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In this edition...
TB diagnostic company Cellestis has delivered sold half-year results and can continue to do so, given that it has penetrated less then 10% of the US market. A sales growth rate of 30% should be sustained.
LBT Innovations is living up to its name and is well and truly on the way to developing a second innovation for the microbiology lab, this time a digital imaging system to grade bacterial colonies on agar plates. Innovation is also on the 'to do' list at Avita Medical, which has plans to devise an automated instrument version of its ReCell spray-on skin kit. Anteo Diagnostics is patiently waiting on an evaluation program with an IVD player, that may incorporate Anteo's novel fixation chemistry in a diagnostic.
The Editors
Companies Covered: ADO, AVH, CST, LBT, PYC

	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 - May '10)	49.2%
Year 10 (May '10 - Current)	32.0%
Cumulative Gain	**283%**
Av Annual Gain (9 yrs)	**18.5%**

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Bioshares

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Edition 396

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

Cellestis – Delivering Sustained Growth

Cellestis (CST: $2.69) has delivered a solid first half result. Sales increased by 24% to $22.5 million, and profit before tax increased by 46% to $5.6 million, from the previous corresponding period. The profit after tax was $4.1 million, a growth of 30% although the PBT growth figure is the one to consider as it is not affected by tax credits. The company is now capitalised at $259 million.

The company currently does not provide unit sales of its latent tuberculosis test. According to CEO Tony Radford, overall sales increased by between 33%-34% in constant currency terms over the previous corresponding period.

Cellestis is now hitting the sweet spot, where more of the revenue, as a percentage, is moving through to net profits. In the first half of FY2008, the earnings before tax margin was 20.9%. In FY2009 first half, the EBT margin was 21.3%. This year that margin has increased to 25.2%, bearing in mind this is also a period where the Australian dollar has gained considerable strength. (In December 2009 the Australian dollar was buying only 0.5 Euro and today it is buying 0.74 Euro).

Stronger Second Half Year

The second half of the financial year has traditionally been a stronger period for the company, due to the northern hemisphere holiday season in the first half and the end of the financial year in Japan in March. Aggregating the data for calendar years, in 2010 the company generated sales of $44.7 million, and a profit before tax of $12 million. Based on the calendar year, the company is currently trading on a PE ratio of 31.

Accelerated Earnings

We expect strong sales growth to continue (in constant currency), in excess of 30%, and margins to continue to improve from economies of scale (EBT margin should approach 30% over the next two years). However, the Australian dollar has continued to strengthen in 2010, starting 2010 at around 90 cents against, dropping to 83 cents and currently trading at around parity with the US dollar, which will likely see actual sales growth at just under 30% if the currency remains steady from now.

Growing Employee Base

Cellestis now employs 84 people, which has doubled in the last three years. The company has 33 people in the US and 23 in Europe, as well as 25 in Australia and three in Asia. It uses a combination of direct sales forces (in the USA, Germany, the UK, France and Australia) and distributors under a commercial partner program in other regions throughout the world.

Still Untapped Market Potential

The addressable market in the US for the Cellestis TB tests is around 18 million tests a year, of which Cellestis has captured only about one million tests a year. A small portion of that market may not be realistic to attain but there is still a substantial market that the company can address over the next 10 years.

Cont'd on page 4

LBT Innovations – Innovation in the Microbiology Lab Continues

LBT Innovations (LBT: 6.7 cents) is seeking to address efficiency issues in clinical microbiology, to better help manage workloads in a sector that is expected to almost double in size between 2008-2018 in terms of number of microbiology tests conducted.

New APAS Program

LBT Innovations is now working on its second project, having successfully launched its first product through its marketing partner, **BioMerieux**, in 2008. That first product, being sold as the PREVI Isola, is a robotic streaking system for agar plates used in pathology centres to grow and detect bacterial infections from patient samples. The second product will be an automated (agar) plate assessment system, called APAS.

