahead between 2009 - 2011 which will see a very active period for new product launches from the sector. These include product launches in the US from:

2009 - Alchemia, Universal Biosensors, Impedimed.
2010 - Acrux, Chemgenex Pharmaceuticals, Pharmaxis, Nanosonics, Halcygen Pharmaceuticals, Ventracor
2011 - CathRx, Avexa, Peplin, Pharmaxis, Heartware, QrxPharma, Universal Biosensors

Circadian - Aiming for deals in 2009

Robert Klupacs from **Circadian Technologies** was keen to stress once again that Circadian has now changed from being an investment fund to a biotech company, a point that is still being missed by the market. Circadian has $52 million in cash and listed investments and is trading at more than a 35% discount to these tangible assets. Investment funds commonly tend to trade at a discount to their net tangible asset value.

Circadian plans to exit its listed investments over the next three years, although not at current prices. It is hopeful of securing a major licensing deal in 2009 for access to some of its VEGF-C and VEGF-D assets. If that occurs, along with an expected revaluation of the company, it would place Circadian in a position to acquire Phase Ib/IIa programs to fill its clinical pipeline.

Circadian has two international licensing deals in place. The earlier stage program is a monoclonal VEGFR-3 antibody program licensed to **Imclone Systems**, which is expected to move into Phase I trials shortly. Circadian also has future royalty rights to sales of Trinam, a VEGF-D gene therapy product from **Ark Therapeutics**, which will commence Phase III studies this year. The potential market for that product, according to Klupacs, is

over US$500 million a year. (Circadian will receive a single digit royalty from sales). In Phase II studies, Trinam was shown to keep veins healthy for an additional 12 months (17 months versus 4.5 months) in patients undergoing regular kidney dialysis. The Phase III trial is expected to be finished in 2011.

Klupacs said that **Genentech's** VEGF-A drug Avastin is expected to reach sales of US$10 billion next year and "it hasn't even scratched the surface yet". It is this product that is driving Genentech's growth. Circadian has the world's most comprehensive patent portfolio over VEGF-C, VEGF-D and VEGF-R3 targets.

Cytopia - Trials in MPD to Start in 2009

Cytopia's CEO Andrew Macdonald is expecting to meet some major milestones in 2009, which should stimulate interest in the company. The company would like to partner its MPD (myeloproliferative disorders) program next year, which is expected to start clinical studies early in 2009. It is expected an MPD trial will be completed before the company returns to the market for additional funding. If it can achieve good data from Phase II studies with CYT997, then a partnership may occur in 2009 or 2010. Cytopia is testing the cytotoxic properties of the drug in a multiple myeloma Phase II trial and the vascular disruption properties of the candidate in a Phase II solid cancer study in patients with glioma.

Cytopia has raised $50 million since listing and is capitalised at around $12 million. The company believes in the portfolio approach, following similar business models to successful groups such as **Exelixis**, **Rigel Pharmaceuticals** and **Vertex Pharmaceuticals**.

Cytopia already has one program partnered with **Novartis** in autoimmune disorders, including transplantation organ rejection. This has been a tough target according to Macdonald, although is hopeful that a drug candidate will be selected soon. In June 2009, the collaboration with Novartis will have reached three years, at which point Novartis has an option to extend it for a fourth year.

Cytopia retained cash assets of $11 million at June 30, 2008.

Hexima - Interesting Deal Terms

Hexima's CEO Josh Hofheimer indicated the importance of being able to deal with large partners from a position of technology and financial strength. The company has $35 million in cash and recently secured a major anti-fungal deal with **DuPont** on very favourable terms to Hexima, highlighting the interest from DuPont is Hexima's technology.

Under the deal terms, Hexima will be paid from a percentage of the value created for farmers for any products that employ the Hexima technology and the number of acres that have been planted, and is not tied to sales of any products. For any improvements offered by genetically modified seeds, traditionally the farmer receives 60% of the upside and the seed supplier 40% from increased product yields.

Hexima has an option to co-fund the registration process to double the level of its payback. Hexima can also apply the DuPont anti-fungal technologies to crops other than corn and soybeans and license to other groups, for which DuPont would receive a royalty. For Hexima this agreement covers only one part of Hexima technology for two crops, leaving Hexima with many other commercialisation opportunities outside the DuPont relationship. What is extremely important is that Hexima is DuPont's exlusive antifungal protein disease partner. And in corn and soy, DuPont is the market leader in the US! (31% of corn seeds and around 40% of soybean seeds).

