

**In this edition...**

The Bell Potter Life Sciences conference was held this week, with eleven biotechs on the roll call. We report on six presentations in this edition. Starpharma was revealed once again as a company bursting with opportunity, with Phosphagenics also in a similar position. Unfortunately Mesoblast did not have any news to break on its Phase III heart failure trial and neither did QRxPharma on the discussions it continues to have with the FDA on a pathway for MoxDuo IR. Confidence at Universal Biosensors has increased with the expansion of products in development under its arrangement with Siemens. Bionomics is busy on many fronts with three partnering goals on its job sheet.

**Companies Covered: BNO, MSB, POH, QRX, SPL, UBI, Quarterly Cash Analysis**

	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 - current)	-10.3%
<b>Cumulative Gain</b>	<b>210%</b>
<b>Av. annual gain (11 yrs)</b>	<b>17.8%</b>

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# Bioshares

2 November 2012  
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*Delivering independent investment research to investors on Australian biotech, pharma and healthcare companies.*

## Conference Report

### **The 2012 Bell Potter Life Sciences Conference**

At Bell Potter's Life Sciences Conference this week, the broking firm's health care analyst Stuart Roberts reminded investors that the current period will be seen as a once in a generation opportunity, one of the great biotech booms that we are experiencing from which investors will be richly rewarded. The take home message from the event was that there is a very good chance Roberts will be right. In this edition we report on six of the eleven companies that presented.

Roberts said the Australian biotech sector has seen serious maturity since the end of 2009. He believes the IPO window in the US is clearly open. Despite the US market (Nasdaq Biotech Index) being up 35% for the year, the sector in Australia has been neutral because of a series of negative and positive events.

The negative events for the sector have been:

- The market's wait for the start of Mesoblast's Phase III congestive heart failure trial (Roberts believes Teva will do the right thing by Mesoblast)
- The Complete Response Letter QRxPharma received from the FDA
- The small upfront payment Bionomics received from its Ironwood deal
- Reimbursement issues (delays) for Axiron for Acrux/Eli Lilly
- Regulatory delays for Tissue Therapies, and
- Prima's poor share price performance following its Nasdaq listing

The positive events in the sector have been:

- The share price performance of Sirtex Medical
- Starpharma's data with docetaxel
- Alchemia's progress in its Phase III study
- Prana Biotechnology moving back into the clinic
- Neuren's progress with NNZ-2256 in Rett Syndrome, and
- NICE reimbursement support for Bronchitol

According to Roberts, there have no setbacks at the clinical level (which is a positive), companies are getting better at communicating their messages, and investors now have a better technical understanding of this sector.

The fundamentals remain favourable said Roberts: Big Pharma needs products; a new crop of speciality pharma, such as Vertex Pharmaceuticals, has arrived; regenerative medicine looms large; orphan drugs are attracting attention; and healthcare productivity is an important issue (which supports the need for innovation).

The milestones to look out for according to Roberts for 2013 include:

- Approval of Bronchitol in the US for cystic fibrosis
- Commencement of Phosphagenics' pivotal study for TPM-Oxycodone

*Cont'd over*

- Starpharma's out-licensing of Vivagel (for bacterial vaginosis) or a drug delivery deal
- Bionomics: Milestones for IW-2143, which will be the only anxiety treatment drug globally in the clinic
- European approval for Tissue Therapies
- A re-submission to the FDA for QRxPharma for MoxDuo IR

### QRxPharma – FDA Discussions Continue

One company investors have been keen to get more information about is QRxPharma. The company is in discussions with the FDA about what it will take to get MoxDuo IR approved for the US market. Chief Operating Officer Ed Rudnic is confident MoxDuo will be on the market within 12 months.

Discussions with the FDA are proceeding as expected. Rudnic said the FDA doesn't have any reason to say no to approving the drug, with there being no negative safety signal found by the FDA in the company's NDA submission. However Rudnic said the regulator just needs a better reason to say yes.

Rudnic said that results from the company's '022' study were not submitted with the company's original NDA. The FDA is now interested in this study. Rudnic said this was the first study of its kind in the world, with oxygen levels in the blood measured every two seconds over 48 hours in the 375 patients enrolled in the study. In total there were 65 million data points.

