Issue 5| March 2015

A Biotech and Money Publication

Drugs&Dealers magazine

Industry insight, foresight and hindsight for life science executives

Positioned for success

The talent and tactics issue

MARCHING FORWARD: ONE YEAR ON FROM IPO

12 months along from IPO, we exclusively interview the CEOs of Circassia and Horizon Discovery on their transformational journeys to publicly limited companys and hear what's next for UK's biggest poster children.

NO RESERVATION: BUILDING £3BN COMPANIES

Fresh from Midatech Pharma's December IPO, we catch up with its CEO Jim Phillips to uncover what the future holds for a company and a CEO whose ambition know no boundaries.

BIOTECH AND MONEY LONDON 2015 TRANSCRIPT

If you missed Biotech and Money's flagship February congress, we've transcribed over 5hrs of content to bring you a concise summary of the debate, discussion and outcomes from this years congress.

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SUPPORTING THE NEXT GENERATION AND CELEBRATING SUCCESS

The first three months of 2015 have been awash with positivity around the sector, eminating from what was a very buoyant JP Morgan event in San Diego in January.

Here in the UK you can feel the sense that the UK is coming back again with a second phase of a much more sustainable and value based life science sector.

Backed by tangible evidence of monies raised in the sector last year and the combined successes of the 15+ serious money raisings on AIM, investor confidence is very much on the up.

This was the view backed by a large and signfiicant contingent of senior stakeholders at Biotech and Money's inaugural life science investment and partnering congress in London last month.

In this issue of Drugs & Dealers Magazine we're distilling the major outcomes from the conference that took place in early February, highlighting the key discussions and heavyweight debate that took place between key industry stakeholders.

We're also featuring two of the UK's greatest IPO success stories of the last decade as we gain exclusive interviews with Steve Harris, CEO of Circassia and Dr Darrin Disley, CEO of Horizon Discovery Group as we feature them in '1 year on from IPO'.

We also find time to speak with Jim Phillips, CEO of Midatech Pharma on their successful December IPO and their continuing amibitions to build a £3bn company.

Happy reading.

Regards
The Biotech and Money Team

NEW MODELLING FOR STRATIFIED MEDICINE

Innovate UK is to invest up to £1 million to establish new Knowledge Transfer Partnerships (KTPs) in developing modelling approaches to support the use of stratified medicine in the UK, across bioinformatics, systems biology, health economics and analytical algorithms.

Open date: 02/03/2015
Closing date: 18/11/2015

DEVELOPING NON ANIMAL TECHNOLOGIES

Innovate UK is providing investment of up to £6 million in collaborative R&D projects that support the development and application of non-animal technologies in the UK. For this competition projects must be business-led and collaborative.

Open date: 23/03/2015
Closing date: 29/04/2015

UK CHANCELLOR OUTLINES AREAS OF GOVERNMENT SUPPORT AFFECTING THE SECTOR

This month saw the Chancellor; George Osbourne give his last budget speech before the General Election. The key announcements affecting the sector rounded on funding support, enabling investment and tax relief.

The Government has outlined that it 'will commit £400m to 2020-21 for the next round of funding for cutting-edge scientific infrastructure' through a competitive fund based on scientific excellence across the UK. An additional £100m will also be invested in cutting-edge research projects through the existing UK Research Partnership Investment Fund, allowing current projects to leverage over £350m of private sector investment.

The sale of Medical Research Council assets will provide a £30m fillip to support research at the Francis Crick Institute. The Government will reinvest these monies, matched by Cancer Research UK and The Wellcome Trust, to help secure the project in the long term.

In enabling funding support, the Government, in respect of the Seed Enterprise Investment Scheme (SEIS), Enterprise Investment Scheme (EIS), and Venture Capital Trusts (VCTs), will bring these schemes into line with the latest state aid rules to support high growth companies.

Looking at the tax environment, the Government announced it will review the Entrepreneur's Relief scheme, something that could boost the UK landscape for spin-out pharma companies, by reducing tax burdens on new start-ups and nascent biotech firms. Helping companies attract successive rounds of investment.

View the full budget statement

FUNDING EXPANSIONS

Gilead Sciences is creating a new UK commercial headquarters in London and expanding its existing operations in the country.

The US biotech will be located in Holborn and expanding its international operations in Uxbridge and UK R&D headquarters in Cambridge. The move represent an increased investment of approx. £13m, bringing Gilead's UK workforce to 600, 400 of which will be based in London.

