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The IPO window is opening and in the queue is Bluechiip, a company developing a passive tracking technology that can be used in the medical storage industry.
Therapeutic product regulators continue to slow the commercialisation prospects of companies in the sector, with Alchemia, Chemgenex, Pharmaxis and Universal Biosensors waiting on regulatory decisions, or revising their submissions.
Mesoblast has released more data from its Phase II heart failure trial and the results go a lot of the way to explaining its hefty capitalisation of $1.3 billion.
Our quarterly analysis of cash flow statements reveals that some companies are winding down their convertible note funding arrangements, indicating perhaps an improvement in investment conditions.
The Editors
Companies Covered: ACL, CXS, MSB, PXS, UBI, Bluechiip 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)	70.0%
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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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 9348 9317
Email: pachacz@bioshares.com.au

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Bioshares

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

IPO Profile – BlueChiip

Bluechiip Ltd will be the third biotech to list on the ASX since December with an expected listing date in the second week of March. Bluechiip is commercialising a passive tracking technology that will initially be used to label and monitor cryogenically stored medical samples. The company is seeking to raise between $3-$6 million at 25 cents a share, giving the company a market capitalisation of $22.6 million on listing if the full $6 million is raised.

Background

Commercialisation of the Bluechiip technology, based on an invention by scientist Ron Zmood, effectively started in November 2005 when the first seed investment round occurred. Since then the company has raised $6.3 million from private investors and the company currently has 50 shareholders. Bluechiip wholly owns the technology.

The technology uses a MEMS identification system, which stands for Micro Electro Mechanical Systems. It is a technology that came out of the semi-conductor industry. MEMS technology is very robust and has been in use for over 30 years. It is currently used in mobile phones, car sensors and in Wii game controllers.

Each tiny chip used has 46 micro beams that resonate at different frequencies. Each chip is different to the next by using a combination of different beams. Of these beams, 35 are used for data storage, just like bits and bytes on a computer system, and 11 beams are used for security and checks. The different combinations of beams allow up to 4.3 billion distinct chips to be made. The beams are excited and detected using a Bluechiip reader (see image).

RFID versus Bluechiip

The technology has most similarity with RFID (radio frequency identification). RFID is used in E-Tags, animal tagging and security passes. RFID has certain features which includes the ability to read chips at high speeds, not requiring line of sight to read chips and is a wireless communication that uses radio waves. The cost reduction that is occurring with RFID is allowing the expansion of this technology in supply chain management.


The BluechiipReader

The downsides to RFID is the tags operate within a temperature range of -25C to +70C. Current passive RFID tags also cannot sense temperature, but this feature can be added with an additional sensor.

The Bluechiip technology uses only mechanical properties within the tag, making it a very robust system. There are no electrodes, like RFID, and this allows the Bluechiip devices to withstand autoclaving, gamma irradiation and cryogenic storage. The Bluechiip system can withstand operating temperatures from -196C to +200C. The chips can allow

– Cont'd over

constant temperature monitoring. In the medical setting, no specific patient information is stored on the chip, only a code that correlates to the patient data stored in the user's Bluechiip management software. The technology can be easily integrated in the storage tube or vial, surviving plastic injection moulding, unlike RFID. The costs for Bluechiip are comparable to RFID.

Bar-coding and Labels versus Bluechiip

Competing products in use for cryogenically stored biological samples are manual labelling (used in around 80% of store samples) and bar-coding (20%). The downside to these systems is that labels/barcodes frost over when frozen making reading more difficult. Many samples need to be removed from storage to locate the required patient's material, and tags and labels can deteriorate or fall off during lengthy storage periods.

The Bluechiip chips are embedded in the storage vessel, being a bag, tube, vial or rack, offering a more secure and reliable material tracking system. To locate a patient's sample, rather than systematically removing each rack of samples to read the labels, a Bluechiip reader would be passed over each rack whilst in place in the cryogenic tank. Not only does this allow the correct sample to be located more quickly, but it offers a more user-friendly operating procedure for the laboratory staff.

Industry at a Crossroads

The medical storage industry is currently at crossroads in selecting an improved monitoring system for the rapidly growing number of medical samples. In the US alone, there are more than 300 million tissue specimens stored and this is growing at 20 million new specimens a year.

