

**In this edition...**

The *Bioshares* Thredbo Biotech Summit was held on Friday and Saturday of last week, with about 130 delegates in attendance. This edition includes coverage of a number of sessions of the event, including the round table format panel discussion on the effects of the global financial crisis on the sector, a 'Show Me the Strategy' double session in which six invited companies detailed the thinking that had gone into devising a product development strategy for one specific product, and a 'case studies' session in which three CEO discussed how their respective companies had achieved partnering deals or reached profitability.

**The Editors**

**Companies Covered: 2009 Thredbo Biotech Summit Wrap**

	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 - Current)	25.0%
<b>Cumulative Gain</b>	<b>144%</b>
<b>Av Annual Gain (8 yrs)</b>	<b>14.7%</b>

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# Bioshares

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

## Thredbo Biotech Summit 2009 Wrap

The 5th *Bioshares* Thredbo Biotech Summit was held last weekend with around 130 delegates in attendance. The mood was more upbeat this year for the sector, which was surprising given the dramatic effect the Global Financial Crisis has had on this sector and many if not most other industries. Although publicly investors remain reserved on placing too much of an optimistic view on the road ahead, on a more private level, key investment players were extremely positive on the road ahead for (a) the broader market and (b) an escalating institutional interest towards the biotech sector.

In our *Bioshares* presentation, we noted that after seven consecutive negative quarters of share price returns for the listed biotech sector in 2007 and 2008, this year has seen two strong quarters and we are likely to see a third strong consecutive quarter of positive share price growth for the local sector, as measured by the **Bioshares Index**.

The GFC has taken its toll on the sector, with what must be a record 17 companies entering administration, changing or announcing their intentions to change businesses or being acquired in the last 12 months. The most public of these was **Ventracor**, which is undergoing a fire sale after around \$200 million was invested in a failed attempt to build a global LVAD (heart pump) business.

Capital inflow has been significantly restricted, with only around \$250 million raised in the last 12 months, way down from 2007 when close to \$1 billion was invested in the Australian biotech sector by private investors. The restriction of capital means that the viability of some smaller biotechs is in doubt. At June 30 last year, 22% of biotechs had less than six months cash. At June 30 this year, that figure had almost doubled to 39% of listed biotechs in Australia.

However, the successes are emerging, with companies such as **Biota Holdings**, which posted a \$38 million net profit, **Sirtex Medical** (\$18.2 million net profit this year) and **Cellestis** (an \$8.2 million profit). Overall the 20 or so profitable companies in the sector have posted strong results, largely unaffected by the GFC, with a new addition into that list, **Imugene**, which just posted its maiden profit of \$650,000.

And while there have been turbulent times for the sector, a golden age for Australian biotech may be approaching, with four major product launches expected next year - from **Alchemia**, **Pharmaxis**, **Universal Biosensors** (through its partner **Life Scan**) and **Chemgenex Pharmaceuticals** - and a further four in 2011 - from **Clinuvel Pharmaceuticals**, **Acrux** (Axirom), **Peplin** and **QRxPharma**.

### 'Show Me The Strategy'

One of the themes at this year's conference was strategy. Last year **Wilson HTM** had a "Show Me The Money" theme, so we altered that and titled ours 'Show Me The Strategy'. The concept here was that companies would focus entirely on a leading product, and discuss the thought that has gone into the strategies for developing that product.

## Acrux

The first company to present on this theme was Acrux, looking at its lead development program with Axiron, which is a roll-on testosterone therapy for men. Testosterone was first introduced in the 1950s as short acting injections (which were painful and required frequent visits to the doctor), then as capsules in the 1970s (but gave inconsistent results and caused liver toxicity), as patches in the 1990s (but needed to be very large and caused significant skin irritation) then as transdermal gels in the 2000s but still with issues such as long drying times and potential transfer to partners.

The global market for testosterone products is currently worth US\$1.04 billion a year, with North America making up US\$850 million of that and European sales totalling only US\$108 million. The leading product is a gel, called Androgel, which generates sales of US\$555 million in the US, followed by Testim (sales of \$141 million), then Androderm (US\$62 million). The market is growing at 20% a year overall. However the patch market is not growing at all where the gel products continue to achieve strong growth.