CONNECTED HEALTH

George Osborne has announced plans to provide £20m to fund four health and social care information projects. These 'Connected Health Cities' form the first investment of the government's Health North programme, which will 'unlock healthcare innovations in the English regions with the greatest health challeng-es'. The Northern Health Science Alliance will lead the programme.

CAN NEW MONEY OVERCOME OLD APPREHENSIONS IN UK BIOTECH?

Bringing investors back to biotech is something Neil Woodford and Jim Mellon are banking on achieving as they both roll out their separate investment vehicles in the UK. Woodford; aiming for $300m and Mellon; $150m, both high-profile investors that command a lot of attention and respect are bringing the fight to what is an underinvested industry in the UK.

Both guru's will be raising money through publicly traded trusts, with plans for investing in a new wave of small biotechs.

Up to now, investors in the UK have refused to gamble on biotech to the same extent as the US industry has enjoyed, but with these funds comes the opportunity to catalyse dormant UK investors, helping lead a resurgence in fortunes for companies in the UK that hold great science but meager budgets.

All eyes will be on these rival funds over the coming months and only time will tell at what level their approaches can re-ignite the UK's taste for biotech.

MICROBIAL RESISTANCE

In response to initial recommendations of the **O'Neill Review** on antimicrobial resistance, the Government 'will work with the Wellcome Trust, the Bill and Melinda Gates Foundation, the Institut Pasteur International Network and other partners to launch a 'Fleming Fund' with a total of £195 million of overseas development aid over the next 5 years to build laboratory capacity and surveillance networks in developing countries to address the issue of antimicrobial resistance and infectious diseases.

HORIZON PRIZE: AMR

Early this month, the **European Commission** launched a €1 million prize aimed at helping to reduce antibiotic resistance. The prize will be awarded to a person or team that manages to produce a test for upper respiratory tract infections to tell whether the patient needs antibiotics or not.

Known as the 'Horizon Prize: - Better use of anti-biotics, the prize is open for entries from 10th March 2015 until 17th August 2016.

Entry information can be viewed here.

The prize compliments the existing Longitude Prize competition run by Nesta.

FORGETTING THE OLD WAYS AS UK LAUNCHES NEW DEMENTIA DISCOVERY INVESTMENT FUND

The 17th March saw the UK Health Secretary, Jeremy Hunt, announce the launch of a £65m ($100m) Dementia Discovery Fund. The large-scale, international investment scheme aims to discover new drugs and treatments that could slow down the onset of dementia or even deliver a cure by 2025. The fund sees investors from the private, public and philanthropic sectors working collaboratively.

Major pharmaceutical companies Biogen, GlaxoSmithKline, Johnson & Johnson, Lilly and Pfizer have all committed to investing in the project, alongside Alzheimer's Research UK and the UK Government. The stakeholders involved will be working together in the coming months to develop the fund further.

The government has been working with JP Morgan to structure the Dementia Discovery Fund as an innovative method for financing dementia research.

The single scheme will finance a range of research projects identified by scientists as having the best potential for future success. The ultimate aim being to develop pioneering new drugs to treat the condition.

It marks a global consensus that Dementia research needs greater priority and that new sources of finance are needed to translate the best science into effective treatments.

Chairman:
Andrew Ward, Pharmaceutical Correspondent, Financial Times

Panelists:
Rt Hon George Freeman, Minister for Life Science, Department of Health

Zahid Latif, Head of Healthcare, Innovate UK

Sir Chris Evans, Chairman, Excalibur Group

Keith Thompson, Chief Executive, Cell Therapy Catapult

Nicole Mather, Director, Office of Life Sciences, BIS

Talking Points

What does the sector need to grow and succeed?

Perspectives on policy, innovation, investment and strategy

How can the UK drive the Life Science investment agenda

How can the UK compete?

Innovation, how the NHS can stimulate investment and growth

What this sector needs is long-term confidence to invest.

THE FUTURE OF LIFESCIENCE INVESTMENT IN THE UK

AW: George, we've got the Patent Box, we've got R&D tax credits, we've got catapults, we've got catalysts, and we've got a life science Minister. How much do you think these measures have impacted the current upturn we're seeing? Would the upturn have happened anyway for cyclical and market reasons or have they really made a contribution? What everyone here is wanting to know is how durable are they? Should they be worrying about whether this architecture will remain in place whoever wins the election in May?

GF: Two good questions. I like to think that our clarity of support has helped. The facts are that since we launched the life science strategy, this country has attracted over 3.5 billion inward investment in the sector, creating 11,000 jobs. We've received a lot of positive endorsement internationally for the clarity of the vision and what we're trying to do.

