

In this edition...

The market crashed this week hitting 5222 points, yet by Friday, a 660 point (13%) rebound had occurred. A scant number biotechs recovered but by and large the week's market turmoil left biotech abandoned.

Our message to investors is that whereas for much of 2007 there were many attractive quality biotechs worth buying, now there are many *extremely* well priced biotechs. The market has generated buying opportunities the likes of which happen only when market shocks occur. However, the view that the quality bargains may be around for months to come may not be correct.

We also include the second instalment in our biotech management series from Richard Treagus, CEO of Acrux.

The editors

Companies covered: IPD, PGL

	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 (from 4 May '07)	-30.0%
Cumulative Gain	127%
Av Annual Gain (6 yrs)	26.8%

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Bioshares

25 January 2008
Edition 248

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

The Great Big Biotech Stock Sale

This week we had the stockmarket crash that we needed to have, or at least the crash many thought we needed to have. The All Ordinaries Index was down 24% on 'Black Tuesday' from its high at the start of November last year although it has finished the week only 16% down from this high.

The local economy remains fundamentally strong, although the continuing growth of residential property prices and consumer spending are supporting an argument for tighter monetary policy. The drought is pretty much over, for the time being, and demand for resources is expected to remain high which will continue to support a strong economy. The main factors that have triggered nervousness amongst investors locally are an anticipated US recession, and the increased cost of capital in the wake of the credit squeeze in the US.

Although other sectors have been quick to rebound and retrace much of the lost value in the last week, the biotech sector continues to languish but offering incredibly attractive value propositions. This has been accentuated by the fact that biotech stocks, excluding the large caps, underperformed the broader market last year (the **Bioshares Index** fell 14.2% last year compared with the All Ordinaries Index gaining 13.6% for the year) and have suffered greater losses this year (roughly 18% compared to 6.3% for the All Ordinaries Index).

Best current value propositions

The tables below list our best current value propositions with a lower risk emphasis on companies that are well financed and closer to market or currently are generating product revenue.

Of particular interest in the table below is the current market capitalisation of **Peplin**. The company had \$30 million in cash at the end of September last year and is now capitalised at only \$139 million. Peplin is due to begin shortly Phase III trials with its topical skin cancer drug candidate. The company intends to sell the drug directly into the US and has 100% ownership of its technology with a long patent life protection out to 2018 and up to five years possible patent extension.

Top 5 Biotech Value Picks - R&D companies

Company	Code	Price 31/12/07	Price 25/1/08	Share price fall in 2008	Cash (M)**	Cap'n (M)
Universal Biosensors	UBI	\$1.48	\$1.10	-26%	39.7	172
Peplin Inc	PLI	\$0.88	\$0.70	-21%	30.1*	139
Alchemia	ACL	\$0.70	\$0.55	-21%	22.1	88
Acrux	ACR	\$1.40	\$1.15	-18%	37.6	182
Chemgenex Pharm.	CXS	\$1.05	\$0.87	-17%	25.3	162

* Plus access to US\$15M loan facility

** As last reported

Cont'd over

Of the profitable revenue companies in the sector that have fallen recently, **Arana Therapeutics** is our best pick. It is capitalised at \$221 million with \$186 million in the bank including \$17.9 million received in December from **GlaxoSmithKline** for as its final payment for its share in **Diversys**. The company anticipates it will receive a future royalty stream in excess of \$80 million up to 2011. The company's lead program is due to start Phase II trials for rheumatoid arthritis and it has recently acquired the valuable Evogenix business.

amongst local life science firms. The likelihood of aggressive bids being made by international life science companies for the better quality biotech firms has increased significantly this week.

Acrux and Sirtex Medical announce positive developments

Amid the chaos this week, there was some very positive news in the sector.