In analysing the worst 25% of patients in this trial, MoxDuo IR was found to deliver a statistically significant improvement in mean blood oxygen levels than those taking equivalent analgesic doses of morphine or oxycodone. When blood oxygen levels fall below 90% an issue of medical concern emerges. In this study two patients had blood oxygen levels fall to 30%, neither being on MoxDuoIR.

Negotiations with the FDA will continue, which Rudnic said were occurring at various levels with the regulator. The company expects to report to the market in early January about refiling its NDA with a PDUFA date likely in mid 2013.

In recent weeks QRxPharma licensed the Canadian rights to MoxDuoIR to **Paladin Labs**. Rudnic said he believes the company can achieve global peak sales from MoxDuoIR in 2.5 years from launch. US rights are licensed to **Watson Pharmaceuticals**, the world's third largest generics player, which also has a position in the branded pharmaceutical space.

### Starpharma – A Suite of Opportunities

Starpharma's CEO Jackie Fairley gave a full summary of progress and understandably exceeded her allocated speaking time, given the breadth of activities being managed by the company. Starpharma this week was awarded the **Janssen** Australian Life Science Company of the Year Award, reflecting the company's progress and increased opportunities.

#### Condom Microbicide Product

Those opportunities start with the company's condom microbicide product which has been licensed to Okamoto for Japan, which

has a 60% market lead in the world's second largest condom market. It has also been licensed to Ansell for the rest of the world. Ansell has a 20% global market share. Starpharma will receive a double digit royalty on condom products. The first approval is expected this year with further approvals expected in other regions in 2013.

#### Vivagel – Vivagel Phase III Trials

Starpharma's next cab off the rank is Vivagel for the treatment of bacterial vaginosis. Data from the company's two Phase III trials for the treatment of this infection are expected in the next six weeks. If the results are positive, Starpharma will then seek to license the product and file for FDA approval.

#### Drug Delivery Partnerships

Using the company's technology platform (its dendrimer chemistry scaffold) for drug delivery (of existing chemicals and pharmaceuticals) is becoming an increasingly exciting space said Fairley. It has drug delivery partnerships with **GlaxoSmithKline** (Stiefel), **Eli Lilly** (for multiple products) and **AstraZeneca**, plus a few undisclosed partnerships with pharmaceutical companies in the oncology space as well.

#### Sustained Release Insulin

The company is working on a sustained release version of insulin with an undisclosed partner, where insulin may only need to be injected once or twice a day rather than three to four times a day.

#### Taxotere Product

Starpharma has shown it can make a safer version of the cancer drug Taxotere. The drug generated sales last year for **Sanofi-Aventis** of US\$1.2 billion and is now off patent. The detergents used to make this drug soluble can cause severe adverse reactions in patients.

Starpharma has shown it can increase the solubility of Taxotere over 2000-fold without any detergents, and increase its half life 60-fold. The company has also shown in mice that there is over a 40-fold increase in concentration of Taxotere in tumour tissue using its dendrimer version of the drug.

The appeal of improving an existing drug, or chemical in the agrochemical space, is that it can provide an additional 20 years in patent protection for chemicals or drugs about to go off patent.

In agrochemical applications, Starpharma has shown it can increase the performance of the \$5 billion Glyphosate (Roundup) product by up to three-fold. The company has also shown that by altering the properties of these agrochemicals with its dendrimers, it can increase the soil penetration of these chemicals, improve the rain-fastness (how long the chemicals stay on the plants after rain) and can achieve higher concentrations of active ingredients (decreasing the volume of product that needs to be transported).

Starpharma is working with **Nufarm** in the agrochemicals space on undisclosed products.

Cont'd over

### Phosphagenics – Phase III Oxy Patch Trial for 2013 H2

Phosphagenics' drug delivery platform uses two types of phosphorylated Vitamin E. Varying the ratios of these two ingredients enables the company to set the penetration level required to allow a drug to penetrate the skin at a required rate.

Phosphagenics this week announced the formation of a joint venture with Equine Ergogenics Australia to improve the absorption of approved vitamins and mineral products into horses to optimally deliver the active ingredients.

#### *Oxycodone Project*

The key project for Phosphagenics is the transdermal delivery of the drug oxycodone. There are no transdermal oxycodone products on the market. One of the key problems with oxycodone is off target side effects, namely constipation. However, by delivering the drug across the skin, the gastrointestinal system is bypassed, eliminating the constipation effect from oxycodone.