I think your second question about long-term policy confidence is very important. Different governments will have different emphasis, but I think this sector is very clear in what it needs: it needs long-term confidence to invest. It needs to know that we're putting in place a policy landscape which is conducive to genuine private/public partnerships in healthcare innovation and a health system that is pro innovation. I mean putting innovation fundamentally at the heart of the health services vision for grappling with these really deep structural challenges. I think the NHS England recent 5 year forward view and Simon Stevens' leadership, with a much stronger emphasis on the importance of innovation, technology and helping us to deliver more health for each pound. Precision medicine, smart medicine, early diagnosis. Now at the moment these are words, we have to translate them into quicker access. That's why I've set out this major review of innovate medicines uptake in the NHS and will shortly be making some announcements about test beds, and using NHS populations in cities and clusters in the UK to be fast adopters of technology and bring them to test at scale.

AW: So we've got a few representatives of the pro innovation architecture that we're talking about there. Let's talk to Keith at the Cell Therapy catapult. Let's talk about your role. We saw last year the go ahead for a 55 million pound manufacturing facility in Stevenage where academic and private sector

That combination of rapid access along with the great research base we have in the UK we think is a real differentiator.

researchers can come and use your site. It sounds like exactly the kind of public/private sector partnership that everyone seems to agree is a good idea. Tell us more about the role of the catapult.

KT: So the catapult is part of a large-scale initiative by government, generally across technologies which might result in the embedding of large scale industries into the UK. Alongside big data, genomics, precision medicine, a new catapult coming in precision medicine, there's a catapult that I've put together in the last 2.5 years or so in regenerative medicine, but more broadly in the advanced therapeutics area.

When we started out we asked ourselves why there wasn't more traction in a sector which holds such promise of cures rather than just treating chronic diseases? It came down to 3 things fundamentally, I haven't got time to go through all of them. One was business related stuff, how do you work an autologous model, personalised medicine, big pharma, health systems generally don't understand how to do that.

Secondly how do you have a regulatory system which is used to dealing with small molecules and large molecules, deal with cells, where stem cells or self-therapies generally or gene therapies where there isn't a proven track record.

Lastly, how do you make the damn stuff? With pharmaceutical companies these days, nobody really thinks about how you're going to make a new chemical entity, someone else does that and the cost of that is so small you almost don't have to think about it in the calculation of how you're going to take it forward. Nowadays the same goes for biologicals. It wasn't the case 20 or 30 years ago when I was cutting my teeth in the industry, but it absolutely is the case for cell therapies regenerative medicine. How can you scale these up? How can you test them, how can you control them? How can you put together what big pharma would called the CMC package. Actually that's part of the value building story, how are you going to make them deliver stuff?

So we put together a survey of all of the assets which were in the UK that were helping it. They were all in the academic sector, they're all small, and none of them can produce any volume. So we took the case to Treasury, to BIS, to put together what we would call a manufacturing hotel, a large scale manufacturing hotel. Which is quite a different concept than anyone has tried to roll out before, and this is really because many of the firms involved in this sector value that kind of knowhow and IP on how to do these things. But given the uncertainty on what manufacturing is going to look like, there's a reluctance to invest heavily in it.

So we put together this 7,700 square meter facility. That is a large facility. We hope to be cutting ground in the summer. It will have within it a range of pre-standardised manufacturing models which quite frankly in partnership with the catapult, firms will be able to rent to make late stage and pivotal material for trials.

In that way the supply chain kind of builds up around it, all of the know how about how to do this starts to get embedded and firms can be confident that if they are successful with their product they will be able to supply in market and replicate that. It's quite a deliberate act because there's plenty of value created in the story of what the asset is, but actually long term value tax take often comes from the industry that develops around that.

So it's all about trying to get the

industry to try and put roots down in the UK, become a global centre, and especially be able to supply all of Europe. We've been out and road tested this with many firms, and frankly it's gone down really well and we expect that to be taken up very quickly.

AW: Let's turn to Nicole, some terrific stuff going on already in cell therapy in the UK, and that will be accelerated further with the Stevenage facility. But in the US we're seeing hundreds of millions of dollars poured into similar projects. Last week we had President Obama using his state of the union address to commit to an even bigger focus on advanced gene therapy and genomic science. How can the UK compete? Why should an investor come to the UK rather than the US?