LBT conducted extensive market research work in the US and in Europe with pathology groups to gauge the market need for such a product. It found there was strong support for this concept, which will help in the continuing drive to deliver operational efficiencies in the pathology industry.

Digital Imaging

The new product will use digital imaging to grade the bacterial colonies present on the agar plates on several levels. Further details have not been disclosed. Currently hundreds of plates are assessed and graded daily in a pathology lab which is creating a bottleneck in the microbiology pathology lab.

LBT has built a number of prototypes to reach proof of concept with the project now ready to move into full development. The company is in a position to seek a partner to complete the development of the project, and that process is currently underway. Without government support, the company will only continue development if the project can be funded by a partner.

The APAS system will differ to the development of the PREVI Isola unit. It will be a physically smaller unit but a much more complex problem to solve using artificial intelligence. There will be no consumables with the APAS system, although users will likely pay for the instrument, software licences including updates, and potentially a fee per image.

The product is expected to sell for upwards of $100,00 where the PREVI Isola sells for around $200,000. The APAS system will require regulatory approval where the PREVI Isola did not. Managing Diector Lusia Guthrie is hopeful the new product could be on the market in 2013, with two years product development already having occurred. The PREVI Isola took four to five years to develop, so the APAS system should be similar.

Funds Received to Date

To date LBT has received $10.1 million in milestone payments from BioMerieux for development of the PREVI Isola (Microstreak) system. The company had $4.16 million in cash at the end of last year. It received minimum royalties from the PREVI Isola product of US$240,000 in 2009, which then increased to US$360,000 in 2010 (with US$180,000 outstanding), and the minimum royalty for 2011 has increased to US$600,000.

After this year, the minimum royalty will need to be renegotiated, as per the terms of the initial agreement. LBT's standard royalty entitlement (above the minimum) is calculated as a percentage of the applicator sales, which are consumables used in the streaking of each agar plate using the PREVI Isola system. For 2011, royalties from applicator sales are not expected to exceed the minimum royalty entitlement (US$600,000). It's likely LBT is seeking to negotiate a higher minimum royalty rate.

Slow Take-up

Take-up of the PREVI Isola units have been slower than anticipated due to the reduction in capital expenditure outlays by customers in the difficult recent economic conditions. Although the company will not say how many systems have been sold, the product has been sold into major regions around the world including Europe, USA, Japan, China, Korea, the Middle East and Australia. Guthrie believes that access to capital for pathology groups is loosening up with good levels of interest for the PREVi Isola system.

Partnering of the APAS program

It would appear that LBT does not want to spend its cash balance or raise further funds to commercialise the APAS system on its own, so it is looking to partner earlier rather than later, with a partnering target date set down for the end of June this year. It is understandable that the shareholders who invested in LBT for the commercialization of the PREVI Isola system want to begin realizing some of the gains made and to be made. BioMerieux would once again be one of the company's LBT would consider partnering with.

Dividend Payments

The company is investigating whether a dividend might be suitable next year, based on growth in applicator sales and any newly negotiated minimum royalties from the PREVI Isola system, paying dividends from 'sustainable profits'.

As the number of installed PREVI Isola systems increases, the applicator sales from each agar plate streak will be compounded bringing in an escalating recurring royalty stream to LBT. However, valuing LBT remains difficult without details on the installed base of PREVI Isola systems and applicator sales.

A New Gold Standard

The processes used in clinical microbiology are mainly manual and prone to errors and delays according to BioMerieux. BioMerieux says the PREVI Isola is a true breakthrough, providing better bacteria isolation, no-cross contamination, standardized plate inoculation and robotic throughput of 180 plates an hour, reducing staffing requirements. Guthrie says BioMerieux is absolutely fully committed to the PREVi Isola and she is sensing some real optimism now around the product. Guthrie says LBT has invented something that will become the new gold standard.