Acrux announced positive pharmacokinetic data from a Phase I trial with fentanyl using its transdermal spray-on technology. Transdermal fentanyl products generate annual sales in the US of US\$1.2 billion and represents potentially an additional very lucrative application of the Acrux technology. The company's first product, Evamist, which is a spray-on HRT product, is due for imminent market release by KV Pharmaceutical in the US.

And **Sirtex Medical** achieved a major goal that had been anticipated by some, with its US manufacturing plant given the green light by the FDA. This is a very significant development. It de-risks the manufacture of its product – radioactive ceramic spheres with a short half-life to irradiate liver tumours – and allows the company to expand the sites it can offer the treatment in the US with the spheres no longer being required to be transported from Sydney.

Bioshares

Top Biotech Value Picks - Revenue generating

Company	Code	Price 31/12/07	Price 25/1/08	Share price fall in 2008	NPAT in 2007 (M)	Cash (M)*	Cap'n (M)
Biota Holdings***	BTA	\$1.23	\$0.93	-24%	\$20.1	\$62.1	\$171.0
IDT Australia	IDT	\$2.46	\$2.03	-17%	\$5.5	\$1.8	\$87.0
Arana Therapeutics	AAH	\$1.15	\$0.94	-18%	\$133.0	\$186.7**	\$221.0
Sirtex Medical	SRX	\$4.50	\$4.09	-9%	\$1.6	\$10.3	\$228.0

* As last reported

** Includes recent \$17.9M final payment for Diversys sale but excludes \$80M in future anticipated royalties

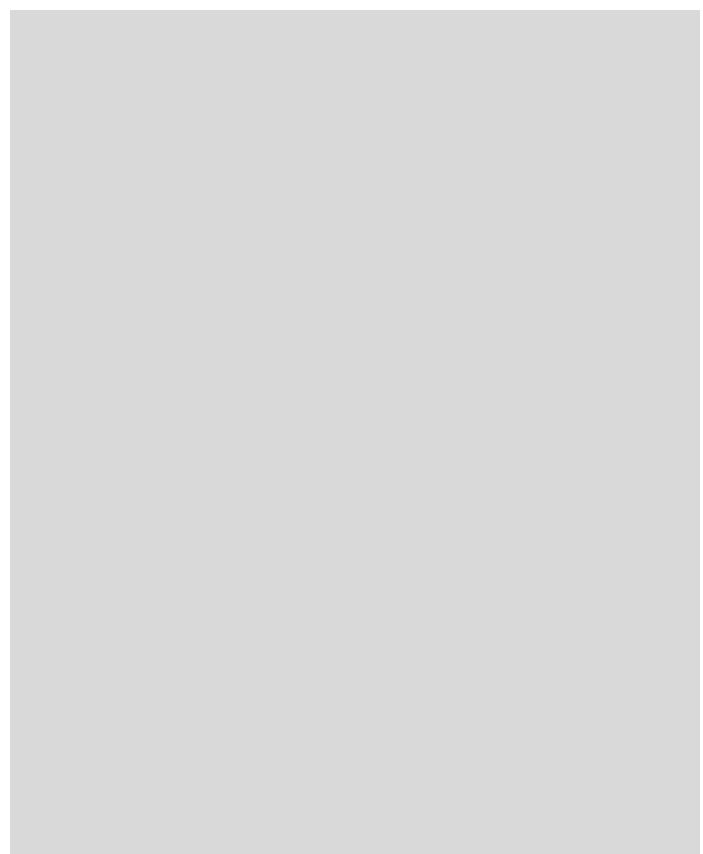
*** Generated \$40 million in royalty payments in FY2007

Biota Holdings is also offering exceptionally good value. It is capitalised at \$171 million, with a valuable ongoing royalty stream from Relenza, which last year generated \$40 million for Biota. Relenza royalties are expected to be received out to 2011-2014, with the range due to possible patent extensions. Biota also has three clinical programs underway and two programs partnered, excluding its co-development program with **Daiichi-Sankyo**.