Other advantages of using a transdermal patch delivery for oxycodone is a sustained release over three days, removing the peaks and troughs of the drug concentration in the blood stream, tolerance to the drug should be developed more slowly, a lower chance of drug abuse, and the delivery is more suitable for an aging population, said the company's Chief Scientific Officer, Paul Gavin.

#### *Phase III Study Start in 2013 H2*

Phosphagenics intends to license the program either during or after the Phase III trial has commenced. A pharmacokinetic study will be completed in early 2013, and the Phase III study is expected to start in the second half of 2013, using an enriched trial design.

The company has had crystallisation issues with the patch it intends to use for its oxycodone product. The proprietary adhesive from 3M did not appear to be suitable, with the active drug crystallising on the shelf after a period of time.

Phosphagenics is now working with **Labtec GmbH** as well. It's non-proprietary adhesive appears to have solved the crystallisation problem so far (although presumably the shelf life of the new patch is being monitored).

An advantage of using a non-proprietary adhesive is that the company will not be locked into using the one supplier.

### Bionomics – Three Partnering Goals

Bionomics partnered its anxiety program with **Ironwood Pharmaceuticals** early this year. Ironwood's drug Linzess moved relatively smoothly through European and US approval and is now on the market. The 'smarts' pioneered so well by Ironwood with Linzess (in clinical study designs) suit Bionomics very well said Bionomics CEO Deborah Rathjen.

With Linzess now on the market (and expected to be a billion dollar drug for the treatment of irritable bowel syndrome), Ironwood really needed a follow-up program in IW-2143 from Bionomics according to Rathjen.

Progress is expected to be announced in coming weeks for the clinical trials for IW-2143. Rathjen believes the company has found the Holy Grail for the treatment of anxiety and depression in IW-2143.

#### *Three Partnering Deals in Train*

Bionomics is working on three partnering deals. One is for the Kv1.3 program in multiple sclerosis, which was handed back from Merck-Serono after the closure of its Geneva R&D site.

The second is the BNC105 oncology drug candidate. The company expects to complete enrolment in the Phase II renal cancer study in coming months with results in the second half of 2013. (The company is expecting to partner after the results come out in this trial.)

The third asset the company will seek to partner is its alpha-7 preclinical Alzheimer's disease program, before it enters the clinic.

### Universal Biosensors – Platform Yields Confidence

CEO Paul Wright said the Universal Biosensors is past the point of questioning whether **LifeScan** is serious about the blood glucose test product that was developed by UBI.

The product has been rolled out now into dozens of countries which make up 85% of the global market. The countries yet to be accessed include India, China and Japan. The OneTouch Verio product replaces the 10 year old incumbent product from LifeScan, called the OneTouch Ultra.

UBI currently has a manufacturing capacity of 750 million strips a year. The market for electronic glucose strips is 16 billion a year. This equates to US\$10 billion a year, with strips making up between 85%-88% of that total.

Lifescan follows the model where the meter is essentially given away and it makes money from the consumables. UBI's gross margin currently is 25%, however this should move towards 100% (once volumes increase).

#### *The PT/INR Test – Siemens*

The PT/INR test (for titrating warfarin dosage) is the second largest diagnostic market after glucose. This test is partnered with **Siemens Healthcare Diagnostics**. However the at-home patient testing market is not covered in this partnership, and UBI is looking to arrange distribution channels for this market.

The advantages of the UBI/Siemens test over the **Roche** CoaguChek test, which has a 66% global market share, is that it will be easier to use and will be more reliable.

Wright said the question about the longevity of the warfarin market with new oral anticoagulants on the market is something Siemens and UBI are watching closely. At the moment the new oral anticoagulants can cost up to four times as much. The new drugs have taken about 10% of the market, although the market has grown by as much. The argument is not there yet to fully switch over to these new drugs said Wright.

*Cont'd over*

### Mesoblast – Still Waiting on Phase III Details

Mesoblast CEO Silviu Itescu talked about the big picture for Mesoblast; its allogeneic stem cell model, the therapeutic applications of its technology, and its partnerships with **Teva Pharmaceutical Industries** and **Lonza**. But what the market is really waiting for is information regarding the design and commencement of the Phase III study by Teva for the treatment of congestive heart failure (CHF).