While it may take a while for pathology groups to change their practises and widely adopt the PREVI Isola system, the tipping

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Contributed Discussion

FDA Approves First Smart Phone App

by Peter Lewis

On the 9th of February, the FDA approved the first diagnostic radiology application for mobile devices. The app concerned is designed for the Apple iPhone or iPad and allows specialists to view medical images and make medical diagnoses based on CT, MRI and PET scans delivered to the device. The beauty of the system is that the specialist can be anywhere and still receive the images to make a diagnosis.

I heard about this app mid last year when it was announced that a couple of US radiologists who also happened to be iPhone programming nerds decided to design their own app to view images and subsequently lobbied the FDA for approval; a case of 'designed by radiologists for radiologists'. Subsequently Johns Hopkins University scientists rallied around the app when a study they completed showed 99% accurate diagnosis of acute appendicitis in 25 patients with only 1 false negative.

If I were a developer or manufacturer of medical diagnostic devices I would start to get worried by this recent FDA action. Here's why. Five different drivers are combining to create a vibrant and swiftly growing wireless health sector. These are:

- New and increasingly powerful portable devices
- Faster and more ubiquitous connectivity & communication networks
- Escalating consumer interest
- Increasing use of advanced IT by Doctors
- Rising health care costs

Portable Devices

"Smartphones are incredibly powerful devices capable of saving lives, saving money, and improving healthcare in a dramatic fashion, and we carry these massively powerful computers in our pockets." said Dr. Peter Bentley, the inventor of iStethoscope app, which has been downloaded by more than three million people.

Sophisticated smart phones like the iPhone and the various Android models provide more computing power in the palm of your hand than many expensive diagnostic machines in specialists' rooms.

With the built-in ability to connect traditional sensors to the iPhone, this 'computer in your pocket' is not only considerably less expensive to purchase by a doctor, it is also a lot easier, faster and cheaper to develop programs for than the traditional big footprint diagnostic machine.

Apple apparently sells a new iPad every 2.3 seconds and has now sold more than 15m of the devices globally. iPhone sales are well in excess of 200m worldwide. Add those sales to the Android based smart phones, which are now outselling the iPhone in the US and the many other smartphone variations (such as Samsung and high end Nokias), and its clear that smartphones are becoming common if not already ubiquitous in Australia and many other advanced nations.

Connectivity and Communication

Apple iPhones and their various competitors all come with a variety of standard data communication methods or 'protocols' built in. These protocols such as Bluetooth, Wifi and RS232 provide the ability to plug or wirelessly connect a wide variety of standard diagnostic sensors without undue engineering.

My company Hydrix, for example, is currently working on a foetal ultrasound monitor that connects wirelessly to the iPhone to display and record a foetus' heartbeat. The app will also provide for the transmission of the recorded heartbeat to the woman's mother or friends to share. This system is not approved for diagnostic purposes yet (as the recorded heartbeat could just as easily be sent to a obstetrician to listen to and analyse), but of course such approvals are likely to start to be sought from regulators including the TGA given the FDA's recent decision around the radiology app.

Common communication systems such as Cellular, Wifi, WiMax and the upcoming NBN in Australia provide close to complete connectivity across all cities and urban centres in Australia. And looking globally, most western nations being smaller in land area than Australia already have complete coverage.

As such, the ability to get diagnostic or other data from the patient to a doctor, wherever he or she may be, has become very easy.

Escalating Consumer Interest

A recent report suggested there were more than 250,000 apps available for sale on the Apple iStore and of these, some 7000 are health and wellness applications (http://bit.ly/a1O2ct) and growing at nearly 100% year on year. Add these to the other 1000 apps available or so on Google and Blackberry app stores and it's clear that there is keen consumer interest in the health area. It also means that consumers aren't afraid of using smart phones to assist with their healthcare.

The US wireless industry association recently conducted a wireless health survey and found that 78% of respondents were interested in mobile health solutions. Forty percent said mobile health would supplement the medical care they receive from their doctor and 23% believe mobile health services could replace doctor visits altogether.

PriceWaterhouseCoopers found 73% of US consumers would use biometric electronic remote monitoring services to track their chronic condition or vital signs.