NM: So I think we have the infrastructure that we've been discussing on the panel already in terms of the cell therapy catapult, but also we have the great basic science in the UK that we can build on. We also have the 100,000 genome project. Looking forward I think the way that we're going to be able to differentiate ourselves is what we're going to be able to produce through the review, and I think George will have talked earlier about his runway that we see coming out of that review. We may not be able to offer in the UK the best prices. But what we're looking to do through the review is to offer faster access. So given the NHS number that can be used across the UK we can collect data, have real world evidence of our outcomes, and provide a testing ground where companies can have rapid evidence of how their products really work out in the market. Then using things like the early access to medicine scheme, which we hope to be able to evolve, get their products into patients faster. That combination of rapid access along with the great research base we have in the UK we think is a real differentiator.

AW: Great, let's turn to Zahid then we can turn to Chris for the investor perspective. Zahid you've got an interesting perspective I think because Innovate UK operates across a range of innovative industries, so tell us how you think biotech is doing relative to other entrepreneurial growth sectors?

ZL: We're recognising the fact now that the health landscape has changed; people understand how much healthcare costs now, and the real challenges of how you deliver efficient and effective healthcare in the future is coming to the fore. What you've got now is what I would describe as a redistribution, a realignment of the supply chain. People need to offer and operate in different business models from what they used to do previously. I think this opens up a real opportunity as to how people think about their business models and how they're going to operate in the future.

A lot of that is enabled by the fact that suddenly we've developed ways of being able to operate banks, entertain ourselves, shop online, yet health care is lagging in the background in this space. So where are the opportunities which allow people to be able to engage in their own health care and engage with

I think the real best wave of bioscience companies to come out of the UK will be in the next 3 years.

being able to decide for themselves what they want to get and receive from their healthcare services?

I think it's all to play for in this sector. It's drawing in a lot of new and different players in this space where they are actually developing new products and services to come onto the market. Now we are there to help companies across that transition, because a lot of the times it's not necessarily just about funding. People know us predominantly for the funding we provide through biomedical catalyst, and other schemes. But it's also through the support that we provide through the catapult programmes and the connections we provide through the knowledge transfer network where we often add great value.

I think what we've evolved through crafting the way we do things is understanding that it's about not just the money but about helping people having the access to the right capabilities and facilities, and the right connections that they need in order to move their ideas forward.

AW: Let's turn to Chris. Chris you're the investor on the panel. You're also known as a straight talker. So give us your health check, your prognosis for UK life science at the moment. We've seen, I think VC finance was at 41% last year, public fundraising multi-year highs, people are feeling more optimistic. Do you share that optimism?

CE: Yes, I think it's a very good time. Did the government create all this? Obviously not. But the government helped, because over the last 7 years, we all remember the crash, the whole world came to an end and biotech fell off dramatically. It was a right state and these initiatives created by the government over the last 3 or 4 years have all been catalytic, have all been extremely helpful. Long may that continue, and there's some good joining up going on. But it's clear that markets have improved and stock markets have got better. There are exits, there are fund raising capabilities which stimulate VC's to put more money into things, and that stimulates other people to start seeding things, to get in amongst the venture capitalists, to get in amongst the markets, and so there's a good positive chain going on.

But the most interesting thing, I believe, is that the quality of things has got better. We all know that. Some people say the Brits learnt their lesson, we didn't learn any lesson. I can tell what you has happened. The best thing for the resurgence of biotech was the 6 year disaster of the fact that all fund raising dried up. A lot of people think that fund raising drying up was the end of bioscience in the UK, which is rubbish, because the actual investment in science by the British government continued to increase, right through that 6 or 7 year period. So the fundamental science, the immuno- therapeutics, the regenerative medicine, the stem cell therapy, and all the stuff we're talking about now building factories to scale these things up. The fundamental science continued to get funded better and better and better, and guess what, it had nowhere to go! There was nobody backing it. Nobody to put any money in. Which was the best thing that could have happened.

It incubated longer in Cambridge, in Oxfordshire, in Wales, and as a result it's beginning to come out now. These things are coming out now and these are good looking spin out companies, good quality companies. They're also finding good managers, because the good managers spent 6 years in pubs whinging and whining and actually learnt some lessons. So they've gone and joined high quality science bases, and guess what? Venture capitalists are putting the money in because the markets are here and the intuitions are all back.

So everything is joining up nicely and I'm feeling very buoyant, because I think the real best wave of bioscience companies to come out of the UK will be in the next 3 years. I don't think you've seen them yet. They're coming. I've seen things right in the early stages that have been incubating now for 5 or 6 years, as I say long may they continue to incubate in these university bases. Thanks to George and all these initiatives actually of the government, because you're making cash available to them, but you're not allowing them to spin out and float and do the dopey things they did way back in the early 00's. So for all those reasons it's actually quite positive.