Itescu said the companies (Teva and Mesoblast) were pretty close to getting alignment with both European and US regulators with respect to the structure of a Phase III study. A crucial aspect is whether the companies can get the regulators to agree to an interim analysis of data without compromising the integrity of the trial.

The top item for the company's 12 month milestones is the start of the Phase III CHF trial 'involving an interim analysis to evaluate evidence of efficacy'.

Expected soon is Phase II 12 month data from the company's spinal fusion trial. The last patient in the 100 patient intervertebral disc repair trial was treated two weeks ago. Results from the six month endpoint from that trial are expected in mid 2013.

### Diabetes Trial

Results are also expected from the company's Phase II type 2 diabetes trial. This trial is actively recruiting, with a total of 60 patients who will be evaluated over a 12 week treatment period. Key endpoints will be blood glucose control and also importantly CRP levels. (Reducing inflammation, of which CRP is a measure, is an expectation with these treatments, and if that is seen, then it will open up several other inflammatory disease options such as rheumatoid arthritis, Crohn's disease and multiple sclerosis).

Mesoblast expects to start Phase II trials in diabetic kidney disease, rheumatoid arthritis and in patients with fibrosis in the lungs. Lung disease, such as asthma and pulmonary fibrosis, are an obvious target for the company given 15% of the company's cells go straight to the lungs.

The company is also enrolling patients in a Phase II trial in wet AMD in Australia and Singapore.

Bioshares

Code	Company	Capitalisation (\$M)	CMP	Recommendation	Comment
BNO	Bionomics	\$117	\$0.32	Speculative Hold Class B	Move into antibody drug dev. with Eclipse Therapeutics acquisition has increased risk attached to the stock
MSB	Mesoblast	\$1,608	\$5.60	Lighten (Take Profits)	Delay with start of Phase III CHF trial is a drag on the stock; likelihood of longer, more expensive trial may have to be factored in to rating
POH	Phosphagenics	\$168	\$0.165	Lighten (Take Profits)	Full Phase III trial design yet to be revealed; notice of plan for enriched design may reduce market opportunity in the long term
QRX	QRxPharma	\$104	\$0.72	Speculative Hold Class A	FDA dialogue process has placed a drag on the stock
SPL	Starpharma	\$475	\$1.68	Lighten (Take Profits)	Little visibility into pesticides and other partnered projects
UBI	Universal Biosensors	\$151	\$0.95	Speculative Buy Class A	Siemens relationship has balanced Lifescan product and partnership risk