Sales of GMO seeds started in 1998 with **Monsanto**'s Roundup Ready soy which is resistant to the Monsanto herbicide Glyphosphate. The current market for GM seeds is worth US$8 billion with only 8% penetration. Growth has averaged 15.7% a year over the last 10 years. DuPont has a 5% interest in Hexima although is a passive investor. Hexima has four years of cash and the first product is expected to reach the market in 2014.

Sunshine Heart - Feasibility Trial to Commence

Sunshine Heart was very pleased that it could report this year that it had received an IDE approval to start a feasibility trial in the US. The company should be eligible for reimbursement in the trial for its products, with 20 patients expected to be recruited.

Co-principal investigator for the trial will be Bill Abraham, who was the leading investigator for the **Medtronic** pacemaker (CRT) trial who in a recorded interview says that this device could ultimately improve the lives of tens of thousands of people.

The device has shown to increase blood flow to the heart by 65%, something that the LVADs do not do (they supply blood to the rest of the body). Pacemakers represent a $3 billion annual market and are suitable for only 30% of Class III heart disease patients. The other 70% potentially could be treated using Sunshine Heart's C-Pulse device.

The pivotal trial to follow the current feasibility trial will likely involve around 200 patients in 30 centres. It would take one year to complete enrollment and would likely require a 12 month follow-up period. The price of the C-Pulse is likely to between that of a pacemaker (US$40,000) and an LVAD (US$80,000-$100,0000). Sunshine Heart will also be working on a second generation fully implantable system.

Sunshine Heart retained cash assets of $10 million at June 30, 2008.

CathRx - Sales have Commenced in Europe

The CEO of CathRx, Neil Anderson, said the CathRx catheters provide the most significant and fundamental improvement in cardiac catheters in 20 years. Last month, the company began selling its catheters into Europe via distributors. It has been used in 12 procedures in the last three weeks.

The company is forecasting sales in excess of $30 million for FY2011. Its new facility in Homebush Bay will have an initial product capacity of $12 million a year with a full upgradable capacity to $150 million a year. The company currently employs 60 people.

Employment Opportunities

Business Development Manager

CSL is a global, specialty biopharmaceutical company that develops, manufactures and markets innovative products to treat and prevent serious human medical conditions. A progressive culture and dynamic management team enable CSL to be a rapidly growing and successful Australian pharmaceutical company.

Your solid commercial and financial knowledge, along with project management and negotiation skills combined with your experience in the pharmaceutical or biotech industry puts you in position to make a great success of this challenging role. Based in Parkville, you will be responsible for the coordination of due diligence activities associated with New Product Evaluations. You will ensure all relevant reviews are conducted and prepare business cases when necessary. You will also assist in the identification and evaluation of R&D products and companies that may be licensed in or acquired according to CSL criteria.

Your networking, communication and negotiation skills will come into play as you work closely within the Business Development team and participate in obtaining new product opportunities and technologies. You will negotiate licenses and agreements and ensure all deal valuations, strategies and terms are thoroughly prepared. Travel may be involved in this role, so your flexible attitude will be valued. With graduate qualifications in a health-related discipline, post-graduate qualifications in business administration and a proven track record in business development, you have just the right mix of skills and experience to excel in this position.

For more information regarding these roles, or to request position descriptions, please contact Katherine Wirth on 03 9389 1911 or email: Katherine.Wirth@csl.com.au

Business Development Analyst

CSL is a global, specialty biopharmaceutical company that develops, manufactures and markets innovative products to treat and prevent serious human medical conditions. A progressive culture and dynamic management team enable CSL to be a rapidly growing and successful Australian pharmaceutical company.

With your experience in the pharmaceutical/biotech industry in marketing and business development, this role is an ideal fit for you. As part of the Business Development team supporting the R&D group, you will work towards achieving CSL's growth projections through assisting in the evaluation of potential new business opportunities, new products that may be in-licensed and opportunities to commercialise CSL R&D activities.

You will draw on your strong understanding of marketing principles and your advanced analytical skills as you coordinate market research, conduct analyses on opportunities and make recommendations on commercialisation activities relating to these opportunities. It will also fall to you to ensure all business activities comply with relevant legal and ethical standards.