The leading pharmaceutical companies are now looking for a new tracking system for biologic materials and RFID has limitations that can not service all the industry's needs. For Bluechiip, the market is not the currently stored samples, but the new samples which may incorporate the Bluechiip tracking system. Bluechiip is in discussions with the world's leading medical, low temperature storage system companies, one of which has 170 million stored samples.

Other Applications

Biobanking is the leading application for Bluechiip. However there are other uses for the technology including in forensics, blood products, diagnostics and tracking surgical instruments. Outside of healthcare the technology could be used in the defence industry, for nuclear storage and cold chain transportation.

Intellectual Property

Bluechiip has a granted patent over the technology in major regions including the USA, with another four families of pending patents. The granted patent (US patent number 7,434,737) was filed in 2004, giving the company considerable patent life over the technology.

Commercialisation Model

Bluechiip has commercial contracts in place with third parties to manufacture its chips and its readers. In September last year it entered into a contract with **STMicroelectronics** in Italy to manufacture the chips. Most of the work (90%) to make the chips is straightforward, using existing silicon chip manufacturing techniques. The final step, laser ablation of the chips, is the only new step that needs to be added, and Bluechiip needs to supply the equipment for this final process (at a cost of around $1 million).

In October last year the company entered into a contract with **SignalCraft Technologies** in Canada for that company to manufacture the chip readers. It is expected that the final sale price of the readers will be below $10,000 each.

The company will seek to enter into contracts with storage consumable companies, whereby the chips will be imbedded in the tube, vials or storage bags that will be used by the medical industry.

Bluechiip will seek to generate income from sales of the chips, reader sales and also from provision of software licenses.

Proof of concept

Bluechiip has successfully completed a trial with the **Peter MacCallum Cancer Centre** trialing the Bluechiip technology in storing autologous stem cells from patients being treated for a range of cancers. It has also successfully completed a trial with a local IVF company.

Another feature of the technology is that because the chip is embedded in the vial, better tracking and quality assurance can potentially be achieved to prevent incorrect delivery of autologous (patient's own) therapies. With companies such as **Dendreon** having an autologous cancer vaccine therapy approved, a major risk with that therapy is that a patient will be given the wrong vaccine.

Bluechiip is now approaching a stage where it will have sample packs available to sell to users to trial the Bluechiip system. These sample packs will include the chip-embedded storage vessels and the reader.

It's likely, in *Bioshares* view, that the Bluechiip technology will be used with existing labelling, which will provide a second confirmatory labelling system that has the above added features for storage of frozen medical samples.

Risks

Bluechiip is relying on third party manufacturers for its products, which is always a risk that needs to be considered. The company still needs to show that commercial manufacturing of its chips can be achieved, at a price that is commercially acceptable to end-users. Bluechiip is also seeking a significant industry change in labelling of biological products. The timeframe for a new technology such as Bluechiip to be widely adopted for this use may be long. The company is also raising only up to $6 million and further funds may be required if adoption is slow.

The company has only one granted patent in major regions over the technology although a further four patents have been filed and are pending. Competitors may also emerge with a superior tracking technology.

– Cont'd on page 7

Mesoblast Delivers Impressive Phase II Heart Failure Trial Results Warrants Cephalon Interest in Leading Stem Cell Therapy

Mesoblast (MSB: SP $5.24; Cap $1.3 billion) has delivered very impressive interim Phase II data from its heart failure trial. Sixty patients were involved in the trial, 15 on placebo, and 45 in three separate groups with different doses. The average trial data was for the changes in heart function in patients for an average period of around 18 months after implant of a single injection of the stem cells, called Revascor, into the heart, or a placebo.

The results showed the following:

- A 93.3% reduction in number of patients who experienced severe adverse cardiac events (compared to a 44.4% drop in the placebo) (p=0.001)
- A 40.7% reduction in major adverse cardiac events (compared to 6.7% for placebo) (p=0.005)
- Cardiac related deaths were reduced from 13.3% to 0% (p=0.059)
- Overall monthly rate of cardiac hospitalisations was reduced by 48% (p=0.07)

That statistical significance was achieved in such a small sample group in the first two parameters listed makes this an extremely impressive result and we conclude that this result is what warranted the interest from **Cephalon** in forming a major alliance.

There was no information on the different dose groups, so no information was supplied on whether a dose response was achieved. There was also a very high response from the placebo group. The treatment was shown to be safe with no cell-related adverse events in any of the patients who received the stem cell therapy.