But as I think you know, the political landscape has got to stay stable. You've got to get a good clean win in May. There's no point having a dopey party coming in with no life sciences minister, no strategy for enterprise or entrepreneurship or business or bioscience, that would a bloody disaster. You need to get on and deal with this topic, and thankfully George and David Cameron and others are dealing with this topic very positively. That has to happen. It will be a disaster if it doesn't and then what we don't want are too many massive hedge fund managers improving the futures of a business by telling the world it's all going to come to an end at October the 1st this year so we're going to have a massive recession so he can short all the stocks and do all the rest of it. So we've got to hope that everyone stays positive through the next 12 to 18 months to allow these good quality companies to come through, to thrive on the markets, and start giving returns to investors. ■

CIRCASSIA: 1 YEAR ON FROM IPO

B&M: The last 12 months have been a very positive and transformational time for Circassia. Let's start by reviewing the progress made over the last year.

SH: You can see from the results we announced two weeks ago that we've made strong progress across all of our four lead programmes. Our Cat-SPIRE Phase 3 study is fully recruited, and it's a very large study in over 1400 patients. That study will report out in the first half of next year.

In our house dust mite allergy programme we have now started a large Phase 2 field study with around 660 subjects. That study is being recruited as we speak and it's on track. The Grass-SPIRE data we produced during the year showed we could give a short course of our product and 3 grass seasons later we still see an effect without any further treatment. So it's pretty dramatic. We're now gearing up to start a Phase 3 study in the first half of next year. We'll set up 150 sites in 10 or so countries before we begin recruit-ing patients.

So that's what we've been doing this year on those products. For our ragweed allergy treatment we are following patients up for a 2nd ragweed season with no further treatment. We will also be doing a larger phase 2 dose ranging study at the start of next year, looking at approximately 500 patients.

B&M: If we also look at the progress made in the commercialisation of the business. Are you able to outline what has been achieved.

SH: We recruited our Chief Commercial Officer, she started in September. What we need to do is educate the physicians as to our technology, how it works, and the data available. You can't sell the product because it's not approved yet, but you can educate the market. And we are currently recruiting the people to enable us to carry out that education process. Half of the team will be US based and half in Europe. And because reimbursement is absolutely critical these days, we will also be hiring market access experts for this process, again US and Europe based.

So we're starting on that process now. It's quite an undertaking for a company of our size to do that. But if you don't, you won't get the launch you need. We raised sufficient money at the IPO to allow us to do this and post our Phase 3 results we will multiply that resource by some considerable number.

Steve Harris
Chief Executive Officer,
CIrcassia

Steven Harris is CEO and co-founder of the company. He is a bioscience entrepreneur with extensive experience of founding and leading specialty pharmaceutical companies.

CIRCASSIA
Controlling Immune Responses

Circassia – a specialty biopharmaceutical company developing a range of novel immunotherapies. Circassia is focused on developing and commercialising a range of immunotherapies for the treatment of allergy and we have made significant progress since our establishment in 2006. Our lead product, a new treatment for cat allergy, is currently in a phase III registration study.

I think allergy is sometimes underestimated in terms of the impact it has on society, it's absolutely huge. I think that is why people pay for it.

B&M: Do you think that the sheer scale of the allergy market is going to help with the conversations you have with payers and reimbursers?

SH: I think it will help the conversations. Importantly, we're focused on the moderate to severely allergic patients. Those are the people that are very poorly served. When you look at the data allergy is the biggest cause of lost productivity at work in the US, bar anything else, by a long way. I think allergy is sometimes underestimated in terms of the impact it has on society, it's absolutely huge. I think that is why people will pay for effective treatments.

Patients are incredibly motivated. I'm sure you know people who are moderately to severely allergic, and if you ask them what they'd do to get better they'd tell you it's a lot.

B&M: You mentioned that the US market holds the greatest potential for Circassia. How will you be looking to exploit that opportunity?

SH: There are 3500 practising allergists in the US. We will be setting up a direct sales force. We raised sufficient funds at the IPO to set up the commercial operations, to hire the medical liaison officers, to hire the sales force and to put in place the infrastructure necessary, and that's what we'll be doing. A sales force of no more than 100 is well within our capabilities and that's sufficient to address that market.

B&M: Beyond Europe and North America, is Asia a target market?