You're a strategic thinker with highly developed project management skills and the ability to establish and maintain professional networks. Your solid financial knowledge and experience in business development will be valuable in this role, as will your understanding of recombinant antibodies and ability to work in a high calibre team. You have graduate qualifications in a health-related discipline and, preferably, post-graduate qualifications in business.

With commercial experience and a background in the biotechnology industry, you were made for this role.

For more information regarding these roles, or to request position descriptions, please contact Katherine Wirth on 03 9389 1911 or email: Katherine.Wirth@csl.com.au

The company has started to generate revenue after only three years since listing on the ASX.

CathRx held cash resources of $18 million at June 30, 2008.

Nanosonics – Well Funded

Nanosonics is another of the well funded life science companies that presented at this conference. The company has developed a new sterilisation device to cleaning hospital instrumentation using a nebulized hydrogen peroxide solution in a contained system. The company anticipates sales to begin in January/February 2009 in Australia and New Zealand and in April in parts of Europe.

The company this week announced the appointment of seven distributors (one in Australia and New Zealand and five in Europe) and the manufacturing facility is on track for January 2009. Nanosonics has $22 million in cash with a burn rate of $700,000 a month.

The first market is for sterilisation of ultrasound probes. There are an estimated 457 million ultrasound procedures a year. The Nanosonics technology offers the advantage of safe handling with no toxic waste products and the cleaning procedure can be conducted at point of care in five minutes versus one hour for existing processes. Nanosonics will not only sell the cleaning hardware, but also the hydrogen peroxide cleaning solution, from which it will be paid for each procedure. The technology is applicable to the cleaning of a range of other medical devices, including endoscopes. The company is capitalised at around $58 million. It has 42 employees.

Heartware – US Trials for BTT have Commenced

Heartware has submitted its LVAD (heart pump) for approval in Europe and has commenced US trials with the device for bridge-to-transplant (BTT) use. The company's Director of Corporate Development, Howard Leibman, said results from the device to date were comfortably ahead of the recently approved Heartmate II device from Thoratec. Leibman pointed to the solid share market performance of Thoratec since the Heartmate II device was approved, now capitalised at US$1.5 billion and trading at close to a 12 month high. The success of Thoratec is a benefit to Heartware, said Leibman, with Thoratec paving the way in growing the LVAD market.

To date, one patient has survived in excess of 600 days on the Heartware LVAD. The BTT trial in the US will take around 18 months to complete and will enrol 150 patients in 28 centres. The destination therapy trial (for permanent use) will start in 2009 and will take two years to complete. The company anticipates to generate around $25 million in revenue from the US trials, where reimbursement is received during the trials of US$70,000 per device.

According to Leibman, one of the appeals of this device is its ease of implant, quoting one surgeon who commented that the procedure was so straightforward he could "throw the device in". Heartware will sell direct to customers and not use distributors. The company has a capitalisation of around $170 million with 102 employees. (Including a subsequent placement, the company had $47 million in cash at mid year.)

Universal Biosensors – Q2 2009 Milestone Ahead

Universal Biosensors (UB) has generated positive results from its new glucose monitoring system against existing products. Its test, to be sold by **Lifescan** (**Johnson & Johnson**), is expected to be cleared for sale in the second quarter of 2009 although the timing of release will be determined by Lifescan. Lifescan has around 25% of the global glucose monitoring market.

The company's initial manufacturing capacity is 750 million strips a year and is expected to double that capacity in the new year. The extra capacity will allow the company to keep up with strong demand or can be used to manufacture the company's subsequent products under development.

UB is also working on a second glucose monitoring product, although further details were not provided due to confidentiality reasons. This product will expand the use of the diagnostic test for people with diabetes. The company expects to be profitable in FY2010, from its manufacturing sales, and also including recognition of tax losses.

The benefits of the new glucose monitor are reduced costs of goods, better precision and easier use for patients. The company expects to find partners for its subsequent products. These are tests to measure at point-of-care C-reactive protein (inflammation) and prothrombin time (warfarin uptake), to be completed in 2010, and a D-dimer (blood clot) test in 2011.

UB retained cash assets of $36 million at June 30, 2008.