Market uncertainties are expected to continue as the fall-out from losses caused by the actions of a 'single' rogue trader at **Societe Generale** in France rack up billions of Euros in derivative trading and until we fully understand the impact of the impending US recession. The Australian economy has shown to be very resilient to external economic slowdowns such as the Asian Crisis in the late 1990's. Unless property prices in Australia decline markedly, the overall impact of various economies drifting into recession for the Australian economy may be lower than that implied by equity markets this week.

As this situation plays out, with some market analysts suggesting difficult market conditions for the next 12 - 18 months, we recommend investors continue to build positions in better quality biotech companies that are well funded and managed. The pharmaceutical and healthcare sector, which is the target market for medical products, is often less affected by economic downturns than the industrial sector. Investors should not forget the billions of dollars of ongoing superannuation contributions that need to be placed each year, which may direct more money into the sector as more companies approach pivotal trials and the sector is better validated through forthcoming commercial success in the Australian biotech arena.

Investors should also keep a sharp look-out for take-over activity



Impedimed Refines Reimbursement Strategy

Impedimed (IPD: 73 cents) is developing and bringing to market a range of devices that use non-invasive bioimpedance technology to measure body hydration and composition. One application of the technology is for the *early* detection of secondary lymphoedema (resulting in gradual and eventually pronounced swelling in the arms) that occurs as a side effect of breast cancer surgery and treatment. Early detection with early treatment can prevent lymphoedema developing into a chronic debilitating condition that decreases quality of life.

Impedimed's bioimpedance technology is competitive against existing diagnostic measurement technologies, on the grounds of superior sensitivity and specificity, as well as cost and convenience. The technology looks set to displace antiquated measurements made with tape measures and buckets of water, which can tend to be coarse approaches. Current diagnostic paradigms and methods are also less conducive to establishing baseline measurements, which is a vital measurement to record at least for lymphoedema assessment. For example, objective measures made with Impedimed's devices prior to breast cancer surgery could cause a significant improvement in the early detection in lymphoedema for patients.

The technology originates from work done by researchers at the University of Queensland and the Queensland University of Technology. The company was founded in 1999 and listed in October in 2007.

The company is targeting the US as a major market opportunity for its bioimpedance diagnostic and detection products. The company has received FDA clearances for several products for basic body composition claims, and for one device for assessment of lymphoedema in the arm. The company has demonstrated that it can achieve FDA clearances, which provides some confidence to investors that future clearances sought by the company for more advanced products with more specific claims, have a realistic chance of success.

However, gaining FDA approval is only one of several elements required to achieve commercial success in the very large US healthcare market, with clinical study data and reimbursement also key issues,

US reimbursement

Gaining reimbursement from health insurers in the US for Impedimed's products, in their various release forms, is perhaps the most crucial milestone for Impedimed in 2008.

The financing of the US healthcare system is, for the most part based on private insurance coverage, with coverage also provided to a lesser extent by government organisations such as Medicare and Medicaid. There may be as many as private 1300 providers of healthcare plans, if membership of the health insurance industry group, America's Health Insurance Plans (AHIP) is used as a guide.

Procedures performed by family care physicians (ie general practitioners) and in hospitals can be eligible for reimbursement (at

prices generally set by the government body, Medicaid) if a code for the procedure has been established by the **American Medical Association (AMA)**. Reimbursement can also apply to part or all of, the purchase of a device.

The AMA first developed its coding system, **Current Procedural Terminology (CPT)** in 1966. The set of codes are revised annually and for 2007, around 8,600 codes and descriptors were published.

A Category I code can be awarded if the procedure or service has been approved by the FDA for the specific use of devices or drugs, it is performed across the USA at multiple sites, that many physicians perform the service or procedure, and that clinical data supporting the efficacy of the service or procedure has been documented. Category II codes are a set of optional tracking codes for performance measurement and Category III codes are applied to emerging technology.

