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Bioshares

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

Companies covered: UCM, Dimerix Bioscience IPO Profile

	Bioshares Portfolio
Year 1 (May '01 - May '02)	21.2%
Year 2 (May '02 - May '03)	-9.4%
Year 3 (May '03 - May '04)	70.6%
Year 4 (May '04 - May '05)	-16.3%
Year 5 (May '05 - May '06)	77.8%
Year 6 (May '06 - May '07)	17.4%
Year 7 (May '07 - May '08)	-36%
Year 8 (May '08 - May '09)	-7.4%
Year 9 (May '09 - May '10)	50.2%
Year 10 (May '10 - May'11)	45.4%
Year 11 (May '11 - May '12)	-18.0%
Year 12 (May '12 - May '13)	3.1%
Year 13 (May '13 - May '14)	26.6%
Year 14 (May '14 -)	0.0%
Cumulative Gain	**350%**
Av. Annual gain (14 yrs)	**16.1%**

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Dimerix Bioscience IPO Profile

Dimerix Bioscience is seeking to raise through an IPO, between $7 million and $9 million from the issue of between 35 million and 45 million shares at 20 cents each. Up to 15 million free attaching options on the basis of every three shares subscribed for is included in the offer.

The indicative capitalisation of the company, assuming the maximum capital is raised, is $25 million.

The offer is being managed by Peloton Capital and is not underwritten.

History and Board

Dimerix Bioscience was founded in 2004. The company's management is distributed between Perth and Melbourne and operates research facilities in Perth.

The board of the company comprises Dr James Williams (Executive Chair), Dr Sonia Poli (Managing Director), with Dr David Fuller, Dr Mark Ashton and Mr David Franklyn serving as non-executive directors. Sonia Poli was appointed to the CEO role in June 2014 and will be relocating from Switzerland to Melbourne in January 2015.

Core Technology – Receptor Heteromer Investigation Technology (HIT)

The company's foundation technology is a screening assay, termed Receptor-Heteromer Investigation Technology (HIT). A benefit of this assay is that it enables the identification of pairs of receptors that function in a joint manner (interact) when ligands, such as small molecule drugs or peptides or antibodies, bind to them.

The company has supplied this assay technology on a fee for service basis to a number of pharmaceutical firms, including the Japanese drug company Takeda.

It has also used the assay technology to create an internal drug development program centered on the development of DMX-200, initially for the treatment of a subset of patients with chronic kidney disease. DMX-200 combines two existing drugs, irbesartan and propagermanium.

Irbesartan is an angiotensin II type I receptor blocker. This now off-patent drug is indicated for the treatment of hypertension and nephropathy in Type II diabetic patients.

Propagermanium (PPG) is a chemokine receptor (CCR2) blocker, which has been used for the treatment for Hepatitis B, principally in Japan where it is known as Serocion (Sanwa Kagaku Kenyusho).

The goal of blocking chemokine receptors is to stop the migration of a protein, MCP-1 (monocyte chemotactic protein 1). This an inflammatory response protein which triggers the activation of monocytes which differentiate into macrophage cells.

Cont'd over

Macrophages remove dead or dying cells or debris. However, in the case of an inflammatory response that remains active (switched on), macrophage activity can result in the destruction of the cells of normal healthy tissue.

Functional Interaction

These two drugs have been found to functionally interact. It is the company's belief that 'the simultaneous blockade of both receptors with existing drugs may be more effective than either drug alone in controlling the activity of the receptors'.

In a pre-clinical study in a rat model of chronic kidney disease, Dimerix found that the combination of PPG and irbesartan delivered a statistically significant greater reduction in proteinurea than either of the two compounds administered separately for separate treatment, where the dose of PPG was 30mg/kg. However, it was also found that at a dose of 100mg/kg of PPG, the PPG/irbesartan dose was not significantly different from the separate administration of irbesartan.

Phase II Trial of DMX200

Dimerix intends to conduct a Phase II trial of DMX200 in 60 patients who are currently receiving the angiotensin receptor blocker, irbesartan. The trial will consist of two parts, with the first part evaluating five increasing doses of PPG. The second part of the trial will evaluate the best dose as determined from the first part of the study.