SH: It absolutely is, but it's not something we would do ourselves. In Japan for example, we'd look for partners. We are not in the process of looking for partners now as we are waiting until we have begun the clinical development of our Japanese Cedar allergy treatment, which is very important in the Japanese market. 50% of the population are sensitive to Japanese Cedar pollen so a Japanese Cedar product has huge potential. We're currently in the process of identifying the epitopes that go into that product, and we've nearly finished that process. We are talking to the Japanese regulators about the toxicology work they want us to do, and later in the year we'll be talking about the development programme. Once we've done that we'll then be in good shape to talk to partners.

B&M: What do you think is the biggest threat to the business at the moment?

SH: For a company progressing as rapidly as Circassia there are a number of areas to keep on top of, and of course you can always be surprised. Recruiting the right people, scaling up our commercial capabilities and managing multiple late-stage programmes can be challenging, but fortunately we've a great team in place to address this. In addition, it goes without saying that as a company still in clinical development there's always an associated risk. To manage that risk, particularly for our lead product, we've made sure we've designed our phase III study as well as we possibly can. We've been very cautious in how we've powered the study, so if anything it's overpowered as we've assumed the treatment effect will be lower and the variability greater than we've seen in phase 2. We've also been very selective in the patients recruited to the study to make sure they are

Cat-SPIRE is the most advanced of this new class and is currently undergoing the final phase of clinical testing

Ragweed-SPIRE has achieved encouraging results in proof-of-concept phase IIb clinical testing

properly allergic and have significant symptoms so you can show the difference with treatment.

B&M: We recently spoke to Dr Jim Phillips at Midatech Pharma and he spoke of his ambition to build a £3 billion company. What are your ambitions for Circassia?

SH: Our ambition is to build a self-sustaining speciality pharma business that develops that sells its own products. Part of that could be supplemented by acquisitions if they made sense at the time. But that's our ambition.

You can see a number of companies that have trodden that path before, and have been extremely successful. You can set a target like $3 billion, but you have to say by when. I want to rapidly build a self-sustaining speciality pharma business as quickly as I can. I want to be able to control our own destiny. I think you do that by commercialising your own products. I don't want to rely on partners to do those things. Partners can help, but I think you should be the driving force behind your own products. So we're very ambitious, we want to build a very large company. We think any one of our products can sell more than half a billion dollars, and that's a lot of money. If you've got 1 product selling half a billion dollars, you'll be a $3 billion dollar company. That's the sort of multiples or greater you would expect. If we get 4 products on the market selling anything like that, we'll be 4, 5, 6 times the size of that. That's the scale of our ambition.

B&M: You mentioned acquisitions. Do I understand that acquisitions are not a major part of your cause or strategy?

SH: It is part of our strategy, and we have talked to shareholders about that. What we want to build is a broad base speciality pharma business. To do that we want to deliver our pipeline and to commercialise our own products. But we also want to broaden out the pipeline and the commercial products we might sell. We're not promising we'll do that next week or next month because these things are difficult to do, especially in terms of identifying the right things that are complementary with our business, and paying the right price for them. But what we've flagged is if there are opportunities to do that, we absolutely will.

B&M: Last year's IPO was the UK's largest for decades. Did you feel that added unforseen pressure?

SH: Well, there is more pressure just because we're higher profile. But I really don't think about it like that. I just think about the fact we've got a job to do. Frankly it doesn't matter if you're private or public. You have to deliver for your shareholders. For me that's the most important thing. The only additional consideration is you obviously do a lot more investor meetings in the City, updating analysts, press, shareholders, and potential shareholders. And that just takes more time than you would ever spend as a private company. But I guess I don't really feel additional pressure in any other sense. I suppose one thing that has surprised me is how much profile the IPO has given us, even across the Atlantic in the US. The biotech market over there is incredible, and although there's a huge number of companies I would say everyone we speak to has heard of us because

It's important to put the past in perspective so that gives people some confidence. But also have some successes going forward which also gives confidence.

Grass-SPIRE has successfully completed a proof-of-concept phase IIb clinical study

we've managed to get that profile. That's actually very helpful. It allows us to engage potential investors in the US, institutional investors, where maybe they wouldn't have listened to a UK based company normally.

B&M: What have you learned from dealing with investors in your time as CEO?

SH: Investors are people at the end of the day. What they want to do fundamentally is understand what you do. They want to understand that if it's successful you can make a lot of money, and that you've got a credible plan to achieve that, and can give them confidence you can execute it. At the end of the day if we do well, and we do what we say we'll do, they will do very well. Fundamentally, I think they want to be able to trust you.

B&M: What do you think resonated the most with your investors?

SH: I think everybody knows someone who suffers from significant allergies. So investors can put themselves in the place of that person, and consider what would they do, and they get it.