Reimbursement analysis

The company commissioned a study by consultants to inform the company's reimbursement strategy in the US. The study, reported in December, found that a piece of US Federal legislation, "Women's Health and Cancer Rights Act 1998", required that payers (ie insurers) must provide coverage for prostheses and physical complications of mastectomy, including lymphoedemas. Similar legislation was also found to be in place in 20 US states.

With the direct support of this legislation, the company is now likely to initially seek to use existing miscellaneous codes to meet reimbursement requirements, while waiting for a specific Category I code for use of its devices to be assigned, preferably encompassing claims addressed by more advanced products. Although such codes might now be available until the release of the CPT 2009 manual, the company will be in position generate sales of currently approved products, yet be in a stronger position when release of CPT codes specific for the method of lymphoedema detection it has pioneered.

Major Milestone Due Mid-year

Publication of data and results from a five year US NIH study of the early detection of lymphoedema in breast cancer patients is expected mid-year. The study will record clinical, health economic and quality of life outcomes, all of which are expected to provide the validation necessary for establishment of specific CPT codes and to set up the next phase of the reimbursement strategy.

Investment Features

Impedimed is an attractive investment for four reasons. The company is led by a knowledgeable and experienced CEO, Greg Brown, who has a detailed understanding of the commercial prospects for Impedimed's bioimpedance devices, and of the many tasks needed to be performed to generate significant revenues. Brown has previously worked in sales and marketing roles with **Baxter Diagnostics, Roche Molecular Systems** and **Digene Corporation**.

– Cont'd on page 7

Seven Reasons for Progen Pharmaceuticals' Sinking Share Price

Most companies have seen their share prices decline this year due to the fear that the US economy is headed into a recession because of falling house prices in that country. But Progen Pharmaceuticals (PGL: \$2.08) has seen its share price plummet since April last year, falling by 78%, since it reached a high of \$9.60. The company is extremely well funded with \$98 million in the bank at June 30 last year, sufficient to conduct its 600 person Phase III trial in patients with resectable liver cancer. But what has happened to this company to bring about such a massive correction in its share price?

There are likely a number of reasons, in fact at least seven, that have been responsible to some degree for the company's sliding share price.

Profit taking

The first reason is profit taking following the large capital raising conducted in May when a \$74 million capital raising was announced at \$5.74 a share. This was a significant discount to the market price of \$7.34 when the raising was announced, with the share price having surged after the final Phase II liver cancer trial results were announced.

Lack of demand for the stock

The second reason was the lack of demand for the stock after such a large capital raising was conducted. A third reason for some of the decline was that almost half of the capital raised (\$34 million) was conducted through a one for nine non-renounceable rights issue at the same price of the placement. This has a natural dilutionary effect on the stock price. These reasons can explain why the share price drifted back towards the capital raising price of \$5.74 a share.

Lack of medium term milestones

Reason number four is the lack of medium term milestones expected for the company. Biotech stocks tend to trade upon the expectation of short-to-medium term milestones being successfully passed and resulting in a positive asset revaluation. Progen's Phase III liver cancer trial is expected to take three years until receipt of final results.

Nexavar

The fifth factor at play is the positive progress being made by a major pharmaceutical company in the treatment of liver cancer. In November last year, **Bayer Pharmaceutical's** drug Nexavar (developed and co-marketed with **Onyx Pharmaceuticals**) was approved for the treatment of non-resectable liver cancer, which accounts for around 85% of all liver cancers (Progen's drug is being trialed in patients with resectable liver cancer). In a Phase III trial, also involving 600 people, interim results showed that Nexavar improved overall survival by just under three months, from 7.9 months in the placebo group to 10.7 months in patients administered Nexavar.

Nexavar was first approved by the FDA in 2005 for the treatment of kidney cancer. The drug, a kinase inhibitor, was approved by the FDA for inoperable liver cancer two years and eight months

after initiating its Phase III liver cancer trial. It is also classified as an angiogenesis inhibitor. It's expected that Nexavar will now move into trials in resectable liver cancer, which will increase the competition for patients, although there are very few later stage trials underway for this disease.