Androgel was first launched in 2000 and the other gel, Testim in 2003. Topical gels represent 72% of the testosterone prescriptions. The appeal of Axiron is that its drying time is less than half that of competing products (less than three minutes versus six minutes) and requires less dosing area under the arm only using a no-touch applicator. The leading product Androgel is applied to the abdomen or shoulders and upper arms.

The reason for the continued strong growth in the market is the high prevalence of low testosterone in men. Of men aged over 45 in the US, 39% are classed as having low testosterone, based on results from a random study. This increases to 50% in men aged over 80 years of age. Overall, only 5% - 10% of that market has been captured. Of interest is that it is not the specialist market that is driving sales growth, but the GPs. Acrux's CFO, Jon Pilcher, views Acrux's Axiron as the best in class product and said delivery systems are everything to this market!

## Starpharma Holdings

Jackie Fairley, CEO of Starpharma Holdings, spoke about a product application of its Vivagel microbicide, as a condom coating, which is due to reach the market in late 2010. Starpharma has partnered with the **SSL plc**, which is the global market leader, now accounting for between 40% - 42% of the global market.

The importance of a partner's position is one of the key aspects of Starpharma's commercialization of its lead product, with SSL being number one or number two in every market in the world except for Japan. For Starpharma there is the first-to-market opportunity for an effective microbicide with no other virucidal/microbicidal condom coatings in development. Starpharma's Vivagel product inactivates sexually transmitted diseases including HIV, HSV-2 and HPV. The Nonoxynol 9 coating, (which is largely ineffective), was previously adopted in 40% of the condom market in the US before issues regarding it with the FDA.

Starpharma's patents will run out to 2027. In a high priced market, this product should be well received according to Fairley, and will form a 'core' and not a 'niche' product for SSL. For the local sector

it is expected that the condoms will be premium priced, at 15%-20% above standard condoms. For SSL, the novel microbicide delivers sustainable differentiation and it's expected this effective microbicide will be a major driver of condom sales growth. For Starpharma, this first product will enhance the Vivagel brand as well as delivering revenues and commercial validation.

## Mesoblast

One of the many applications for Mesoblast's stem cell cells is for use in spinal fusion. The current lead product on the market is BMP-2 from **Medtronic**, which was launched in the US in 2003 and in Europe in 2005. The product now generates annual revenues of US\$800 million however has also had a dramatic impact on Medtronic's instrumentation business since the BMP-2 product was approved.

The key to entry for Mesoblast is that the BMP-2 product is only approved for 8% of spinal fusion procedures, with 80% of revenues coming from off-label use. Cervical spinal fusion (around the neck) accounts for 42% of the US spinal fusion market but the BMP-2 product has been linked to deaths due to swelling in the neck and the FDA has warned against the product's use in this application.

Moving further down the spine, for *posterior* lumbar interbody fusion, which accounts for 38% of the potential spinal fusion market, a pivotal BMP-2 trial was halted after ectopic bone formation was noticed. Which leaves *anterior* lumbar interbody fusion.

The gaps in the market offer Mesoblast the opportunity for entry into this sizeable market for cervical spinal fusion and posterior lumbar fusion (which the surgeons prefer over anterior lumbar fusion). In sheep studies Mesoblast's cells have shown no ectopic bone formation or spinal congestion.

Mesoblast will start studies in groups of 24 patients this quarter in both of these opportunities, with pivotal 400 patient trials each, possibly to start in 2010, for both cervical and posterior lumbar fusion.

## Biotech Round Table

In this session some of the sector's most experienced biotech managers and investors discussed many of the current issues facing the Australian biotech sector. Jeremy Curnock Cook from investment group IB Managers said he had always been a believer that you could always raise money depending on the price. That had now changed and in some cases you could not raise money at any price! Curnock Cook believes there needs to be a significant clear-out and re-establishment of trust between investors and biotech companies.

Jurgen Michaelis from **Terra Rossa Capital** (and **BioInnovations SA**) recounted a conversation he had with a major superannuation fund only that morning. Super funds are having currency and liquidity problems but super funds stand committed to biotech for a very long time. According to Michaelis, we will ride this out one way or another.