## 4.7B Reporting Companies – Cash Balances September 30, 2012

### Sorted by Survival Index

Code	Company	Cash Receipts (\$M)	Nett Op. Cash Fl. (\$M)	Cash End 30/09/12 (\$M)	Survival Index	Comments/Events post reporting date		
1	HCT	Holista Colltech	\$1.7	\$0.2	\$1.27	A	Not App	
2	SOM	Somnomed	\$4.0	\$0.1	\$3.79	A	Not App	
3	SIE	Scigen	\$13.6	\$0.3	\$1.84	CY	Not App	
4	UBI	Universal Biosensors	\$22.1	-\$0.8	\$13.94	CY	13.4	
5	NDL	NeuroDiscovery	\$0.0	-\$0.1	\$2.32	A	6.5	
6	RHT	Resonance Health	\$0.5	\$0.0	\$1.21	A	5.5	
7	NAN	Nanosonics	\$2.7	-\$1.8	\$27.85	A	5.1	
8	LBT	LBT Innovations	\$0.0	-\$0.3	\$2.66	A	4.9	
9	AVX	Avexa	\$0.0	-\$0.6	\$12.02	A	4.9	
10	NEU	Neuren Pharmaceuticals	\$0.0	-\$1.2	\$7.13	CY	4.3	
11	BIT	Biotron	\$0.0	-\$0.2	\$7.72	A	3.9	
12	OSP	Osprey Medical	\$0.0	-\$3.7	\$17.01	CY	3.5	
13	MSB	Mesoblast	\$0.0	-\$15.9	\$189.79	A	3.0	
14	SPL	Starpharma	\$0.1	-\$5.8	\$37.63	A	3.0	
15	OBJ	OBJ	\$0.0	-\$0.4	\$3.29	A	2.8	
16	RVA	Reva Medical	\$0.0	-\$13.2	\$44.05	CY	2.5	
17	BNO	Bionomics	\$0.7	-\$3.7	\$13.12	A	2.5	
18	AVH	Avita Medical	\$0.9	-\$1.3	\$10.84	A	2.4	Raised \$10.5M through placements and SPP
19	ANP	Antisense Therap.	\$0.0	-\$1.0	\$5.83	A	2.1	
20	GID	GI Dynamics	\$0.4	-\$18.5	\$49.10	CY	2.0	
21	PAB	Patrys	\$0.0	-\$0.7	\$7.02	A	2.0	
22	BRC	Brain Resource Corp	\$0.2	-\$0.8	\$7.06	A	1.9	Seeking to spin-out Brain Health& Fitness division
23	PXS	Pharmaxis	\$0.5	-\$9.9	\$71.18	A	1.9	
24	PRR	Prima Biomed	\$0.0	-\$4.5	\$33.47	A	1.8	
25	IMU	Imugene	\$0.0	-\$0.3	\$1.65	A	1.7	
26	ADO	Anteo Diagnostics	\$0.0	-\$1.0	\$3.90	A	1.7	
27	ACG	Atcor Medical	\$2.6	\$0.3	\$1.31	A	1.6	Signed US\$3.2 M pharma contract
28	QRX	QRxPharma	\$0.0	-\$3.8	\$18.73	A	1.5	
29	LCT	Living Cell Technologies	\$1.7	-\$0.2	\$2.94	A	1.4	
30	CDY	Cellmid	\$0.1	\$0.3	\$1.75	A	1.3	
31	CUV	Clinuvel Pharmaceuticals	\$0.0	-\$1.7	\$11.45	A	1.2	
32	VLA	Viralitics	\$0.0	-\$1.3	\$4.55	A	1.2	
33	ACU	Acuvax	\$0.0	-\$0.1	\$0.57	A	1.2	
34	MGZ	Medigard	\$0.0	-\$0.1	\$0.25	A	1.0	
35	IPD	Impedimed	\$0.8	-\$3.0	\$11.39	A	1.0	
36	BDM	Biodiem	\$0.0	-\$0.3	\$1.10	A	0.9	Seeking to raise \$2.5M through Rights Issue
37	PBT	Prana Biotechnology	\$0.0	-\$1.7	\$6.00	A	0.9	Completed \$6M placement
38	CXD	CathRx	\$0.0	\$1.4	\$3.31	A	0.9	Intends to de-list
39	GTG	Genetic Technologies	\$0.0	-\$2.2	\$6.75	A	0.9	Commenced new round in patent assertion program
40	ALT	Analytica	\$0.0	-\$0.3	\$0.96	A	0.8	
41	UCM	USCOM	\$0.2	-\$0.3	\$1.17	A	0.7	
42	BLT	Benitec	\$0.1	-\$0.9	\$2.09	A	0.6	Acquired Tacere Therapeutics in scrip deal
43	ACL	Alchemia	\$0.1	-\$5.4	\$8.63	A	0.6	Conducting demerger coupled to fundraising for HyAct assets
44	BCT	Bluechiip	\$0.0	\$0.3	\$0.96	A	0.6	
45	IVX	Invin	\$0.0	\$0.6	\$4.79	A	0.6	CBio completed merger with Inverseon Inc in August
46	EMS	Eastland Medical Systems	\$1.2	-\$0.5	\$0.98	A	0.5	
47	UNS	Unilife	\$0.0	-\$10.4	\$20.79	A	0.5	Has US\$27.8M in loan facility outstanding
48	CBB	Cordlife	\$2.2	-\$0.3	\$1.68	A	0.4	
49	ISN	Isonoa	\$0.0	-\$0.6	\$1.69	A	0.4	Raised \$4M through u/w Rights Issue
50	BXN	Bioxyne	\$0.2	\$0.5	\$1.24	A	0.4	Entered into Heads of Agreement with Vaxine Pty Ltd
51	TIS	Tissue Therapies	\$0.0	-\$2.5	\$3.75	A	0.4	VitroGro Euro launch further delayed by MHRA by max of 210 days
52	GBI	Genera Biosystems	\$0.0	-\$0.5	\$0.63	A	0.4	Expects to receive \$340K tax refund
53	MLA	Medical Australia	\$2.2	-\$0.3	\$0.26	A	0.4	MLA's mature trading operations support lower end Q cash balances
54	PYC	Phylogica	\$0.1	-\$1.3	\$1.51	A	0.3	Raised \$1.6 M through Converting Notes
55	AHZ	Allied Healthcare Group	\$1.6	-\$0.9	\$1.09	A	0.3	Inventory build occurred in Sept Q; also has \$500K draw down facility
56	IMI	IM Medical	\$0.0	-\$0.1	\$0.50	A	0.3	Continuing to assess investment opportunities
57	CGP	Consegna Group	\$0.1	-\$0.8	\$0.21	A	0.1	
58	AGX	Agenix	\$0.0	-\$0.3	\$0.054	A	0.0	Accessing \$1.2 M funding agreement with Fortrend Securities
59	ACW	Actinogen	\$0.0	-\$0.2	\$0.024	A	0.0	
60	HTX	Healthlinx	\$0.0	-\$0.4	\$0.034	A	0.0	
61	BNE	Bone Medical	\$0.0	-\$0.2	\$0.017	A	0.0	US\$6 M Convertible note facility with La Jolla Cove Invest. Part.