Enrollments not commenced

Reason number six is that Progen has yet to begin enrolling patients in its Phase III trial, although this is expected to start shortly with ethics approval in at least five centers now received and at least one center now looking to recruit patients.

Market turmoil

Yet a seventh reason that may explain the decline in the Progen share price has been the global investment market turmoil experienced this year.

Moving forward for Progen

The share market slide for Progen has been excessive. There are challenges ahead for the company, first and foremost to start and complete recruitment of its Phase III trial, which is expected to take 18 months. A key parameter to monitor will be the recruitment rate for this trial, which should be about 100 patients per quarter. In the company's Phase II liver cancer trial involving 168 patients, the best dose delivered a five month (21 week) improvement in time to disease recurrence over the placebo. That trial took two years and nine months to complete.

There may be some competition for recruiting patients for the Phase III trial from Bayer and its drug Nexavar and also on the market if both companies generate successful Phase III results. Progen has designed its Phase III trial based on achieving at a minimum 50% of the efficacy seen in its Phase II trial, which should then deliver it a statistical significant result.

Market size

We estimate the market size for resectable liver cancer to be around \$250 million a year for major western markets. However, this could be considerably higher if Asia is included fully, where the incidence of liver cancer is considerably higher due to much higher levels of hepatitis which often underlies a progression to liver cancer.

To expand into other cancer indications, Progen will be up against **Genentech's** Avastin, also an angiogenesis inhibitor like Progen's PI-88. However, the two compounds work via different mechanisms and could potentially be used in combination although the treatment cost of Avastin alone is significant, at over US\$50,000 a year. Avastin is currently being trialed in at least 20 other tumour types. It is currently approved for use in patients with metastatic colorectal cancer and non-small cell lung cancer.

Other milestones approaching

Aside from monitoring recruitment rates, Progen expects to report on results from a Phase II prostate cancer trial that was initiated by

– Cont'd on page 7

Biotech Management Series

Partnering & Licensing: Processes, negotiations and relationship management

Dr Richard Treagus – CEO, Acrux

The essence of partnering

The essence of any entrepreneurial venture is the creative blending of a unique concept, with the appropriate capabilities and of course the pre-requisite capital. Life science companies rarely possess all three of these ingredients at any point in time and so by definition, if a company wants to get a new product to market, partnerships are essential.

Different partners have different strengths and a "one size fits all" approach to any partnering strategy is overly simplistic. Partners may provide additional capabilities, or leverage a company's existing capabilities. Either way, they typically bring a specific expertise, an infrastructure, an established market position, development capital or a combination of these.

A partner's core capabilities are quite easy to place a discrete value on, but of equal importance is the value one can attribute to the key elements of "partner fit". This relates very broadly to an assessment of a partner's strategic intent, their motivations and expectations around the deal, the organisational culture, as well as their partnering track record and internal partnering processes. Any misalignment on this level of so-called "fit" is quite often the basis for a sub-optimum, or even a failed partnership.

Partnering as a core competency

Partnering should be a core activity, and a resident skill within any growing business that is serious about getting product to market. Some companies may be forced to outsource the partnering function in the initial stages due to financial constraints; however this has inherent limitations. Effective partnering is built on corporate learnings, on business relationships, on commercial judgment and a continuity that goes well beyond the actual transaction itself. When this activity is outsourced, organisations lose the opportunity to benefit from and internalise these skills and this vital corporate knowledge. In short, you can outsource expertise, but don't outsource relationships.

When partnering is core to the business, it should ideally be placed in a position within the organisation that facilitates a strong cooperative working relationship with the R&D function. Together these functions should be tasked with jointly reviewing target product profiles, product attributes and constantly refining the development path to market. Like two ends of the same stick, one can view R&D as creating the value, and the partnering function as delivering the value.