Alan Robertson, CEO of **Pharmaxis**, said that fund managers now had a huge choice now with (many) under-priced assets so biotech companies need to sell the message clearly. Robertson believes Australian biotechs are doing a huge number of things right and that we are light years away from where we were four years ago when the first Thredbo Biotech Summit was held. Business models are better, there is better execution, and he has more confidence in the sector than ever before.

In terms of market confidence, it seems that confidence has not returned to the UK, some is returning to the US, and Canada is somewhere in the middle, according to Curnock Cook. In Europe, whilst confidence also appears to be returning, overall it has still not been established that biotech can generate returns for investors.

According to Sue Macleman, CEO of **Benitec**, the sector needs to stay actively involved with the government. However, government backing does not always work, according to one comment from the floor. In Germany, failed government support (arguable misdirected financial support) of the biotech industry has destroyed the confidence of investors in that country in their local biotech industry.

Other comments from the floor were that if companies can hit their milestones and get a track record, groups will invest in biotech. By way of example, Pharmaxis which is doing just that, raised funds from 40 investment groups in its last capital raising earlier this year.

And another way to attract investor interest is to pool companies with operating businesses to put them above the \$10 million of revenue, which according to Michaelis is the threshold to which attract better investor interest.

## **Saturday Sessions – Pathways to Commercial Success**

The first session of the second day of the summit was devoted to presentations by three companies that have achieved success in one form or another, serving as case studies on the path to success. For **Imugene** it has been the licensing of its technology and several vaccines to animal health products company **Merial**; for **Labtech Systems**, the commercial launch of its automated laboratory system for streaking agar plates, and for **Cellestis**, its road to profitability from the sales of its QFT diagnostic. Each company was tasked with discussing their commercial strategy.

### **Imugene**

Imugene CEO Warwick Lamb discussed his company's commercial strategy, which he broke down into three phases. The first phase was focused on internal preparations, which involved improving the science, but making sure it had commercial outcomes. He said the company did proof-of-concept on one or more the major targets to use the data as a selling point.

Lamb said that they always intended to partner with a large company for the product development, regulatory and marketing phase. Noting criticism that this was 'giving away the farm' he said that "once you have looked past your own ego, there are people out

there who can do it far better, especially if you want to get a product to market as quickly as possible."

The second phase addressed the issues of how best to engage partners who might have an interest in the technology. Imugene hired a well-regarded US based animal health industry consultant and commenced talking to the management and scientists of prospective partners about their budgets, their needs, structures, approval processes, with the goal to move forward to fit in with them. The choice of a high quality consultant ensured they could always get meetings. Imugene also investigated partners' manufacturing processes and facilities to make sure they could be adapted.

Lamb said "We had a good understanding of our partners. We made data that was meaningful to them. We asked questions such as 'Is this a trial site you would use? Is it a credible trial site?'"

On gaining pig vaccine trial results, Imugene then presented data to prospective partners and began to develop competitive tension. "We were delivering to them what they wanted, not what we thought they should have" stated Lamb.

Imugene completed a deal with Merial following the conclusion of the pig vaccine trial for which the results were better than expected. He said they expected to close out a deal with at least one of three parties that were in the negotiation phase.

Imugene now has a staff of about five, with two in the lab at **Latrobe University**, making the vaccines for Merial and testing them for stability and purity and making material for trials. Merial designs and conducts the trials.

Merial pays Imugene each year a set payment just to have access to IP and Imugene's cooperation. It has exclusive licenses for two products. If its want more products they must to pay another sublicense fee. Imugene stands to gain further milestones and royalties. The deal sees Imugene receiving revenue that is three times the firm's running costs.

If Merial do not pay the annual access fee, they lose their rights and must hand back everything. However, the 'pay and stay' model fits into the Merial fiscal year and comes under their research budget. Lamb made the following point: "I think very big milestone payments and sign-up fees are impediments to your product moving forward. You are trying to get large amounts of money when you have small amounts of data". He also said "We let them in to prove it up". They have to pay to stay but they do not have to pay a large amount to look at the technology. They have to pay a lot more when they move it into the product development stage.