**Bioshares Model Portfolio (2 November 2012)**

Company	Price (current)	Price added to portfolio	Date added
Nanosonics	\$0.510	\$0.495	June 2012
Osprey Medical	\$0.38	\$0.40	April 2012
QRxPharma	\$0.72	\$1.66	October 2011
Somnomed	\$0.91	\$0.94	January 2011
Cogstate	\$0.400	\$0.13	November 2007
Sirtex Medical	\$11.15	\$3.90	October 2007
Clinuvel Pharmaceuticals	\$1.62	\$6.60	September 2007
Pharmaxis	\$1.30	\$3.15	August 2007
Universal Biosensors	\$0.95	\$1.23	June 2007
Alchemia	\$0.540	\$0.67	May 2004

**Portfolio Changes – 2 November 2012****IN:**

No changes

**OUT:**

We have removed Tissue Therapies and Phylogica from the Model Portfolio. Tissue Therapies anticipated launch of VitroGro ECM in Europe has been delayed by the MHRA for at most 210 days, with the likelihood of a fresh capital injection now increased. Phylogica has been slower than expected to signing collaborative research agreements with customers. The company has recently accessed Convertible Note funding, suggesting that the company's capacity to obtain finance is tending towards the more constrictive range of options.

**4.7B Reporting Companies – Cash Balances Sept. 30, 2012 (Cont'd)****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 average of the last five quarters of NOCF, annualised.

**CY:** The SI calculation for these companies is calculated on the last three quarter of NOCF, annualised.

**Commentary**

For the September quarter 2012, we calculated that 26 of 61 life science companies reporting under the ASX's 4.7B rule had cash that would support less than one year's worth of operations, based on net operational cash flows.

Of the companies with low cash positions, Consegna looks to be in a challenging position (holding \$210,000 in cash) with a deal for its BreatheAssist product yet to eventuate.

Healthlinx (\$24,000 in cash) has sold the majority of its IP, including its OvPlex ovarian cancer diagnostic, to a US company, but with shareholder approval pending. If approved, Healthlinx will receive US\$250,000 in cash. However, the company's viability is likely to remain a concern.

Another diagnostic company that continues to struggle, reporting an SI of 0.4, was Genera Biosystems.

*Small cap life science companies that are not required to comply with the 4.7B Rule include: Acrux, Advanced Medical Design and Manufact., Immuron., Bioniche, Cogstate, Circadian Technologies, Clovercorp, Compumedics, Cryosite, Cyclopharm, Telesso Technologies, Ellex Medical Lasers, IDT, ITL Corp, Calzada, Medical Developments Int., Novogen, Optiscan Imaging, Progen Pharm., Phosphagenics and Sunshine Heart. Re-domiciled companies, pSivida and Heartware International no longer comply with the 4B Rule, as does Sunshine Heart.*

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 net operational cash flows (NOCF) for last five quarters ending September, 2012, annualised, into each company's cash assets as recorded at September 30, 2012. For companies that report on December 31 full year basis, the index is based on the last three quarters of net operational cash flows (NOCF), annualised. 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 than 0.5 may be in positions of funding stress and investors should investigate such stocks with a greater degree of concern.

**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**

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