It is extremely helpful in the process if those responsible for the partnering activity have a dual ability to articulate the attributes of the technology as well as the value of the product within the context of the product's final target market.

Partnering should be considered a marketing skill

Ultimately, partnering should be considered a marketing skill. It is not a science. In fact, partnering is often an imperfect process and

How do biotech companies do what they do?

Many of the activities conducted by life science firms are not self-evident, so we have selected a dozen different topics covering the major aspects of biotech company management as the subjects of contributions from biotech CEOs and experienced executives. We hope the series, which we commenced last year will both inform and educate. This second in the series covers partnering and licensing.

success is more often a function of an individual's ability to establish a clear value proposition, communicate this convincingly, establish trust, and deal effectively with a fluid process, rather than follow any specific algorithm or template.

I often describe the partnering process as being like a river running to the sea. We know exactly what the endpoint will be, but we shouldn't be overzealous in trying to predetermine the precise course of getting there. Keeping a firm fix on the outcome is essential, but trusting the process, pre-empting obstacles, creating alternatives and building momentum along the way, are all vital components of negotiating and completing a successful transaction.

Nurture the process from start to finish

Organisations that understand the essence of partnering, also understand that alliances are about people. Trust underpins any successful negotiation and subsequent implementation, and the sooner that trust is established in the process, the faster and more efficiently an organisation can realise the benefits of the partnership.

A typical deal process would comprise an initial prospecting stage, moving into more detailed exploratory discussions, a negotiation culminating in a term sheet or letter of intent, a mutual due diligence, and finally the legal contracting and appropriate corporate approvals.

Time invested up-front in the process pays dividends later, as the early interactions are often very instructive of how the parties are going to interact and engage over the longer term. Throughout the process it is helpful to maintain the same member(s) in the core business development team. Although the team may draw on expert financial, legal or technical advice, there should always be a clearly nominated champion of the deal. Nominating your own deal champion is the easy part, trying to identify the deal champion within the target company, can sometimes be less easy. Either way, the point is that if the interface between the parties keeps chopping and changing, the process becomes inefficient and effective relationships are hard to establish. The larger the organisation, the more challenging this can sometimes be, as functional experts can be parachuted into the process at various points.

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Dealing a strong hand

In concluding, let me share some practical tips that should assist your organisation in maximising its position in the deal making and partnering process:

- Test your partner's intent and ability early in the process. If you are not going to be able to conclude a deal, you should endeavour to fail quickly!
- Assess your partner's deal track-record. Companies quite often follow a similar modus-operandi and this can be instructive.
- Recognise and respond to the business objectives and key value drivers of your partner. By hitting the "hot buttons", this will get alignment on the issue of value more quickly.
- Identify the deal-champion and key decision makers and build an effective relationship. Limit any negotiations through third parties, or intermediaries.
- Communicate your product's attributes and benefits in simple, compelling marketing terms.
- Ensure flexibility, discipline and rigour in your own processes.

- Keep communication clear and consistent. Any inconsistency can cause the process to become confused and trust will be diminished.
- Be firm but fair. If you are the smaller partner, don't be intimidated. If you have to reject a position, do so by offering up an alternative. This ensures that the process keeps moving forwards.
- When contracting, avoid going back and re-negotiating key issues, unless this is absolutely essential.

Finally, it's worth remembering that a great deal, if poorly implemented, will almost always fail to live up to expectations. The rigour and energy established during the deal process must be carried over into the implementation phase in order to realise the full value of the alliance. Companies that build a strong reputation on positive and effective partnering will find that it becomes even easier to attract further quality partnerships in the future.