Alchemia – Updates on fondaparinux and HA-irinotecan

Peter Smith, the CEO of Alchemia, presented largely on Alchemia's fondaparinux asset, which he commented was the strongest point of interest for Australian investors. There is no chemical or molecular risk with the synthesis of the drug remaining, which Smith said was likely the most difficult of drugs to manufacture, taking Sanofi Aventis up to 15 years to produce.

The company's partner in the US is **Dr Reddy's**, which is number three in terms of the number of DMFs (drug master files) recorded by the FDA, with 130 generic DMFs held by Dr Reddy's. Sales uptake for generics is almost immediate in the US. The top seven group purchasing organisations (GPOs) in the US handle 85% of the buying for US hospitals, highlighting the very narrow distribution channels.

The maths for Alchemia is relatively straightforward. The branded drug Arixtra will generate sales of around US$200 million in 2008, which is expected to increase to US$250 - US$300 million in the US in 2009 if the current growth rate continues. Alchemia expects to achieve at least a 40% market share very quickly with minimum 50% profit share (and up to 60%) which corresponds to 30% - 35% of generic sales flowing back to Alchemia. Price discounting is not expected to exceed 20% with only one generic (Alchemia's) on the market. (Based on an exchange rate of AUD=0.70USD and the above assumptions, Alchemia stands to receive around $40 million a year from fondaparinux sales from mid 2009.)

The main threat to the market is the recently approved Factor Xa inhibitor, Xarelto (**Bayer, Johnson & Johnson**) approved in Canada and Europe. Smith says this drug could end up selling over $6 billion a year. The impact for fondaparinux could be mixed, with fondaparinux also a Factor Xa inhibitor (indirectly). Fondaparinux is an injectable drug whereas Xarelto is an oral drug. However, injectables are preferred in the hospital setting, particularly after surgery when patients experience nausea.

Lovenox and Xarelto are priced similarly at US$30 a day, versus Arixtra at US$26 a day. Alchemia's fondaparinux could come it at a 20% discount at around US$21 without destroying the market, conforming to unwritten rules of engagement that govern the generics drug market.

Arixtra is still awaiting approval for use in the indication of Acute Coronary Syndrome. When it is received there may be significant and faster uptake for use in this indication compared with use as an anticoagulant in knee and hip surgery with cardiologists being early adopters unlike orthopaedic surgeons.

Alchemia will not start is oncology trial with HA-irinotecan until it can fund the trial, with Smith stressing you do not want to start a trial when you can't finish it. Smith indicated the company will be filing an amendment to its IND, to evaluate HA-irinotecan without Erbitux now in patients with metastatic colorectal cancer but who are not expected to respond to Erbitux. This will bring down the cost of the trial significantly.

Smith does not expect to conduct a capital rasing at current prices to fund the trial and is prepared to wait for revenue from its lead product sales which are due to start around mid 2009, if the FDA approves the first generic fondaparinux within 180 days, which is the aim of the FDA under the GIVE initiative.

Alchemia had $15 million in cash at mid-year with a market capitalisation of $29 million.

Chemgenex Pharmaceuticals – Omacetaxine on Track for 2010 Approval

The Chief Operating Officer at Chemgenex Pharmaceuticals, James Campbell, said he believes the company's lead drug candidate, omacetaxine, is on track to be approved in 2010 in the US. The company has no composition of matter patent over the compound, although it has secured protection with manufacturing patents, use patents, formulation patents and patents around new analogues.

The first indication will be for patients with chronic myeloid leukemia who become resistant to Gleevec (developed by **Novartis)** and hold a particular gene mutation (T315i). Patients with this particular mutation will generally die in 18 months according to Campbell (without the benefit of omacetaxine treatment).

Due to the increasing level of resistance to Gleevec, the US$30,000 cost of Gleevec per year often reaches US$50,000 because of increased doses needed to fight resistance.

Chemgenex has opted for the quickest path to market, selecting the above specific patient population. Patient numbers to gain approval might be as low as 40 (!) with no other therapy options to this patient group. This allows the company to conduct a single arm open study. Results to date have shown that by the third cycle of omacetaxine, 80% of patients in this group will generate a positive haematological response to the drug.

The company anticipates the data from its current trial will be out in May and the company will complete its filing for approval with the FDA in June/July next year.