With some of the rare diseases, as awful as they are, they're quite difficult to picture and understand what it means. But you can really understand allergy because it's your sister, your mother, your friend, and they can't go out in the summer, or they can't visit friends because they've got a cat. There's all sorts of things you can't do if you've got allergies. Can you imagine not being able to go out in the summer? You want to go out but you can't because it makes you feel so awful.

B&M: If we look at the life science industry in the UK as a whole. What do you think needs to happen for investment to fundamentally grow?

SH: I think success always breeds success. When investors see other investors making money, they become more interested. I think that's just a natural consequence. I think what people tend to forget are some of the successes of the past and they have historically focused on the failures. They say company A or B is very risky because they had a bad time maybe in 2000 or a few years ago. But I think what they also forget is that if you had invested across the board in say Shire, CAT, Celltech you'd have done extremely well.

More recently you look at SkyePharma, Vectura, Vernalis and BTG, they've been good investments over recent times. So it's easy to remember the failures and forget the successes. I think if you'd looked across the board, you'd probably only have to have invested in Shire in 1997 when it was worth £150 million to make every penny back and a lot more from the investments in the other less successful companies. It's important to put the past in perspective to give people some balance and confidence. It's also important the industry has some successes going forward which will alsogive confidence. There has definitely been a change recently with more people at least willing to listen to investment stories now than a year or two years ago.

There were certain investors where you'd try to get in and they'd say they're not interested. Now some of those will actually want to hear what you have to say. It's a slow change, but it is changing. Of course the biggest change will come when people make lots of money.

B&M: What do you think you can do as a CEO to influence this?

SH: I'm sure there are many people that can collectively make a difference. Anyone on their own can only make an incremental difference. But I think perhaps presenting the facts of the number of historic successes and how successful they have been versus the failures is important. It's about all of us educating the market. The market shouldn't be taking rash decisions, but they should be taking well educated decisions.

B&M: To close, what advice would you give to a CEO embarking on their first 12 months as a Plc?

SH: I think if you've done it before you know what to expect. If you haven't, what comes as a surprise perhaps is the amount of time you have to spend in the City. Consequently you have to put in place the right team to allow you to spend that time in the City, otherwise you just don't have the time to do a decent job.

You do need to keep the news flow and the information flow coming to all interested parties, whether it's existing shareholders, potential shareholders, analysts, press and so forth. It's not a trivial exercise. That can come as a shock. But you just have to structure yourself internally in a way that allows you to do that. ■

Chairman:
Joe Pillman,
Partner, Wilmer Hale

Panelists:
Nigel Pitchford,
CIO, Imperial Innovations

Martin Walton,
CEO, Excalibur Group

Chris Hollowood,
Partner, Syncona Partners

David Porter,
Partner, Apposite Capital

Graziano Seghezzi,
Partner, Sofinnova Partners

Talking Points

Where are the opportunities and new sources of innovation and how can they be tapped?

What are VCs looking to back and why?

What is needed to go from idea to IPO?

How should business models evolve?

In my world you need more than a great idea, you need someone to propagate the idea.

OBTAINING GROWTH CAPITAL AND FOLLOW-ON FUNDING

JP: I am going to start by picking up something Chris Evans said earlier this morning - the idea that the last 5 or 6 years has led to a lot of exciting sciences staying in the universities, not being spun out as soon as they used to with mixed results and whether particularly the VCs round the table and in the room think that now is a moment when there are some wonderful opportunities out there at the various universities around the country. Chris, you probably haven't done, certainly in your current role, too many exits yet. But you're looking at these opportunities?

CH: We are. I have to say I do agree with the comment from Chris Evans. We started Syncona 2 years ago now, and it was really on the back of the Wellcome trust being frustrated in the short termism as it saw it of investing in the life sciences, and a real desire to leverage the European academic base into proper big companies. I was staggered in the first 6 months with the quality of opportunity we were finding in universities. So this was back in 2012, very much 3 or 4 years post Lehmans.

And as examples we have found investments, one out of Oxford where clinical proof of concept data already existed, which is a rare thing for a university spin out, and we've been very pleased. So I do agree with that. I don't think it can go on forever because you've got a bolus of maybe 5/6 years build-up of academic innovation, and the VC's can right now cherry pick that. But it's not going to be sustainable at the rate it's getting cherry picked on a year on year basis. But I do agree there is a moment in time now where it's very interesting.

JP: Martin you probably have thoughts on this too?

MW: Yes, we clearly see the same thing. What we have noticed though is that you have many universities where previously they'd been very keen to set their records, set their bar for performance as number of spin outs, have ratcheted that back partly because of lack of funding opportunities but also partly because they have not had the best commercialisation opportunities from the funders that have traditionally been funding those spin outs.