Full results will be available when all patients have been followed for 12 months. On the back of these results Cephalon will now look to move into Phase III trials in heart failure.

Bioshares recommendation: **Speculative Hold Class A (Look for cheaper entry points)**

Bioshares

Bridging the Communication Gap Between Science and Business – Tom Williams

I'll never forget my introduction to one biotech company at their first annual meeting. The scientists providing the IP were voting against every management motion. After a while the meeting was adjourned to explain that a simple misunderstanding was behind the behaviour. That 'simple misunderstanding' took over a year to sort out. Meanwhile progress ground to a halt.

There are many less extreme examples where productivity on a drug or device in development gets derailed for a time, as scientists and business people look at a situation through very different glasses. It's not surprising as they often have had little training in each others shoes and so their paradigms, their language, their perspective on what's important can be worlds apart.

The 'MBA in a day Seminar' (it's good to be ambitious, right?) is an attempt to take a step towards improving this situation. It's a packed introduction to the basics of business for bio scientists.

The morning runs through topics including company law, accounting, IP, business planning, fund raising, valuations and negotiations. The afternoon puts it into virtual practice following the case study of a bioscience company through its development stages from a start up, to product development, an IPO and its eventual takeover.

The course is designed to strengthen scientists' ability to take the right strategic actions to successfully commercialise the innovations they or their organisation are developing.

While principally aimed at scientists, the course will benefit anyone who wants a refresher course to review key insights in accounting, law, management, funding, business planning and negotiation in the context of a science-based business.

Speakers include Tom Williams, Prof Mike Vitale, Dr Ian Nisbet, a corporate lawyer and a patent attorney. Participants at the inaugural seminar last year said it was a great way to get an overview of the business side of getting innovations to market in a hurry. It's produced by BioMentoring Australia in conjunction with Ausbiotech as a Bio Pro Course. The next course is in Melbourne on **Tuesday March 1st.**

Regulators Continue to Cause Delays for Australian Biotechs

A decade after much of the investment into the current wave of Australian biotechs was kicked off, many of those biotechs are now entering regulatory and product launch phases for their products. This period can be a double-edged sword for investors.

An approval from regulators should result in significant stock price gains (in excess of 30%) and it's also a time when suitors will often consider making a premium-priced bid for a company because a significant portion of technology risk has been extinguished. However there is also the risk that products will not gain approval and invariably there will be delays with regulatory assessments.

Universal Biosensors

Universal Biosensors (UBI: SP $1.395, Cap $222M, Cash $23.2M) has seen its new glucose monitoring system approved for use in The Netherlands (January 2010), in Australia (August 2010), and now in Italy and France (February 2011). However, the launch in the major US market has been delayed due to regulatory approval delays.

It is a seemingly slow global rollout but the enormity of launching such a product globally that potentially will be used by millions of people with diabetes should not be underestimated. This gradual but organised global rollout also should be indicative of a sustained market presence for this product for many years to come.

For calendar year 2010, UBI received $14.7 million from customers, including $5.8 million in the December quarter. Over 2010, total cash outflow from operations was $6.4 million. UBI is now manufacturing glucose strips for its marketing partner Lifescan. It receives a manufacturing payment as well as a one cent per strip royalty. We estimate Lifescan sells around 4.5 billion strips a year.

Bioshares recommendation: **Speculative Buy Class A**

Alchemia

Alchemia's (ACL: SP 69.5 cents; Cap $133M) original expectation was that its generic fondaparinux drug (fonda) would be approved about six months after its ANDA (abbreviated new drug application) was submitted to the FDA, which should have been around September 2009. That theory went out the window as the FDA got overloaded with ANDAs, presumably from low cost manufacturers in China and India and which was compounded by the wave of patent expiries taking place.

Analysts covering Alchemia's partner **Dr Reddy's** had expected a market launch around April 2010. The Dr Reddy's plant in India has been inspected and there have been no further questions since around October last year. We understand Dr Reddy's has been granted an import license for the product.

The final inspection of the filling facility, which fills the drug into vials, was conducted on January 7 this year. Alchemia believes that a final response (approval) from the FDA should occur 15-30 days after that, which places the expected approval date at this week. But then we have had a snowstorm in the US this week!

Bioshares recommendation:
Speculative Buy Class A (long term)
Take some profits on approval over 75 cents a share (short term)

Chemgenex Pharmaceuticals

Chemgenex Pharmaceuticals' (CXS: SP 52 cents; Cap $147M) plans for the commercial launch of its CML cancer drug Omapro have been set back by the FDA by over a year. The FDA requested that the company have its patients' samples analysed by a validated molecular diagnostic for the T315I mutation.