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Bioshares Model Portfolio (25 January 2008)

Company	Price (current)	Price added to portfolio	Date added
Patrys	\$0.40	\$0.50	December 2007
NeuroDiscovery	\$0.15	\$0.16	December 2007
Bionomics	\$0.31	\$0.42	December 2007
Cogstate	\$0.13	\$0.13	November 2007
Ventracor	\$0.47	\$0.625	October 2007
Sirtex Medical	\$4.09	\$3.90	October 2007
Clinuvel Pharmaceuticals	\$0.37	\$0.66	September 2007
Progen Pharmaceuticals	\$2.08	\$3.52	September 2007
Starpharma Holdings	\$0.34	\$0.37	August 2007
Pharmaxis	\$3.40	\$3.15	August 2007
Universal Biosensors	\$1.10	\$1.23	June 2007
Biota Holdings	\$0.93	\$1.55	March 2007
Tissue Therapies	\$0.25	\$0.58	February 2007
Probiotec	\$1.15	\$1.12	February 2007
Phylogica	\$0.12	\$0.42	January 2007
Peplin Inc	\$0.70	\$0.83	January 2007
Arana Therapeutics	\$0.94	\$1.31	October 2006
Chemgenex Pharma.	\$0.87	\$0.38	June 2006
Cytopia	\$0.41	\$0.46	June 2005
Optiscan Imaging	\$0.24	\$0.35	March 2005
Acrux	\$1.15	\$0.83	November 2004
Alchemia	\$0.55	\$0.67	May 2004

Portfolio Changes – 18 Jan 2008

IN:
No Changes

OUT:
No Changes

– *Impedimed cont'd*

Although the company is looking to focus its technology at first in the breast cancer lymphoedema market, which with 2.4 million sufferers in the US and 400,000 new cases each year is a very large market, there are other markets that over time could emerge as commercially valuable.

The barriers to entry for competitor products are also high, involving patents, and regulatory and coding pathway challenges that could slow down a competitor by at least five years.

Lastly, we expect Impedimed over the next 18 months to develop the markings of a company that would make a very valuable bolt-on acquisition to large diagnostic firms that seeks earnings growth from acquisitions. Such a target company would own a novel next-generation diagnostic technology that has received endorsement from physicians, has set up the necessary coding and coverage base in the US, with strong long lasting barriers to entry by competitor firms and has commenced sales sufficient to show strong growth potential.

Summary

Impedimed represents a high quality and extremely attractive investment proposition. With the key milestone of NIH data publication approaching mid-year, an entry into this stock well before that date, will be better made sooner rather than later. Impedimed is capitalised at \$59 million.

Bioshares recommendation: **Speculative Buy Class A**

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– *Progen cont'd*

oncology clinicians. A Phase II melanoma study is continuing although recruitment is likely to be competitive given the large number of trials underway in this indication.

Other programs

Progen is seeking to broaden its discovery and development program in a 'four pillar' approach. This includes the development of the 500 series of compounds, with the first candidate planned to enter the clinic in 2009; a small molecule drug discovery program to find other compounds to hit the same target as the company's lead drug candidate, PI-88; and in-licensing or acquisition of other programs through various channels.

Summary

Progen Pharmaceuticals is capitalised at \$123 million. The stock has been oversold although its lead program will take up to three years before results are released, a long time for most investors. A merger or acquisition strategy would be appropriate for the company to build its clinical pipeline however a weak scrip may prevent that occurring at present.

The company's lead compound has achieved successful results in a large Phase II trial in post-resection liver cancer and if the company can be first to market in this indication with better or

similar results to competing drug Nexavar (assuming that drug is trialed for the same indication), then Progen's share price chart will look distinctly different to that of the last nine months. Developing oncology drugs is difficult, but the rewards can be exceedingly high with billion dollar businesses built on such successes, as seen with the likes of **Imclone Systems** (US\$3.7 billion company built on Erbitux), **Onyx Pharmaceuticals** (\$2.5 billion company built on Nexavar), **Millennium Pharmaceuticals** (US\$4.7 billion capitalisation largely due to Velcade) and the massive wealth generation created for **Genentech** by Avastin.

Bioshares recommendation: **Speculative Buy Class A**

[Suitable for investors with a longer term investment outlook]

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.

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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