With regards to any M&A activity, the company can not wait around and will launch into pre-commercialisation, having recently hired an ex-Novartis employee to attend path-to-market issues, including handling of reimbursement issues. Campbell said this all adds value to the company, which should it be acquired at some stage. According to Campbell, a small sales force of up to 10 people could sell the omacetaxine drug in the US, where 80% of the patients are treated in only 20 centres.

In terms of sales forecasts, Campbell suggested that Wilson HTM's analyst sales forecast of $67 million in 2012 for T315i-positive mutations and $65 million in 2012 for patients who have failed two tyrosine kinase inhibitor drugs to be good but a little conservative (total $132 million of sales in 2012).

ChemGenex holds estimated cash assets of $23 million.

Biota Holdings – Considering In-licensing Options

Biota's CEO Peter Cook stressed that the company's objective was to reward shareholders through asset growth, not through any dividend payments. The company is seeking to maintain cash neutrality from its operations and to manage risk by licensing early. The company is considering in-licensing options and has added to early stage programs, one being a non-nucleoside hepatitis C program and CMV (cytomegalovirus) program.

Relenza royalties are expected to generate between $15 - $50 million a year up to 2014. The best seasonal influenza season has just passed for makers of the flu drugs Tamiflu and Relenza, with sales of US$700 million being achieved. There is also a US$3 billion stockpile market. Relenza has a shelf life of five years. When a pandemic does hit, and Cook stressed there will be another flu pandemic, use of stockpiling will go first to emergency care staff, health care workers, schools and to undertakers.

Peplin – To Submit NDA by mid-2010

The gold standard in treating actinic keratosis (AK) lesions has been cryotherapy (liquid nitrogen), from which dermatologists have made good business. However, most lesions treated by cryotherapy come back within a year (72%) and healthcare payors are keen to see a more effective treatment.

The existing topical treatments take between 4 - 16 weeks of daily or twice daily applications which results in low levels of full compliance of treatment. And the efficacy results reported in clinical trials for these treatments are as a result not realistic in practice. The treatment also causes scaling, erythema and swelling over the treatment period for 4-16 weeks. By comparison, the Peplin alternative takes only two to three treatments.

Peplin anticipates completing both its Phase III trials for AKs on the head and the rest of the body in 2009. It should submit its NDA in mid-2010 which will see the drug on the market in 2011 if all goes well (only three years away).

One of the lead topical products on the market, Aldara, sells for US$756 per therapy (around A$1100 on the current exchange rate). Many dermatolgists have built their businesses around cryotherapy treatments, which are used in 75% of AK treatments. Topicals are used in 16% and topicals in combination with cryotherapy are used in the remaining procedures. However, the reimbursement rate for cryotherapy is falling by about 15% a year. The dermatologist is paid US$60 for the first treatment and then US$6 for each subsequent lesion treated. The use of combination treatment is growing within the field. The current market for topical treatments of AKs in the US is approximately US$200 million a year with 1.26 million topical treatments a year for AK in the US.

Peplin holds estimated cash assets of $87 million.

Acrux – Profits Expected in 2010

According to Acrux's CEO, Richard Treagus, the Acrux business is well funded and the company does not need to go back to the market ($34 million in cash at mid year). The company expects to be profitable in 2010. While the company's lead product, Evamist, a hormone replacement therapy transdermal spray product being marketed by **KV Pharmaceuticals** in the US, is doing well, the company's second product, a male testosterone lotion, was recently listed as one of the global top five most promising drugs entering Phase III studies by **Thomson Reuters.**

The global market for male testosterone drugs is now US$900 million ($1.3 billion) and growing at 20% a year. Acrux has added two additional doses (now four) in its Phase III trial to help ensure a clear outcome. The trial will involve 150 men with low testosterone levels with 30% of participants now recruited. Recruitment is expected to be completed by June next year with results out in Q3 2009.

Acrux is looking to grab 30% of the global market with its product, which will generate net margins of 60%, with between 40% - 50% flowing through to Acrux (by *Bioshares* estimates a net revenue to Acrux in excess of $160 million a year !).

In a survey of 136 doctors and specialists earlier this year, 91% of physicians rated the Acrux testosterone lotion as very good or excellent in improving patient experience over existing male testosterone gels. And 87% said they would offer the lotion to existing gel patients. Treagus said it is not good enough to approach potential licencees with trial results and market sizes, but that results from market surveys were very important when negotiating marketing deals. Receipts from the male testosterone lotion sales are expected to be received by Acrux in 2010.

