ISSN 1443-850X

In this edition...
With the 8th Bioshares Biotech Summit concluded we bring readers coverage of the event, commencing with reporting of an address by QRxPharma COO, Ed Rudnic on the topic of 'Bypassing the Pharmocracy'.

More coverage will be included in the next edition of Bioshares.

	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)	-11.9%
Cumulative Gain	**204%**
Av. annual gain (11 yrs)	**17.8%**

Bioshares is published by Blake Industry & Market Analysis Pty Ltd.

Blake Industry & Market Analysis Pty Ltd
ACN 085 334 292
PO Box 193
Richmond Vic 3121
AFS Licence
No. 258032

Enquiries for *Bioshares*
Ph: (03) 9326 5382
Fax: (03) 9329 3350
Email: info@bioshares.com.au

David Blake - Editor
Ph: (03) 9326 5382
Email: blake@bioshares.com.au
Mark Pachacz - Research Principal
Ph:(03) 9348 9317
Email: pachacz@bioshares.com.au

Individual Subscriptions (48 issues/year)
$375 (Inc.GST)
Edition Number 464 (24 July 2012)

Bioshares

24 July 2012
Edition 464

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

2012 Bioshares Biotech Summit Report (Part 1)

The 8th Bioshares Biotech Summit was held in Queenstown, New Zealand on July 20-21. The Summit gathered 134 attendees. Topics addressed at the Summit included 'Bypassing the Pharmocracy', 'Biotech Equity Markets Going Global', 'Market Dynamics' and a special session devoted to presentations by four companies who were asked to discuss a pivotal drug trial they were conducting or planning. The summit commenced with a 'Year in Review' presentation by Dr Shane Storey from **Wilson HTM**, which was followed a little later by a discussion of trends in global M&A by Dr John Cullity from **Torreya Partners**. The Summit closed with the traditional Private Company Profile session and Investment Panel.

Bypassing the Pharmocracy Session

In this week's edition we exclusively report on the presentation given by Ed Rudnic, the Chief Operating Officer (COO) of **QRxPharma**, who addressed the topic of 'Bypassing the Pharmocracy'. This topic originates from our observation that a small number of ASX-listed biotech companies have moved away from the traditional early licensing model with large pharmaceutical companies to later licensing or to endeavouring to build an integrated pharmaceutical company from the ground up.

Rudnic commenced his talk by noting industry metrics that show that about two-thirds of companies that enter Phase I successfully move on. However, Phase II is the stage where companies fail. This is the critical phase where venture capitalists will say they need to design the 'company killing' experiment.

A little over a third exit at Phase II. However, a little more than half that enter Phase III will get approved. According to the **Tufts Center for the Study of Drug Development**, 91% of drugs that filed for approval will get approved. "That's probably about right but a bit on the high side," said Rudnic. "The ones that don't get approved give up. Something happened in Phase III. They had some deaths, they had some liver tox, they had some seriously bad things happen. They may be only a small percent but they don't go away. The regulators make these companies do very large or very long studies but they give up because they don't have the resources to keep going.

"For the record, that's not the case with QRxPharma. We believe we have a very safe product and we believe we will get there in the end," said Rudnic.

Rudnic shifted the focus of his talk to the subject of licensing deals. "If you execute them early in Phase II or earlier, people talk about it providing non-dilutive cash. All cash is dilutive. It takes away later value, it takes away shareholder percentage of the market place. You end up licensing the product for a lower percentage of commercial revenue. Cash is dilutive because it just prevented you from doing a private equity deal at the time."

Rudnic argued that being able to balance the near term benefit of the cash against the long term cost of it is something he would urge every company to take a look at, although he noted that every company is unique. He conceded that if you couldn't raise cash, then mortgaging a commercial revenue stream could be a necessity for the survival of a company.

One of the advantages of licensing early is that a company can access expertise especially if it seeks out a larger company. The larger company might employ clinical experts and special access to opinion leaders and to key figures with insights into the regulatory process. Furthermore, large companies often are willing to comment on a small company's clinical plan, even if they don't license it. "It's a valuable tool, even if you want to get to an M&A (and not license)," Rudnic noted.