Chemgenex has decided to opt to commercialise the drug initially for a slightly different patient subset, those who have failed two TKIs (tyrosine kinase inhibitor drugs including Gleevec) rather that those with the T315I mutation.

Last month the company announced it would align its regulatory submissions between Europe and the US, withdrawing its European submission. Chemgenex plans to resubmit its NDAs (new drug applications) in Europe and the US in the second half of 2011.

Chemgenex is due to complete the data acquisition and assessment from its two pivotal studies by 31 March this year. This data will form the basis of the company's NDA submission. Chemgenex has a convertible note with **Cephalon** for $15 million (at 50 cents a share), which if converted will make Cephalon a 10% shareholder in Chemgenex. Cephalon also has an option agreement in place with two major Chemgenex shareholders that will allow it to acquire a further 19.9% of the company at 70 cents a share. If both of those transactions are completed, Cephalon will own just under 30% of the company which would trigger a takeover of Chemgenex.

Bioshares recommendation: **Speculative Buy Class A**

Pharmaxis

In October 2009 Pharmaxis (PXS: SP $2.65; Cap $605M) filed an NDA for Bronchitol with European regulators (EMA) for the treatment of cystic fibrosis. In an update to the market this month, Pharmaxis CEO admitted the European regulatory assessment is taking longer than anticipated. Pharmaxis has received questions from the EMA at the end of last month. Once it addresses those questions (within 30 days of receiving the questions), the EMA has 30 days to respond. Pharmaxis expects the process to conclude in the second quarter of 2011. According to these timeframes, a decision is due by the end of April.

Without being specific, some of the questions from the EMA relate to who will use the product and under what conditions. One month after approval, the company will launch the product in the UK and in Germany. In other jurisdictions in Europe, it will take up to six months to negotiate reimbursement. In Australia the company is ready to launch once approval is received. In December the drug was recommended by a committee of specialists that advises the TGA.

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4.7B Reporting Companies – Cash Balances December 31, 2010