Pharmaxis – Bronchitol filed with the TGA

Pharmaxis CEO Alan Robertson said the company's preclinical candidate PXS25 was looking "robust" as a treatment of lung fibrosis and with PXS4159 will both move into the clinic in the next year.

Bronchitol for the treatment of cystic fibrosis (and bronchiectasis) will be the only drug that will alter the treatment of CF if approved. The leading drug Pulmozyme, which generated sales of US$440 million and liquefies mucous, still requires physiotherapy to remove the mucous build up.

The company is anticipating a 30% take-up by CF patients in Europe in year one when the drug is released based on Pulmozyme penetration rates. There are around 30,000 people in Europe with CF. The drug will be on the market in Europe at the earliest in mid-2010.

Pharmaxis receives a call every day from patients asking when the treatment will be available, suggesting the rapid penetration rate is no overly optimistic.

Bronchitol has been filed with the TGA for approval in Australia for the treatment of bronchiectasis. The company has been well supported by the Australian government through IIF venture capital funding, over $10 million in R&D Start grants and the company is also a P3 grant recipient, suggesting it is in the Australian Government's interest to ensure the drug is made available to Australians as quickly as possible, if it meets regulatory requirements.

In Australia, the company can not ask for pricing coverage under the PBS until it is approved by the TGA. However, once the drug is approved, it cannot be given free to patients on a compassionate use basis, which is currently the case with 200 people, which may also encourage government departments get the drug onto the market in Australia sooner. Another point to note is that aboriginal children have the highest incidence of bronchiectasis in the world. In Australia there are 33,000 people suffering with bronchiectasis.

Pharmaxis held cash assets of $106 million at September 30, 2008.

Bioshares

Bioshares Model Portfolio (17 October 2008)

Company	Price (current)	Price added to portfolio	Date added
Hexima	$0.60	$0.60	October 2008
Atcor Medical	$0.10	$0.10	October 2008
CathRx	$0.70	$0.70	October 2008
Impedimed	$0.70	$0.70	Aug-08
Antisense Therapeutics	$0.05	$0.07	Aug-08
Mesoblast	$0.83	$1.25	Aug-08
Cellestis	$2.01	$2.27	April 2008
IDT	$1.80	$1.90	March 2008
Circadian Technologies	$0.69	$1.03	February 2008
Patrys	$0.17	$0.50	December 2007
Bionomics	$0.28	$0.42	December 2007
Cogstate	$0.16	$0.13	November 2007
Sirtex Medical	$2.26	$3.90	October 2007
Clinuvel Pharmaceuticals	$0.24	$0.66	September 2007
Starpharma Holdings	$0.25	$0.37	August 2007
Pharmaxis	$1.55	$3.15	August 2007
Universal Biosensors	$0.67	$1.23	June 2007
Biota Holdings	$0.43	$1.55	March 2007
Probiotec	$1.29	$1.12	February 2007
Peplin Inc	$0.36	$0.83	January 2007
Arana Therapeutics	$0.83	$1.31	October 2006
Chemgenex Pharma.	$0.60	$0.38	June 2006
Cytopia	$0.13	$0.46	June 2005
Acrux	$0.75	$0.83	November 2004
Alchemia	$0.20	$0.67	May 2004

Portfolio Changes – 17 Oct 2008

IN:

We have rebalanced the portfolio with three companies (Hexima, Atcor Medical and CathRx) that are in relatively stronger financial positions and have better access to funds than many others. While Atcor and CathRx may need to raise funds in the next 12 months, they are not likely to need to raise funds in the very short term.

OUT:

Due to the impact of distressed credit markets on equities markets and an outlook for difficult funding conditions ahead, we have removed Optiscan Imaging, NeuroDiscovery and Avexa.

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, Pharmaxis, Biotech Capital, Cytopia,Arana Therapeutics, Starpharma Holdings, Cogstate, Xceed Biotechnology, Optiscan Imaging, Bionomics, ChemGenex Pharmaceuticals, Circadian Technologies, Biota Holdings, Stem Cell Sciences, Halcygen Pharmaceuticals, Peplin, BioMD, Impedimed, QRxPharma, Patrys, Labtech Systems, Hexima, Proteome Systems

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:	$550	2-3 email addresses
	$750	4-5 email addresses
	$950	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 _____

_____

_____