Rudnic suggested that small companies should ask a large company's clinical group to comment on clinical plans, study designs and ultimate regulatory strategy. Apart from providing invaluable feedback, such a move also sets the stage to have a clinical champion come to the fore in those larger companies by the time the small company is at a critical stage of looking for a partner.

"If they have looked at your program and you have made some changes it can then be good to have someone on your side going in."

Later Stage Partnering

Rudnic said that if a company executes the deal later there are some 'musts' for the partnership. Firstly, there has to be substantial non-dilutive cash as part of the deal when you license out the revenue. "You have de-risked the program so to give it away for a low upfront is not worth it. When I say substantial, I mean enough money to get through the forceable future and start building on the next set of projects and investing in the company," he said.

According to Rudnic, a later stage licensing deal should validate for the marketplace that your product or discovery platform has significant value.

However, he emphasised the only reason for doing a late stage deal is that the larger licensee company has expertise or some characteristics that a small company does not have or will not be able to have in the near term.

"If it doesn't provide lower regulatory or commercial risk or both then I would say you are better off not doing the deal. The drawbacks to licensing deals is that they dilute the future value of the product or the technology. It greatly reduces control."

M&A Risk

An important issue relating to licensing is that both the product and technology are always subject to risk of the partner being acquired. "If you think about licensing to Big Pharma, but take a look at what's has happened to them; there has been some tremendous M&A activity. That's has been a real issue for some companies."

Ed Rudnic's Career in Pharma

QRxPharma COO Ed Rudnic has had a rich career which has included periods with Bristol Meyers Squibb and Schering Plough. He moved into the startup space where he invented several products while at **Pharmavene**, which was acquired by **Shire Pharmaceuticals** (in 1997). He was associated with Carbatrol and Adderall XR, which generated about US$2 billion at their peak in sales.

Rudnic left Shire in 1999 and started **Advancis Pharmaceuticals**, an anti-infectives company. He listed the company on the Nasdaq, three and half years later.

A significant stake in the company was sold to Chicago billionaire Sam Zell in 2008. The sale was brokered by Lehman Bros on September 8, 2008, nine days before Lehman Brothers went bankrupt. Zell acquired $100 million in stock at a 65% premium to the market. Advancis, which held $120 million in cash and possessed two FDA approved products, was bankrupted in 11 months. "It was breathtaking to watch" said Rudnic.

Rudnic has consulted to QRxPharma since 2008, having invented the controlled release version of MoxDuo while working with a venture group. He came to work full-time at QRxPharma September 2011 and took on the role of COO in February in 2012.

Related to M&A risk is the fact that large companies rationalise projects out all the time. "They are always taking a look at their R&D portfolio, as well as looking at budgets which can be cut, always looking at projects to cut and yours can be one of them."

No-Mans Land

One warning issued by Rudnic was that if the terms to the deal restrict access to future cash flow then "you are in no-mans land. You are in a position where you have spent the upfront and the milestone money, and the royalties you are getting are not substantial enough to grow your company. So now you have limited value and limited ability to raise new money on the existing portfolio and you don't have enough revenue coming in that would entice your licensee to come back and buy you."

With these considerations in mind, Rudnic discussed some examples to illustrate certain points.

Genvec

Genvec had licensed its main oncology drug product to **Warner Lambert Parke Davis** (WPLD). Genvec received a substantial upfront payment and was to receive another on conclusion of a first Phase III trial. However, between the deal signing and the Phase III Conclusion, **Pfizer** bought WLPD and the internal champion for the product was let go and rationalised its portfolio and returned the product. Genvec's share price fell despite being convinced there was not a technical problem with the product. They were stuck with a broken asset and it took them two years to get another company AstraZeneca to licence the product. Ultimately the drug failed in Phase III but that's not why Pfizer returned the drug.

Cont'd over

Advancis Pharmaceuticals

Rudnic drew from his own experience at Advancis Pharmaceuticals. **GlaxoSmithKline** had a version of augmentin and they had tried for many years to get a once a day version developed but they couldn't so they turned to Advancis Pharmaceuticals to access its technology. Advancis received $5 million as up an front payment, and another $8 million came as progress based milestones. However, GSK lost a patent suit and their patents covering augmentin. GSK chose to stop work on improving augmentin. The asset was returned to Advancis.