Sorted by Survival Index

	Code	Company	Cash Receipts ($M)	Nett Op. Cash Fl. ($M)	Cash End 31/12/10 ($M)		Survival Index	Comments
1	ACR	Acrux	$89.0	$85.9	$147.1	A	**Not App**	To pay $60M dividend
2	ATW	Atos Wellness	$4.4	$0.2	$1.2	A	**Not App**	Suspended from quotation
3	CTE	Cryosite	$3.0	$0.8	$2.4	A	**Not App**	
4	GTG	Genetic Technologies	$14.2	$5.4	$8.4	A	**Not App**	
5	IMU	Imugene	$0.0	$1.3	$2.0	A	**Not App**	
6	MSB	Mesoblast	$98.9	$90.3	$140.6	A	**Not App**	
7	PCC	Probiomics	$0.6	$0.0	$0.2	A	**Not App**	
8	NDL	NeuroDiscovery	$0.2	-$0.1	$2.2	A	**9.6**	Conducting rights issue
9	CBB	Cordlife	$12.3	-$0.9	$12.6	A	**6.7**	
10	RVA	Reva Medical	$0.0	-$9.4	$80.5	CY	**4.3**	
11	HCG	Helicon Group	$0.0	-$0.2	$1.7	A	**4.3**	Acquiring Leading Edge Instruments
12	OBJ	OBJ	$0.0	-$0.7	$5.0	A	**3.7**	
13	UBI	Universal Biosensors	$14.7	-$6.4	$23.3	CY	**3.6**	
14	SOM	Somnomed	$5.7	-$0.5	$3.7	A	**3.5**	
15	AVX	Avexa	$0.0	-$3.2	$20.4	A	**3.2**	
16	HXL	Hexima	$0.2	-$3.8	$19.5	A	**2.6**	
17	SPL	Starpharma	$1.2	-$3.8	$19.7	A	**2.6**	
18	ACU	Acuvax	$0.0	-$0.3	$1.3	A	**2.5**	
19	CUV	Clinuvel Pharmaceuticals	$0.0	-$4.6	$22.5	A	**2.5**	
20	BRC	Brain Resource Corp	$0.4	-$1.5	$6.9	A	**2.4**	
21	LBT	LBT Innovations	$0.0	-$0.9	$4.2	A	**2.3**	Expects balance of 2010 min. royalty of US$180k
22	HCT	Holista Colltech	$3.1	-$0.3	$1.5	A	**2.2**	
23	ANP	Antisense Therap.	$0.0	-$0.7	$3.1	A	**2.2**	
24	PXS	Pharmaxis	$0.7	-$17.2	$67.0	A	**1.9**	
25	UCM	USCOM	$0.5	-$0.7	$2.6	A	**1.9**	
26	AGX	Agenix	$0.0	-$1.1	$4.0	A	**1.8**	
27	RHT	Resonance Health	$0.8	-$0.5	$1.7	A	**1.8**	
28	NAN	Nanosonics	$1.0	-$4.6	$16.3	A	**1.8**	
29	SHC	Sunshine Heart	$0.3	-$3.6	$12.0	A	**1.7**	
30	IPD	Impedimed	$1.8	-$5.9	$19.9	A	**1.7**	
31	BDM	Biodiem	$0.3	-$1.3	$3.9	A	**1.5**	
32	TDX	Tyrian Diagnostics	$0.7	-$1.9	$5.0	A	**1.4**	
33	PAB	Patrys	$0.5	-$3.0	$7.7	A	**1.3**	
34	CXD	CathRx	$0.2	-$3.5	$8.7	A	**1.3**	
35	OMI	Occup.& Medical Innov.	$0.0	-$0.5	$1.1	A	**1.2**	
36	QRX	QRxPharma	$0.0	-$9.1	$21.1	A	**1.2**	
37	SIE	Scigen	$12.1	-$3.4	$3.9	CY	**1.1**	
38	VLA	Viralytics	$0.0	-$2.0	$4.5	A	**1.1**	
39	MGZ	Medigard	$0.0	-$0.4	$0.9	A	**1.1**	
40	AVH	Avita Medical	$1.5	-$1.3	$2.9	A	**1.1**	Repaid borrowings of $500k; now conducting US$722k placement
41	BNO	Bionomics	$2.5	-$3.9	$8.5	A	**1.1**	
42	CDY	Cellmid	$0.0	-$0.9	$1.8	A	**1.0**	
43	ACW	Actinogen	$0.0	-$0.5	$0.9	A	**0.9**	
44	ACL	Alchemia	$0.0	-$6.7	$10.7	A	**0.8**	
45	PAA	Pharmaust	$0.9	-$0.3	$0.5	A	**0.7**	
46	LER	Leaf Energy	$0.1	-$1.1	$1.5	A	**0.7**	
47	TIS	Tissue Therapies	$0.0	-$2.3	$3.2	A	**0.7**	
48	ACG	Atcor	$3.4	-$1.6	$2.1	A	**0.7**	Signed 3 contracts of ~US$1 each in Dec Q
49	BOD	BioMD	$0.0	-$0.6	$0.7	A	**0.6**	
50	PYC	Phylogica	$1.2	-$1.5	$1.8	A	**0.6**	Partner payment of $940k received or expected
51	GBI	Genera Biosystems	$0.0	-$1.1	$1.3	A	**0.6**	Expects $225K R&D contribution in 2011 Q1
52	ADO	Anteo Diagnostics	$0.1	-$1.5	$1.6	A	**0.5**	Anticipates deal-based revenue in near term
53	NEU	Neuren Pharmaceuticals	$0.0	-$2.9	$1.5	CY	**0.5**	Approx $3.7M of CN funding remains
54	BIT	Biotron	$0.0	-$0.9	$0.9	A	**0.5**	
55	PRR	Prima Biomed	$0.0	-$4.8	$4.4	A	**0.5**	To terminate Springtree Funding facility; Nasdaq listing planned
56	BPO	BioProspect	$0.0	-$1.7	$1.5	A	**0.5**	Completed $2.3M rights issue (in Dec Q)
57	PBT	Prana Biotechnology	$0.0	-$3.3	$2.9	A	**0.4**	
58	SLA	Solagran	$0.5	-$4.2	$3.5	A	**0.4**	Raised $6.6M in Dec Q; to repay US$2.6M debt
59	AYX	Austofix	$0.9	-$0.5	$0.4	A	**0.4**	Seeking to raise $1.5M; commitments of $790K received
60	KSX	KarmelSonix	$0.2	-$2.7	$1.7	A	**0.3**	
61	LCT	Living Cell Technologies	$0.2	-$3.0	$1.8	A	**0.3**	Secured $5.25M CN funding; also $1.72M placement
62	CBZ	Cbio	$0.1	-$7.8	$4.5	A	**0.3**	Completed $9.3M rights issue (in Dec Q)
63	EMS	Eastland Medical Systems	$1.5	-$1.8	$0.9	A	**0.2**	Subsidiary won $2.5M, 5yr tender
64	GIA	Giaconda	$0.0	-$0.5	$0.1	A	**0.2**	
65	BLT	Benitec	$0.1	-$1.3	$0.4	A	**0.2**	Has approx. US$4.2M of Convertible Note remaining