Increasing use of advanced IT by Doctors

Historically health care has tended to lag other sectors in terms of technology adoption (ie paper based medical records, pagers etc), but recent signs point to a sea change in this lag and a number of changes that will accelerate wireless health. Many facilities now use wifi to support initiatives such a IP telephony, data connectiv-

– Cont'd over

FDA iPhone – from previous page

ity etc and according to Manhattan Research of the US, 99% of physicians use the internet in their practices and more than 80% of nurses direct patients to health-related websites.

Shortly after the announcement of the launch of iPad, the popular US medical application developer Epocrates did a survey of its users and found that one in five users said they planned to buy the device once it became available. This amounts to 20% of its mostly health professional user base.

The iPad's not ready for use in hospitals say nay sayers but as MobiHealthNews points out it will become increasingly popular as medical grade accessories come out. "…The iPad's not ruggedized? Don't worry, there will be a ruggedized case for the device. The iPad's not really sanitizable? They'll make a case for that, too, or just keep it in a plastic bag like surgeons in Japan did recently. The iPad is missing a camera? Well, it has Bluetooth so attach one that way…"

Rising Health Care Costs

According to the OECD, Australia spent a round 8.5% of GDP on health care in 2009. This figure was about average for Western Nations except for the US which spent a whopping 17% of GDP on healthcare according to the US Dept of Health Services, amounting to around USD$2.5Tn (that's trillion) in the same year (interestingly despite this spend, the US population has a lower life expectancy than Australia).

And according to Cambridge Consultants, 75% of US healthcare providers, patients, payers and technology enablers believe that connected health preventative services could cut healthcare expenses by 40%.

The use of wireless and smart phone-based health diagnostics will allow services to be provided in lower cost locations like a doctors surgery rather than a hospital, or even the patient's home rather than in a surgery. It's clear that the US government along with private insurance and other health providers have a keen interest in bringing down the cost of healthcare. And as we all know, where the US treads, Australia tends to follow.

So What Does This Mean to My Business ?

Businesses need to analyse which of their products or services could be delivered on a smart phone.

If it can be delivered on a smart phone then its only a matter of time before it will be offered on a smartphone. Consider starting a smart phone based R&D program sooner rather than later

Smartphones provide an established and robust technology platform for developers. This means that development times are significantly reduced compared to normal custom product development cycles. And chances are your competition may already be working on a smartphone-based offering to your own device. Wouldn't you rather be first to market?

Smartphones are cheap to buy and easy to use and upgrade compared to often complex custom diagnostic equipment. Ask yourself, which device would a doctor or nurse rather use? The FDA has opened the flood gates to approval of smart phone applications and it's only going to get bigger and faster.

To be approved by the FDA for diagnostic use a device needs to comply with a series of exacting design, development and manufacturing standards to different extents (for those who are interested: ISO13485, IEC60601, IEC62304 and ISO14971 are the most common). Approval of the iPhone means that it is already probably meeting many of these standards which therefore suggests that iPhone-based applications are likely to have a reduced regulatory overhead for your development team compared to custom devices. And its likely that Android phones won't be far behind.

About the author:
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– Cellestis...from page 1

In Europe the addressable market is much smaller at around 2.5 million tests a year and the company has secured around 400,000 tests a year in that market. One of the target areas in Europe will be in people taking arthritis anti-TNF drugs such as Remicade and Humira, with those people more susceptible to TB infection due to a lowered immunity as result of the drug therapy.

At the moment the US market contributes to 45% of sales. Radford expects US sales to contribute to a greater portion of total sales going forward. The company has recently introduced new operating systems to prepare for increased turnover in the business.

Financials

The company finished last year with $22.3 million in cash. It will pay a 2 cent per share interim dividend (up from the 1.5 cents final dividend payment), with the record date being 25 February. The company's current tax rate is 27%, however tax losses have been exhausted and the tax rate will move up to 30%-31% in the next 18 months.