"It impacted on our entire technology base and the company's valuation went to half of what it was. It wasn't even the company's main product but the market took it as an indication that the technology had failed. It had not. The market didn't listen and still took us down by about half," said Rudnic. "Sometimes you can license out a minor product but because you don't have control over its and no control over decision making the risk can be substantial," he said.

GlycoMimetics

GlycoMimetics developed a drug for sickle cell disease. GlycoMimetics concluded a deal with **Pfizer** in which it obtained a significant amount of up-front and good royalties. Sickle cell disease is a disease that is largely targeted to African Americans which begged the question of how reimbursement would apply for a section of the US population. It's likely the drug will get covered but at what rate is the question. The risk for GlycoMimetics is not so much reimbursement, it's what the price is going to be.

According to Rudnic, GlycoMimetics tried really hard to get acquired. "A lot of us tried hard to get bought. But if it doesn't happen and you license, you are betting the company on the commercial value of the product," he said.

"Which tells you something about when you start these companies, and you start going down a path, it becomes incredibly important to understand what the value in the market place is and what the potential is, because that drives whether or not you want to bet your company on the back end commercial revenue or whether a license is really where you want to go."

QRxPharma

Rudnic also discussed QRxPharma and its MoxDuo IR pain drug, which is a product that combines two opioids and comes from research conducted at the University of Queensland. He said the US market opportunity is big, (US$2 billion) and growing. The drug is used for the treatment of acute pain and post-surgical pain. There are about 210 million prescriptions written in this space alone in the US every year.

Rudnic said QRxPharma filed an NDA with the FDA for MoxDuo IR in July 2011 and was given PDUFA date (a date by which the FDA must respond) of June 25, 2012. However, it did not receive approval as expected but instead received a Complete Response Letter (the old Non-Approvable Letter). A post-review meeting is set for August.

The Licensing of MoxDuo IR

Rudnic's view of MoxDuo IR is that it is a safe and effective drug, with over 1000 patient exposures to the drug having occurred to date. However, the company was not impressed by some of the terms coming out from discussions with various large companies. This drove QRxPharma to focus on the commercial revenue stream and less on licensing income.

"Because we had already put in about $70 million, we decided we weren't going to give it away for a little bit," he said.

"We did a strategic deal with **Actavis**. Our royalties were based on the fact that we had a late stage de-risked program. Actavis is a nice mid-tier company for us. So they are not big but had expertise. Our deal was based on 10-30% of royalties of net sales, except for a portion of time where we got 50% of sales which would see us get $75 million back, to reimburse us for all the money we had put into the program. And then 10-30% royalties. We were also able to negotiate a co-promote, where we got 25% of the effort and take up to 25% of the net profit plus our cost of selling reimbursed. (With that) you're in about a 50:50 revenue sharing event."

Rudnic said that QRxPharma was not capable of putting together a sales and marketing effort so they "absolutely needed a partner."

However, QRxPharma was able to negotiate a one year option for the co-promote. "What is pretty clear is that first year of selling always guaranteed to be the least profitable. You might even lose money. So we were able to avoid that first year of selling and come in after year two at our option and get up to 25% of the revenue. We could monitor how the product was performing and come in when we want to. We got a $6 million upfront fee but that was more of a token," he explained.

Actavis is the fourth largest generic company in world doing about €2 billion in turnover and has 10,000 employees. Actavis sells the pain product Kadian which was doing about $250 million in sales and was supported by 60 sales representatives. "We picked them as having expertise in this space that we didn't have and as having established sales and marketing infrastructure."

Actavis has announced it will merge with **Watson Pharmaceuticals** in the fourth quarter of this year, creating a company with about US$10 billion in sales. Watson has two existing brand franchises, one in neurology the other in women's health. Rudnic suggested Watson is "excited about getting into a third area, the pain market. So unlike other M&As, this works out well for us."

However, for QRxPharma, the launch of MoxDuo IR is on hold pending the post review FDA meeting. But according to Rudnic "all pre-launch preparations are done, all the marketing strategy, conversations with managed care and key opinion leaders have taken place. And as we (head to) launch we are in good shape."