The deal also prevents Merial from cherry picking and they are required to work on a minimum of four products. Lamb said that there is a lot of pressure on Merial to move products forward – the faster they do it, the less they pay in annual fees. "It costs them \$3M a year to stay in the game".

The deal was the culmination of a three to four year strategy which Lamb said worked perfectly. "It played out to every last card, the

only difference being that we got \$10 m more than we thought we would get, because the trial results were better.” The deal was signed in September 2008, and was negotiated in the four months prior to that.

Lamb commented on Imugene’s financial position. “We no longer have to raise capital. We are now in the unusual position of being able to pay a dividend and return some funds back to shareholders while Merial do the product commercialisation.”

Lamb was asked who conducted the negotiations. He said they used a US based patent and commercial attorney, but that he did almost all the negotiations with the US animal health consultant sitting alongside. “That was an enormous advantage. He knew these people. He had done so many deals. As soon as they would err, he would say ‘Come on guys, we’re not going down that track’”. Lamb concluded that using the consultant made a very big difference and helped get Imugene an extra \$10 million.

### Labtech Systems

Labtech System was founded in 2004 and listed in 2006. Lusie Guthrie, the CEO, commenced her talk by contesting the view that ‘certain’ small companies should fail. She reminded the audience that companies like Cochlear started out small.

Guthrie described her journey in raising money for Labtech Systems and the reasons investors were not interested. “We were too little, too small. We were from Adelaide” with similar reasons continuing today. The company first listed on the Newcastle Stock Exchange and raised \$300,000 for proof-of-concept work.

Labtech Systems has developed the MicroStreak technology for streaking agar plates used in microbiology labs. This approach delivers ‘far superior’ results and productivity gains. The company has an exclusive partnership with **bioMerieux** for the MicroStreak technology. The product is now launched and was first manufactured at **Invetech** in Melbourne. To date, Labtech Systems has received \$6.7 million in payments

In the early days, Labtech Systems was told it had solved the wrong problem. However, the product is now considered the gold standard in labs. Guthrie says the MicroStreak technology is “an elegant breakthrough that has opened up other areas for automation. You can now seriously think about automating colony picking.”

Labtech Systems received \$3.2 million on signing the agreement with bioMerieux, which has taken a 10% stake in the business. A royalty stream flowing from sales of the applicator commenced from January 1 this year, with minimum royalties coming into effect. Another license payment is due in April 2010 of 3.5 million Euros with a performance payment to follow after that.

bioMerieux was Labtech’s first choice of partner because they are number one in Europe and have a focus on infectious diseases. Importantly, bioMerieux was looking for a technology that would enhance its position in the US.

### Key success factors

Guthrie said that a key success factor was that they had something that was needed in the market which was a true breakthrough. The company brought together a clever idea of John Glasson at the **IMVS** in Adelaide and with ‘brilliant engineering’ developed by **Invetech** in Melbourne.

She also said that they tried to connect with overseas markets early. The technology has a global application so they developed a global vision.

The selection of market partner was important and it was also important to connect with the right people at the right level. They worked closely with the executive team, who regarded the technology as pivotal for their growth strategy. Labtech didn’t meet the Australian staff of bioMerieux until about a year ago. BM have taken over manufacturing, distribution and marketing. BM have 55,000 instruments in the market worldwide.

*Bioshares* posed the question as to whether Labtech Systems could have done what they did if Invetech had not been located in Melbourne. Answer: “Probably not.”

### Future opportunities

“We have another lab automation project on the books and we now have the challenge of how to grow the business and not get taken out.” We have gone back into the laboratory to see where the pressing need is, Guthrie said. “We are aware of what competitors are trying to do. We are trying to put our own bent on it.” Guthrie said that microbiology has only in the last twelve months begun to opening up to change. (In contrast clinical chemistry and haematology were revolutionised in the 1970s.) Guthrie also said Labtech Systems now has the track record and knowledge and confidence to structure a deal differently.

### Cellestis

Cellestis has offices in Australia, the US and Japan, although the biggest office is in the US. The company sells the Quantiferon TB diagnostic for latent TB, addressing the developed world market. Quantiferon Gold In Tube is an ELISA based system.