Summary

Cellestis has become a well established global business with continued strong growth expectations. This stock has often been expensive, trading largely between $2-$4 for the last seven years, aside from a brief dip down to $1.50 during the GFC. The stock is now offering a good, long term investment prospect at current prices.

Bioshares recommendation: **Buy**

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Anteo Diagnostics Waits on Validating Deal

Anteo Diagnostics (ADO: 7.3 cents) is commercialising a chemistry-based technology that has the potential to significantly increase the performance of, or reduce the cost of, immunoassays used in diagnostics and medical research. An immunoassay measures biological activity according to the presence of antigens, which are detected through their binding with an antibody fixed to a detection plate or surface.

Immunoassays bind antibodies in a solid phase to the surface of a detection plate or bead. Conventional covalent binding results in roughly 20% of antibodies being oriented the correct way that achieves functionality.

Anteo Diagnostics has a developed a technology, called Mix&Go, that specifically binds the 'leg' of the antibody, improving the use of the antibody to 80%. The binding approach used in Mix&Go is called, in chemical terms, a chelation.

The benefit of Mix&Go is that it can improve sensitivity, or if sensitivity is sufficient than it can reduce the cost of the test since less antibody is required. Mix&Go can deliver from 10% to 70% improvement in sensitivity.

History

Anteo Diagnostics was formerly known as Bio-Layer Corporation, which listed through the shell of the defunct SSH Medical in 2006. For a time the company's business model was to develop and sell bio-markers which incorporated the company's core technology. However, the bio-marker discovery model demands high throughput and high volume of bio-marker candidates in order to yield successful products. Consequently, reasonably significant amounts of capital are required to support such efforts.

The appointment of Dr Geoff Cumming as CEO in April 2009 resulted in a re-working of the business model, moving away from the bio-marker model to an 'Intel inside' model. Cumming perceived that the technology was scalable with the potential to be taken up by many groups across a number of application areas.

So far technology has been put in front of 55 groups (some within the same company), including most of the top 20 the life sciences bead manufacturers as well as purification and separation players. Cummings' other management challenge has been to inject more rigor into the company's scientific engine to ensure that Mix&Go offers reliability and replicability in the hands of customers.

Current Commercial Arrangements

Anteo Diagnostics has to date executed two agreements to supply Mix&Go. At the beginning of 2010, Anteo Diagnostics signed the number four ranked bead manufacturer, Bangs Laboratories, for Bangs to use Mix&Go in various products, and for which Anteo receives a double digit royalty.

Its second agreement is with Merck Chimie SAS, which is a unit of the Merck KGaA Group. Anteo supplies Merck Chimie with Mix&Go activated beads that are used in separations and purifications.

Bangs will launch a new product soon, but deals of the type initiated with Bangs and Merck will not generate significant revenues, according to Cummings.

However, Anteo has a much stronger interest in pursuing opportunities directly in the *in vitro* diagnostics (IVD) market. Immunoassays account for US$7.7 billion in the $37 billion IVD market.

Cummings' focus is on signing up an IVD company to incorporate Mix&Go in a test. Anteo is currently dealing with many of the Top 20 IVD companies. One of these Top 20 IVD companies is evaluating Mix&Go for a particular test which has 10% false negatives. The object of the evaluation is to reduce the rate of false negatives. The test generates sales of $200 million in Europe alone. Anteo is looking at a supply agreement with the prospective partner, aiming to have the product on the market by Q1 2012. However, this particular company has been running behind schedule in its evaluation of the Mix&Go technology. In the case of the evaluation being successful, Anteo would sell Mix&Go to the IVD company, but an R&D deal which expands the relationship between the two companies could be possible.

The test being evaluated is one component in a six-test panel. If successful, there are five other tests in the panel to which Mix&Go could potentially be applied.

ADO believes it can be cash flow positive from having this one company adopt Mix&Go for this one test.