The primary goal of the study will be to assess the safety of PPG when added to irbesarten treatment, followed by the secondary objectives of the pharmacokinetic effects of PPG, including in patients with proteinurea.

Chemocentryx – Interim Phase II Results

Important validation for the Dimerix development of DM200 has come from the release of interim results for Chemocentryx's CCX140, which is part way through a 52 week Phase II trial.

CCX140 targets the chemokine receptor, CCR2, (as does propagermanium).

In September 2013, the Chemocentryx released data relating to the first 12 weeks of treatment with CCX140 in patients with diabetic nephropathy, but who have also been receiving angiotensin pathway inhibitors (e.g. irbesarten).

At 12 weeks, patients on a 5mg dose of CCX140 recorded a statistically significant drop in UACRR (urinary albumin creatinine ratio) of 21%, the 10mg group recorded a 12% decrease and the placebo arm a 2% increase.

In a pre-specified group of patients that entered the trial with UACR of greater than 800mg/gm and an estimated glomerular filtration rate (eGFR) of greater than 60 ml/min/m2, the results were as follows: the 5mg group showed a 27% decrease in UACR, the 10mg group a 33% decrease and the placebo group a 2% increase.

The eGFR is measure of renal (kidney) function and describes the rate of flow of fluid that is filtered by the kidneys. Normal kidney function is classified by an eGFR > 90ml/min/1.73m2 and no appearance of protein in the urine (proteinuria).

Interim Results - Chemocentryx Phase II Trial - CCX140

Change in Urinary Albumin Creatine Ratio (UACR)

	2 weeks	12 weeks	
			Subset*
n	332	208	?
5mg once daily	-12%	-21%	-27%
10mg once daily	-8%	-12%	-33%
Placebo	1%	-9%	2%

*Subset: Baseline UACR>800 mg/gm; eGFR >60 ml/min/ m^2
eGFR = Estimated glomerular filtration rate
(Entry criteria was for eGFR >= 25 mL/min/1.73 $m^{2)}$

The preselected sub-group from the Chemocentryx Phase II trial is representative of patients with Stage I or Stage II chronic kidney disease.

Although the full trial results are expected in 2014 Q4, the interim results, especially in the preselected sub-set of patients, suggest that targeting CCR2 is beneficial for patients with chronic kidney disease.

The Chemocentryx interim Phase II data would appear to validate Dimerix's DMX200, which includes the CCR2 blocker propagermanium. However, the expectation for Dimerix's own Phase II trial would be that DMX200 could outperform Chemocentryx's CCX140 because of the functional interaction that takes place when they are administered jointly.

Patents and IP

Dimerix has a family of three patents: 'Detection Systems and Uses Therefor', which has been granted in many jurisdictions and which expires in 2027; 'Combination Therapy', which has not been granted in any jurisdiction, but if granted would expire in 2032; and 'Novel Receptor Hetero-Dimers/-Oligomers' which has not been granted in an jurisdiction, but if granted would expire in 2030.

The patent 'Combination Therapy' seeks to protect the company's therapies which combine blockers of chemokine receptors (not merely CCR2) with angiotensin pathway blockers to treat a range of ailments and conditions, not just chronic kidney disease.

Risks

One risk for potential investors to keep in mind with the Dimerix investment proposition is that the company's IP position rests on one patent that has not been granted in any jurisdiction. The examination process may result in various claims made by the inventors being struck out. There is also the risk that the patent could be challenged by a pharmaceutical company that believes that the patent infringes their own IP.

Cont'd on page 4

Uscom's Flagship Product Builds Global Presence

Uscom (UCM: $0.25) has now sold more than 650 of is cardiac output monitors globally that has generated more than $11 million in revenue. The company's core technology has been covered in more than 350 peer-reviewed medical journals and is becoming the standard of care according to some physicians who have adopted the product. Is the technology approaching a point that may see accelerated adoption?