### The Business Model

Cellestis business is based on a patented product, which it markets indirectly and directly. The company’s preference is to sell direct because using distributors ‘gives up a lot of margin’. However, Cellestis uses some distributors because it is not possible to be everywhere.

According to CEO Tony Radford, Cellestis sells direct, “where the money is and where the key influencers are. Whether the rest of the world likes it or not, medical practise is established in the US and Europe. You influence those people, you change medical practise world wide.”

Manufacturing is done by specialist sub-contractors because they have the greater ability to address critical issues. “If we had a factory we would have all the problems of investment and none of the advantages” he said.



A point over which Radford argued at length over was the licensing business model. "Here is where I get truly heretical" he said. "We have not fallen for the Big Brother temptation. Nobody is going to make you a true success. The history of this country is that everybody who has gone in for that has ended up in litigation with the Big Brother partner." Radford said that once the real money was on the table, your partner would not want to pay you. "If you are sitting on the ASX and you are licensing, they can screw you. They will not pay you. You are dead in the water."

And this would, he argued, dramatically affect a company's share price and commercial viability. "Where do you think your share price is going to go? If your Big Brother partner walks away from you, you are dead. You are not going to be able to get out of it. You're not going to have the trade marks, the marketing reach, the marketing skills. That's not to say you can't distribute."

"But if you have one person that holds a license, then they may as well have bought your company. They have already (bought it) but they haven't paid for it. If they are going to buy the company they should pay the premium."

### **Sales**

Radford said that Cellestis had just started to post reasonably serious sales figures. Revenue for the full year (ending June 30, 2009) was just under \$35 million, with a net profit of \$8.2 million. "What we have here is the beginnings of a successful company", said Radford.

### **Success factors**

Radford said that the a success factor was to make the focus of the business on developing a product and not validating a technology. A second factor was being global, not just thinking global. He also made the distinction that Cellestis invents develops, makes (through a contractor) and sells diagnostics, not IP.

Apart from manufacturing Cellestis does most things in house. Radford regards development and clinical trials expertise as a core set of skills.

Another success factor is the development of distributor partnerships. "We don't regard distributors as our customers. They are partners" he said. "You need to think about what is going to help them sell". As an example, he said Cellestis built a warehouse in Europe to better serve the needs of partners.

Another factor he cited as a reason for success is that as founders, he and Jim Rothel started as experts in TB. "We knew the market and had some development knowledge when the company started."

At the corporate level, the original VC group, **Asia-Pac**, was very helpful and John Bennetts (a continuing director) was "a fantastic find". It matters to get people who are smart, straight, honest and supportive. Danny Sharp, an investment banker now at **Shaw Stockbroking**, was also recognised for his significant input to the company.

Cellestis' IPO was followed by one secondary capital raise. This allowed a sensible capital base to be established, according to Radford. The company had enough money to do what it needed to do and could avoid raising money in bad times.

Another success factor included allowing founder control to be maintained. Founders (Tony Radford and Jim Rothel) are the largest single shareholders. "It's a good thing. We should recognise that" said Radford. "The only reason we add value for VCs is too make them money. And if you are not focused on making money then you are in the wrong game. Aligning your interests with the shareholders is a very good thing to do."

Other factors included running a very conservative cash strategy and maintaining a very conservative announcements rule. "We try to keep it material. Because when we put something out, people know it is serious."

### **Tactical partnerships**

Tactical partnerships have also been important. Cellestis licensed from **Statens Serums Institute** and cross-licensed with **GlaxoSmithKline** to get access to highly specific antigens for use in TB diagnostics. According to Radford "in diagnostics it's unlikely that a single technology will make the 'maximum' product. It will be part of it, but there will be others things that will help. The cross-licence has been worth every cent."

### **Cautious Boldness and Persistence**

To be successful, Radford said that "You have to do all the things that are necessary. Don't think that it is that hard. It may take a while such as getting an FDA approval the first time, but it gets easier on later attempts."

### **Sponsoring Clinical Studies**

According to Radford, Cellestis has maintained credibility by being open to sponsoring clinical studies regardless of the outcomes. Cellestis has also sponsored TB conferences, which while expensive have been great marketing tools.