Summary

Anteo Diagnostics is on the verge of making stronger progress in 2011, with a key validating deal expected in the near term. Anteo's cash burn is $2.5 million year, however it hopes to be cash flow positive by the end of CY2011, or have contracts in place to support that position. The company employs 15 people. Other milestones for the year ahead include securing three more commercial transactions including an agreement with an IVD company.

Anteo Diagnostics is capitalised at $54 million. As of December 31, 2010 the company held cash of $1.6 million but has since received $930,000 through the exercise of options.

Bioshares recommendation: **Speculative Hold Class B**

Bioshares

Avita Medical Plans New ReCell System

Avita Medical (AVH: 13 cents) markets Recell, a skin regeneration kit which can be used to treat burns, as well as for plastic and reconstructive surgery. The company also sells spacer products used in asthma ventilation devices.

Recell has received approval for use in many countries around the world. A major exception is the US, where the company is currently conducting a US Defense Department funded clinical study, with another pending.

The Recell system requires medical personnel to harvest a patient's own skin cells, which are then processed (grown) in kit. After a 30 minute wait a solution with a sufficient quantity of skin cells can be sprayed onto the wound or burn area. Each kit can be used treat roughly 320 cm^2 of skin or approximately 2% of total body surface area.

An advantage of the product is that processing and culturing of the harvested skin cells is relatively short and can be done on site.

However, one issue that has emerged is that it takes several kits to treat burns with a larger surface area. Since each kit sells for approximately €1250, and the use of additional kits raises the cost of treatment.

New System

To address this problem Avita Medical is developing a system that will automate a number of the manual steps in Recell kit, to increase the production capacity and align production with intended treatment area.

The instrument will include enzymes, buffers and filters for the culturing of cells, as a well as a cell-counting component. The machine will culture cells while surgeons prepare and clean the wounds. The development of an instrument based system that will reside in the operating theatre represents a substantial evolution of the Recell business model, moving from a 'sale of kit' model to a capital equipment and consumables model. Avita will require additional capital to achieve this objective.

The development of an automated system should address a fundamental problem the company has encountered in the commercial roll out of ReCell, which is high degree of variability of results achieved by customers. The source of variability has been identified with a separation and scraping step, with additional difficulty found with the biopsy step. An automated system will help deliver consistency to results.

Sales and Marketing

Avita Medical sells direct in selected territories, but also has distributors in place in some countries.

The company has been focusing on developing and supporting a select group of key opinion leaders (KOLs) in the UK, France and Germany. These are designated as centres of excellence because consistently good results are obtained. There are between 14-20 surgeons using ReCell on a regular basis.

Clinical Trials

Avita Medical has received funding from the US Department of Defense (DoD) to conduct two clinical trials, receiving US$2 million for each trial.

The first trial in burns patients (called the AFIRM study), although underway was delayed while the company sought approval to conduct the trial from a separate clinical trials authority within the DoD. The trial protocol was also subject to scrutiny by the FDA, which had questions (now addressed) regarding treatment, follow-up, the collection, processing and storage of data and online analysis.

To date twenty patients have been enrolled, from a trial that is structured to enrol 106, but requires 92 subjects to address statistical outcomes. Avita may be in a position to receive interim data at once 50 patients have completed the trial.

The trial will compare ReCell for the treatment of burns to current standard of care skin grafts. Endpoints include time to healing, incidence of infections, graft loss and experience of pain. However, Avita must also show superiority at two weeks to the donor site. Then at the recipient site, the endpoint is non-inferiority, comparing Recell healing of the wound site at 16 weeks versus the graft site.

The trial is scheduled to see final data made available by April 2012 to be followed by submission to the FDA by mid-2012

Avita intends to submit an IDE for a second study for Recell used to treat scars. This trial may be completed before the first trial ends, with the evaluation period measuring healing at day 10 post treatment.

Financial Performance

Avita Medical recorded sales of $3.9 million in FY2010 ($3.3 million FY2009). The company's net loss in FY2010 was -$5.9 million (FY2009 -$5.2 million).