4.7B Reporting Companies – Cash Balances December 31, 2010

Sorted by Survival Index

	Code	Company	Cash Receipts ($M)	Nett Op. Cash Fl. ($M)	Cash End 31/12/10 ($M)		Survival Index	Comments
66	FLS	Fluorotechnics	$1.6	-$1.3	$0.4	A	0.1	Reviewing new investment opportunities
67	HTX	Healthlinx	$0.0	-$1.7	$0.4	A	0.1	Expects receipts of $750k in 2011 Q1
68	ALT	Analytica	$0.0	-$0.4	$0.1	A	0.1	
69	IMI	IM Medical	$1.9	-$0.6	$0.1	A	0.1	
70	STI	Stirling Products	$0.4	-$1.7	$0.1	A	0.0	Seeking to raise $6M through Novus Capital
71	BNE	Bone Medical	$0.0	-$0.3	$0.0	A	0.0	Access to US$6M Conv. Note facility

Commentary

Of the 71 companies in the sector that reported their quarterly cash flow positions for the quarter ending December 31, 2010, 29 had 12 months or less cash at hand (compared to 30 companies with 12 months or less or cash at hand in the September quarter) to support operations on a nett cash flow basis. A year ago, 26 companies held 12 months or less cash at hand. These data show an increase in the number of companies in need of raising funds in the near term.

Despite obtaining access to convertible note funding of US$6 million, Bone Medical continues to verge on the non-operational. Fluorotechnics is in the throws of divesting of assets and looking for new investment opportunities. Other companies that appear to be in tenuous positions include Analytica, IM Medical and Stirling Products, although this last company has plans to raise $6 million through Novus Capital.

Safety syringe developer OMI Holdings has emerged from a period of re-organisation and has re-capitalised, raising $2.3 million in the December quarter.

Several companies has sought to move away from their reliance on convertible note finance. Avita Medical declined a periodic payment from its financier and also repaid debt funding of $512,000 in lieu of conversion to equity. Prima Biomed gave notice to its financier that it conclude its debt funding arrangement by March 29, 2011 (and announced that it would also seek a Nasdaq listing.) After completing a $3.8 million placement, Patrys re-negotiated its $15 million, three year line of credit with Advance Opportunities Fund to eliminate the time-defined mandatory aspect of the arrangement to also be able to close the equity line at any time for a defined nominal fee.

Small cap life science companies that are not required to comply with the 4.7B Rule include:Advanced Medical Design and Manufact., Immuron, Biota Holdings, Cogstate, Cellestis, Circadian Technologies, Clovercorp, Compumedics, ChemGenex Pharm., Cyclopharm, Telesso Technologies, Ellex Medical Lasers, Ascent PharmaHealth, IDT Australia, ITL Corp, Calzada, Medical Developments Int., Novogen, Optiscan Imaging, Progen Pharm., Phosphagenics, Sirtex Medical and Virax Holdings.

Re-domiciled companies,pSvida and Heartware International no longer comply with the 4B Rule.

Legend:

Not App. : The SI calculation for these companies is not calculated due to the companies reporting positive operational cash flows, or in some cases marginally negative operational cash flows.

A: The SI calculation for these companies is based on the last 2 quarters NOCF, annualised.

CY: The SI calculation for these companies is calculated using the full year NOCF.

Each quarter, the majority of ASX listed biotech companies are required to report their cash positions. In turn, a key analytical measure we present each quarter is the 'Survival Index' (SI). The index measures how many years those cash reserves will last, based on a company's recent spending patterns. It is limited because it does not account for companies that may increase spending in the next period of activity.