### **Peer Review Clinical Papers**

Publications have been important to the company's success. Peer review clinical papers now exceed 400 and are growing. This has been a tremendous assistance in getting guidelines written according to Radford.

### **Marketing**

Radford argued that for companies we regard as success it has not been about R&D that has been the key, it has been about effective marketing. "R&D and good technology won't get you there."

"You have to invest in marketing and think about it really early on" said Radford. "And by doing it, you get to understand what your product should be. We have been through three generations of product. Our first product wasn't specific enough. Our second product was very specific and very good but what we found in the field it caused disruptions in work flow. So our third generation product addressed that."

**2009 Thredbo Biotech Prize Winners**

**2009 Stock Tipping Winner**

1. **David Groth**, Wilson HTM, +60%
  2. Alan Robertson, Pharmaxis, +51%
  3. Kerry Hegarty, Sienna Diagnostics, +39%
- Thank-you to Alan Liddle for donating prizes*

**2009 Inaugural BioMD ‘Bull Of The Mountain’ Award**

Winner: **Brad Walsh**, Minomic  
*Thank-you to BioMD for sponsoring and creating this prize category.*

**Ski Race Prizes**

Mens 1<sup>st</sup> Prize: **Greg Collier** (Chemgenex Pharmaceuticals)  
 Womens 1<sup>st</sup> Prize: **Fay Weston** (Talk Biotech)  
*Thank-you to the Lyon Group for sponsoring this event.*

“We have a competitor out there who has a disruptive technology. We cream them in every market because its an annoying technology (to use)”, he said.

The third generation product change came to us because we were in the market, because we were selling. “It came down to how long the blood tube had to stand in the rack at a reference laboratory, the processing time between the blood coming in and getting it out there. Now that doesn’t get taught to you when you are looking at the science of something. It only gets taught to you by the customer.”

**What Could We Have Done Differently?**

Radford reflected on what Cellestis could have done differently. One observation was that they could have gone into Europe ear-

lier. “I thought it was never going to be as big. I thought it would be more difficult than it was. We have 35% of sales in Europe. If we had gone earlier, we would have had more success because it has more countries and you can get specialised penetration.”

Radford said he would have possibly spent more on distributor relations, since the partnership concept wasn’t as engrained eight years ago. Spending another year in clinical trials and raising investment in R&D earlier were further reflections. And he might also have invested earlier in logistics and finance systems. A final consideration was that he might have hired a General Manager because of the enormous work involved in building the company.

Bioshares

**Bioshares Model Portfolio (1 September 2009)**

Company	Price (current)	Price added to portfolio	Date added
ASDM	\$0.45	\$0.30	December 2008
QRxPharma	\$0.65	\$0.25	December 2008
Hexima	\$0.48	\$0.60	October 2008
Atcor Medical	\$0.17	\$0.10	October 2008
CathRx	\$0.27	\$0.70	October 2008
Impedimed	\$0.54	\$0.70	August 2008
Mesoblast	\$0.95	\$1.25	August 2008
Cellestis	\$3.59	\$2.27	April 2008
IDT	\$1.49	\$1.90	March 2008
Circadian Technologies	\$0.72	\$1.03	February 2008
Patrys	\$0.13	\$0.50	December 2007
Bionomics	\$0.24	\$0.42	December 2007
Cogstate	\$0.26	\$0.13	November 2007
Sirtex Medical	\$4.55	\$3.90	October 2007
Clinuvel Pharmaceuticals	\$0.32	\$0.66	September 2007
Starpharma Holdings	\$0.45	\$0.37	August 2007
Pharmaxis	\$2.29	\$3.15	August 2007
Universal Biosensors	\$1.06	\$1.23	June 2007
Biota Holdings	\$2.04	\$1.55	March 2007
Probiotec	\$2.46	\$1.12	February 2007
Peplin Inc	\$0.60	\$0.83	January 2007
Chemgenex Pharma.	\$0.59	\$0.38	June 2006
Cytopia	\$0.10	\$0.46	June 2005
Acrux	\$1.34	\$0.83	November 2004
Alchemia	\$0.45	\$0.67	May 2004

**Portfolio Changes – 1 September 2009**

**IN:**  
No changes

**OUT:**  
No changes

**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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