For the half year ended December 31, 2010, Avita recorded receipts on a cash basis of $1.4 million and a net cash outflow of $1.3 million.

Summary

Avita Medical is demonstrating a welcome maturity in spelling out plans to develop a next generation ReCell system that can address several limiting aspects of the product. The company now has a small but valuable user base with which to build support for product sales, which remain at modest levels.

The development of an automated ReCell system has the potential to position the company to capture value that has been locked up in the ReCell technology. Although funding challenges remain, the company now offers much more clarity about its future.

Avita Medical is capitalised at $15 million. It held cash of $2.9 million at the end of last year although US$0.7 million was raised in January.

Bioshares recommendation: **Speculative Buy Class B**

Bioshares Model Portfolio (18 February 2011)

Company	Price (current)	Price added to portfolio	Date added
Somnomed	$1.06	$0.94	January 2011
Phylogica	$0.077	$0.053	September 2010
Sunshine Heart	$0.037	$0.036	June 2010
Biota Holdings	$1.13	$1.09	May 2010
Tissue Therapies	$0.59	$0.21	January 2010
QRxPharma	$1.33	$0.25	December 2008
Hexima	$0.37	$0.60	October 2008
Atcor Medical	$0.10	$0.10	October 2008
Impedimed	$0.82	$0.70	August 2008
Patrys	$0.09	$0.50	December 2007
Bionomics	$0.39	$0.42	December 2007
Cogstate	$0.23	$0.13	November 2007
Sirtex Medical	$5.63	$3.90	October 2007
Clinuvel Pharmaceuticals	$2.25	$6.60	September 2007
Starpharma Holdings	$1.10	$0.37	August 2007
Pharmaxis	$2.61	$3.15	August 2007
Universal Biosensors	$1.34	$1.23	June 2007
Acrux	$3.50	$0.83	November 2004
Alchemia	$0.70	$0.67	May 2004

Portfolio Changes – 18 February 2011

IN:
No changes

OUT:
No changes

Phylogica Successfully Completes Collaboration with Roche

Phylogica (PYC: 7.7 cents) has successfully completed its first of three recently signed big pharma collaborations, with **Roche**. The aim of this collaboration was to see if Phylogica's peptides could drag other drugs into cells. That has now been shown and Phylogica will receive a second payment as per its initial agreement.

The two companies are now in negotiations to expand the collaboration to look at extending the work to see if the technology can move the drugs through cells completely, to pass through the blood-brain barrier. Whether it's a new collaboration or an extension of the previous collaboration and the payment terms will need to be negotiated. Either way a continuing relationship with Roche will validate the potential of the Phylogica technology.

Bioshares recommendation: **Speculative Buy Class B**

Bioshares

– LBT Innovations cont'd

point should be very clear once first signs appear. In the meantime the company is well into the development of its second of what the company hopes will be a series of automation advances for the pathology industry.

LBT is capitalised at $7 million with $4.1 million in cash at the end of last year.

Bioshares recommendation: **Speculative Buy Class A**
(Suits longer term investors)

Bioshares

Clarification

In our tabulation of cash positions reported by 4B reporting Companies in Bioshares 394, we stated that Prima Biomed's cash balance at December 31, 2010 was $4.4 million. In fact, the company retained cash of $14.4 million, with $10 million held in term deposits. This means that Prima Biomed's revised Survival Index measure was 1.5 .

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. For both groups, the rating "**Take Profits**" means that investors may re-weight their holding by selling between 25%-75% of a stock.

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, Starpharma Holdings, Cogstate, Bionomics, ChemGenex Pharmaceuticals, Circadian Technologies, Biota Holdings, Halcygen Pharmaceuticals, Impedimed, QRxPharma, Patrys, LBT Innovations, Hexima, Mesoblast, Atcor Medical, BioMD, Tissue Therapies, Viralytics, Phosphagenics, Immuron, Phylogica, Bluechiip