Uscom specialises in manufacturing and selling monitors used in the cardiovascular setting. Its first product is the USCOM 1A, that uses ultrasound technology to non-invasively measure cardiac output. Last year the company acquired the Pulsecore technology that allows it to measure central blood pressure (which the Atcor Medical Sphygmocor product also measures). That product has been re-badged the Uscom BP+ and manufacturing of the product is expected to start this month in Sydney.

New Distribution Deals

Over the last year, Uscom has been busy signing new distribution deals for its products. For the USCOM IA cardiac output monitor, it has singed on new distributors in the UK, Germany, Italy, Netherlands, China, Mexico, the USA (two distributors), and a new distributor for Scandinavia (Sweden and Norway).

Last month the company appointed three distributors for the UK to sell its Uscom BP+ device. The device will also be sold by its Chinese and Italian distributors into those respective markets.

Some of the new distribution deals have been signed on more favourable terms with some set sales targets based on best endeavours. The German distribution deal has set a sales target of $2.7 million over three years for the USCOM 1A cardiac output monitor. The UK distribution deal (with Deltex) for the same product has a revenue target of $582,000 in the first year and $2.35 million over three years. And the Chinese distribution deal for both of the company's products has a revenue target of $6.6 million over five years.

The company now has 28 distribution agreements in place.

Set Up for Year Ahead

Uscom's Executive Chairman, Rob Phillips, said the company is now well set up for the year ahead. Last year the company acquired the Pulsecor central blood pressure device, BP+. That product has been independently reviewed as having the highest clinical applicability of all central blood pressure monitors on the market.

Uscom has been selling existing units it had received as part of the asset acquisition. In-house manufacturing of that product is due to commence this month with the first run of around 180 devices. European approval was received in February this year, with US approval already in place. Three distributors were appointed for the UK in May with the company seeking to appoint US distributors.

In January this year Uscom signed on Deltex as a distributor for USCOM 1A. Deltex has a device that measures cardiac output during surgery with a sensor that is placed into the throat. Uscom will also market the Deltex product. Deltex, based in the UK, sells into the European and US markets. Deltex has already sold several of the Uscom monitors. Uscom sells the products to its distributors for around US$15,000 each.

Strong Benefits From Using the Uscom Cardiac Monitor

With over 350 publications and presentations featuring the Uscom 1A cardiac output monitor, the evidence continues to build around the benefit of cardiac output monitoring, in a non-invasive procedure using the Uscom instrument. Phillips believes patients should have their cardiac output measured before surgery and optimised with IV fluids or medication. This would significantly decrease mortality from surgery said Phillips.

One of Uscom's largest shareholders, Dr Steve Woodford, is an anaesthetist who uses the Uscom technology in all of his surgeries. Woodford is quoted as saying that there should be an USCOM on every intensive care bed and used with every anaesthetic patient.

Another quote the company uses in its presentations is from Dr Akash Deep, Director of Pediatric ICU at the king's College Hospital in London. He says ‘USCOM has now been established as the standard of care.

In January last year, the Bathurst protocol which incorporated the Uscom cardiac output monitor at Bathurst Base Hospital showed that deaths from sepsis could be reduced by 94% (to 5.6% of patients) and renal failure was reduced from 74% of cases to 14%.

Phillips said the USCOM 1A is the state-of-the-art technology for pre-eclampsia in pregnant women and can reduce fetal mortality. Phillips says this product is saving kids lives every day, in countries including Kuwait, Russia and England, and it is now being accepted as part of clinical practice. The pulmonary artery catheter used to be the gold standard says Phillips but it doesn't work, with no evidence of clinical effectiveness.

Financials

Uscom generated sales last year of $578,000, which was down 27% on the previous year. However receipts from customers in the March quarter was stronger, at $239,000, up 157% over the previous corresponding period (pcp), and we estimate strong sales growth over the full year, albeit still off a low base. Receipts from customers were $566,000 for the first nine months of this financial year, up from $515,000 over the pcp.

The company has recorded a net cash outflow of just under $1.2 million for the first nine months of this financial year, and has an estimated $1.8 million in cash after raising $1.4 million in May at 24 cents a share through a placement.