"So for us, picking a mid-tier player and getting about 50% of the revenue of what we believe is about a $600 million product is very

Cont'd over

Bioshares Model Portfolio (20 July 2012)

Company	Price (current)	Price added to portfolio	Date added
Nanosonics	$0.515	$0.495	June 2011
Osprey Medical	$0.38	$0.40	April 2012
QRxPharma	$0.73	$1.66	October 2011
Mayne Pharma Group	$0.39	$0.435	September 2011
Somnomed	$0.85	$0.94	January 2011
Phylogica	$0.036	$0.053	September 2010
Biota Holdings	$0.69	$1.09	May 2010
Tissue Therapies	$0.48	$0.21	January 2010
Atcor Medical	$0.06	$0.10	October 2008
Bionomics	$0.29	$0.42	December 2007
Cogstate	$0.250	$0.13	November 2007
Sirtex Medical	$6.35	$3.90	October 2007
Clinuvel Pharmaceuticals	$1.76	$6.60	September 2007
Pharmaxis	$1.12	$3.15	August 2007
Universal Biosensors	$0.55	$1.23	June 2007
Alchemia	$0.500	$0.67	May 2004

Portfolio Changes – 20 July 2012

IN:
No changes

OUT:
No changes

substantial. It allows us a lot of flexibility with what we can do with that cash," he said.

August FDA Meeting

"We believe that following the August meeting we will have a lot more clarity about the FDA's concern," he said.

"I believe we are looking at a very short delay. When I look through the data I believe we have a safe and effective drug that has benefits over existing therapies. I believe (Moxduo IR) is going to get approved."

General Conclusions

Rudnic's conclusions were these:
Every company is unique. (Licensing) Deals that get done really have to be beneficial to both parties. Companies get non-dilutive cash from these deals but companies will spend that cash. However, it's very rare that investors or shareholders will see that cash.

"In the end, royalties and commercial revenues will drive the future growth and value of companies and the higher the commercial revenue the more likely it is you will get an M&A.

"So you can read into our intentions from the deal that we did. The lower the commercial revenue – no chance of an M&A! In the end, a company bets it future on the commercial success. As we start companies, as we grow companies, take a look at future commercial revenues and that will tell you what the future looks like."

Bioshares

How Bioshares Rates Stocks

For the purpose of valuation, Bioshares divides biotech stocks into two categories. The first group are stocks with existing positive cash flows or close to producing positive cash flows. The second group are stocks without near term positive cash flows, history of losses, or at early stages of commercialisation. In this second group, which are essentially speculative propositions, Bioshares grades them according to relative risk within that group, to better reflect the very large spread of risk within those stocks. For both groups, the rating "Take Profits" means that investors may re-weight their holding by selling between 25%-75% of a stock.

Group A

Stocks with existing positive cash flows or close to producing positive cash flows.

Buy	CMP is 20% < Fair Value
Accumulate	CMP is 10% < Fair Value
Hold	Value = CMP
Lighten	CMP is 10% > Fair Value
Sell	CMP is 20% > Fair Value

(CMP–Current Market Price)

Group B

Stocks without near term positive cash flows, history of losses, or at early stages commercialisation.

Speculative Buy – Class A
These stocks will have more than one technology, product or investment in development, with perhaps those same technologies offering multiple opportunities. These features, coupled to the presence of alliances, partnerships and scientific advisory boards, indicate the stock is relative less risky than other biotech stocks.

Speculative Buy – Class B
These stocks may have more than one product or opportunity, and may even be close to market. However, they are likely to be lacking in several key areas. For example, their cash position is weak, or management or board may need strengthening.

Speculative Buy – Class C
These stocks generally have one product in development and lack many external validation features.

Speculative Hold – Class A or B or C

Sell

Corporate Subscribers: Pharmaxis, Starpharma Holdings, Cogstate, Bionomics, Circadian Technologies, Biota Holdings, Impedimed, QRxPharma, LBT Innovations, Mesoblast, Tissue Therapies, Viralytics, Phosphagenics, Immuron, Phylogica, Bluechiip, pSivida, Antisense Therapeutics, Benitec BioPharma, Allied Healthcare Group, Genetic Technologies, Calzada, Bioniche