The index is derived for this quarter by dividing the average of net operational cash flows (NOCF) for the last 2 quarters ending December 31, 2010, annualised, into each company's cash assets as recorded at December 31, 2010. For companies that report on Dec 31 full year basis, the index is a full year of net operational cash flows (NOCF) for the nine months NOCF figure. The NOCF is the net of receipts and outgoings incurred in support of operational activities.

As a rule of thumb, companies that present with an SI of less than one are likely to be raising funds to support their activities, or are in the process of doing so. A healthy SI is either two or more. Companies with SIs of less then 0.5 may be in positions of funding stress and investors should investigate such stocks with a greater degree of concern.

Bioshares Model Portfolio (4 February 2011)

Company	Price (current)	Price added to portfolio	Date added
Somnomed	$0.95	$0.94	January 2011
Phylogica	$0.078	$0.053	September 2010
Sunshine Heart	$0.045	$0.036	June 2010
Biota Holdings	$1.29	$1.09	May 2010
Tissue Therapies	$0.64	$0.21	January 2010
QRxPharma	$1.20	$0.25	December 2008
Hexima	$0.32	$0.60	October 2008
Atcor Medical	$0.10	$0.10	October 2008
Impedimed	$0.81	$0.70	August 2008
Patrys	$0.09	$0.50	December 2007
Bionomics	$0.38	$0.42	December 2007
Cogstate	$0.24	$0.13	November 2007
Sirtex Medical	$5.50	$3.90	October 2007
Clinuvel Pharmaceuticals	$2.25	$6.60	September 2007
Starpharma Holdings	$0.98	$0.37	August 2007
Pharmaxis	$2.65	$3.15	August 2007
Universal Biosensors	$1.40	$1.23	June 2007
Acrux	$3.54	$0.83	November 2004
Alchemia	$0.70	$0.67	May 2004

Portfolio Changes – 4 February 2011

IN:
No changes

OUT:
No changes

– Pharmaxis cont'd

In Europe, 85% of the market is in the top five countries: the UK, Germany, France, Italy and Spain, which the company believes should be accessed within six months after European approval.

There a few immediate competing drugs in late stage development following the Phase III trial failure of Denufosol. Pharmaxis CEO Alan Robertson said there are now no other competing cystic fibrosis drug candidates in Phase III trials.

Bronchitol is now showing a consistent and ongoing effect, with an 8.1% improvement in lung function at 12 months in the first trial and a 8.2% improvement in lung function at 12 months in the second trial. Pharmaxis estimates that Bronchitol can provide between a four to six year improvement in quality survival by taking Bronchitol according to Robertson.

Pharmaxis expects to file its NDA in the US in the second quarter of 2011. It is now developing economies of scale in terms of responding to both questions from US and European regulators.

In the US and the UK the company will use its own sales teams. In Continental Europe the company will use sales teams operated through Quintiles. The price of the existing drug for CF, Pulmozyme, currently is sold for $22,000 in the US and for $13,000 in Europe. In the US there are 30,000 people living with CF and 40,000 in Europe.

Bronchiectasis

The CF market is dwarfed in size by the bronchectasis market. It is a condition non-unlike cystic fibrosis said Robertson but without the genetic link, affecting eight times as many people. It represents an addressable market worth $6 billion according to Robertson.

Aridol

Aridol was launched in the US this month. Sales were $156,000 in the December quarter, which was disappointing to the company. The lung function testing market is estimated to be worth around $50 million a year. The challenge for the company is how it can grow this market. .

Financials

Pharmaxis had $67 million in cash at the end of last year. It is currently spending $3 million a month, which gives it just under two years of cash at its current rate of spending.

Bioshares recommendation: **Speculative Buy Class A**

– Bluechiip IPO preview from page 2

Summary

Bluechiip has developed an intelligent and robust labelling system. The technology has the potential to be widely adopted as an industry standard for storage of biological samples. There is significant growth in the storage of frozen samples used by the medical industry with increasing medical therapies requiring very low temperature storage of samples including stem cells, IVF, autologous vaccines and other biological therapies. With the industry at crossroads in selecting the next generation tracking system, Bluechiip is well positioned to commercialise its technology.

We recommend readers read the company prospectus, which can be downloaded at www.bluechiip.com Bluechiip IPO Summary

Offer closes: 28 February 2011
Expected listing date: 14 March 2011
Funds to be raised: $3M - $6M
Listing share price: 25 cents
Market Cap on listing: $19.6M - $22.6M

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

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