– Cont'd over

Bioshares Model Portfolio (13 June 2014)

Company	Price (current)	Price added to portfolio	Date added
pSivida	$4.150	$4.000	May 14
Invion	$0.068	$0.089	February 14
Impedimed	$0.185	$0.245	December 13
Analytica	$0.046	$0.025	December 13
Imugene	$0.013	$0.022	November 13
Oncosil Medical	$0.115	$0.155	September 13
IDT Australia	$0.230	$0.260	August 13
Viralytics	$0.275	$0.300	August 13
Tissue Therapies	$0.295	$0.255	March 2013
Somnomed	$1.48	$0.94	January 2011
Cogstate	$0.255	$0.13	November 2007

Portfolio Changes – 13 June 2014

IN:
No changes

OUT:

No changes

Recommendations:

– Dimerix cont'd

Dimerix intends to file additional patents covering delivery and formulation of DMX200 and the follow-up compound DMX250.

Competition for DMX200 exists with Questcor's Acthar gel, an injectable steroid which has been re-positioned to treat proteinurea in nephrotic syndrome. Dimerix estimates that Questcor made sales of ~$250 million from treating nephrotic syndrome in 2012.

In addition to Chemocentryx's CCX140, that company is developing CCX872 as a follow-up compound. CCX872 has completed one Phase I trial and is part-way through a second Phase I trial. Chemocentryx may develop this compound for indications outside of chronic kidney disease, such as acute kidney injury, post myocardial infarction reperfusion injury, vascular endothelial injury and hepatosteatosis.

Investment Points

There are several features of the Dimerix business which offer appeal to biotech investors.

The first is that the company is working with existing drugs with known properties, although some additional safety data on PPG needs to be established. A consequence is that significant risk and cost associated with new molecular entities is eliminated.

The chronic kidney disease market is large and growing, which in turn produces increases in sub-market disease indications such as focal segmental glomerulosclerosis and membranous nephropathy, two patient groups being addressed by Dimerix. The attraction of large pharmaceutical companies to smaller or niche drug opportunities was illustrated recently with Shire Pharmaceutical's purchase of local biotech Fibrotech for an upfront of $70 million and of Lumena for US$260 million.

Dimerix will conduct its Phase II trial under the TGA's CTN scheme. This will allow the company to more cheaply and quickly establish proof-of-concept data with which to build an IND-backed clinical program in the USA at a later stage. It may also be, if the data is compelling enough, sufficient to attract a pharmaceutical company to acquire the firm.

The company's Executive Chairman, James Williams, has had success in building and selling a drug technology business, having sold UWA spin-out Iceutica to Iroko Pharmaceuticals for a 10X return for first round investors.

One less appealing feature of the Dimerix investment proposition is that the Phase II trial will take up to a maximum of 36 months to complete, with initial data available at 24 months. If more sites are added to the trial, the trial could be completed at an earlier point in time.

Key Dates

Offer opens: 10 June 2014
Offer closes: 8 July 2014
Date of listing: 28 July 2014

A copy of the prospectus can be found at http://dimerix.com/investors

Bioshares

– Uscom cont'd

Summary

Phillips says the company has a technology that can potentially revolutionise the way cardiovascular medicine is practised and believes they are on the cusp of drastic change in terms of product adoption (of the USCOM 1A).

While the company will need to manage its financial position carefully, the company is well placed to be commercializing two cardiac monitoring products, with new distribution agreements in place, a new line of in-house manufactured product (Uscom BP+) and a building global presence of the company's flagship product, the USCOM 1A cardiac monitor.

Uscom is capitalised at $20 million.

Bioshares recommendation: **Speculative Buy Class B**

Bioshares

How Bioshares Rates Stocks

For the purpose of valuation, Bioshares divides biotech stocks into two categories. The first group are stocks with existing positive cash flows or close to producing positive cash flows. The second group are stocks without near term positive cash flows, history of losses, or at early stages of commercialisation. In this second group, which are essentially speculative propositions, Bioshares grades them according to relative risk within that group, to better reflect the very large spread of risk within those stocks. 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

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