And so they've either drawn capital, raised capital which has been too small to get them to the key inflection point or on terms they found it ultimately wasn't worth their while to continue, given their expectations they had from the

I don't think that capital is the scarcest resource in this sector, I think it is good terms.

outset. So I think there is, and this is in the larger universities now I'm talking about. I don't want to say they've had their fingers burnt, but there's certainly a greater caution which is lending itself to that long incubation period.

JP: Nigel you have close links at Imperial Innovation with Imperial College. Do you see this coming through as well?

NP: So I guess the benefit of having had money within Imperial Innovations over that period of time is there's been a constant pipeline of new companies been emerging from Imperial and then laterally also the connections we have with other universities in that golden triangle, have seen us sort of foster and develop up those opportunities.

I guess when I look back though over the whole funding period it's absolutely true that there was sort of a dearth of capital available, but actually where that capital was available it was being concentrated in 1 or 2 new deals with big syndicates being put in place around them with those companies being fully funded to achieve something really special. We and Soffinova were involved in Mission Therapeutics for instance. This has raised a lot of money, it's got 3 other corporate VC's involved as well as Soffinova and ourselves. So this is a company that while still very early stage still has capability to drive itself forward and is based on fundamentally some really interesting new science.

So I think those opportunities have been out there. I guess also within that environment I would also look around and characterise that some businesses have had to develop in a different way. So they've developed with access to smaller pockets of capital from angel investors for instance and worked particularly hard on building business models that earn revenue quite early if that's something that is possible. Darrin at Horizon Discovery, for example, had that combination of both technology, entrepreneurial management but also the ability to drive some revenue through that business that they were both able to get money from us as a VC but also money from angel investors that have supported them through that period.

So whilst that absence of large scale capital was definitely relevant across that period, and as a consequence I think there are some really interesting projects which are accumulating in universities that can now be spun out. I think there are different circumstances around those, and certainly around Imperial we've continued to keep that pipeline flowing. But also outside of that I think certain companies have been funded in different directions.

JP: David, do you have any thoughts on this topic?

DP: Maybe one point from me, which is that sometimes I think we get very science orientated, because all of us are scientists I expect. But in my world you need more than a great idea, you need someone to propagate the idea. I think one of the things that goes wrong when we're looking at earlier stage stuff is the science might be great, the scientists might be great, but who is actually going to be the CEO and take that forward and sometimes there isn't enough cash around to afford that CEO, and that's when incubation schemes or putting things together is very important.

So there is a lot of brilliant science going on, but to turn that into what I need, which is ideas that are going to make returns for my LP's requires that other magic ingredients of a serial entrepreneur or someone who can do that and sometimes we seem to be a bit short of them, or they're not quite connected with the

Good failure is cheap, bad failure is very expensive.

good science, or the science is itself not enough and needs some other science from somewhere else. Again we get through those barriers of pulling things together into baskets which can be barriers to what we want to do, which is to get this out into the commercial world.

Audience: Can I just make one point, we've been through the nuclear winter and now we're coming to the sunlit uplands of biotech through the roller coaster we've all lived through in the past. One point it wasn't just the science that was incubated in the academic environment, companies were forced into Darwinian strategies to survive, and almost hibernate in some ways and actually I think during that period, some of the initiatives that government had such as the R&D tax credit and more laterally the catalyst funding and so forth have really helped that hibernation, so that companies can now come out of their burrows and seek funding properly so they can get properly financed both in the private markets and public markets. I think it's quite a different environment that we're all emerging into isn't it.

Darrin Disley: I agree entirely with Chris, recessions are the best times to start companies. All the companies I have had been successful, started in recession, in fact all the ones I had that didn't work started when times were plentiful and funds were slushing around. People find a way. Entrepreneurs start being more entrepreneurial, they start making challenging business models to the status quo.

My worry is that when we come into these so called better times that people start getting lazy again and keep doing the obvious things and they just carry on and the process starts, and everyone walks to the tech transfer office, and through the series A B C and become less entrepreneurial about it.

JP: What are VC's looking to back and why do you back particular companies?

GS: On our side, I think we are not known to be innovators of business models. So we continue to do what we've been doing for the last 25 years, which is we like to back companies and build companies, we start from the series or series A, and then we go with our companies until a trade sale or position them on public markets.

The first element that David brought up is we look for the people around the table, and then the technology that they want to bring forward and the business model they have in mind. But we almost always start from the people around the table. It can be a great scientific leadership for example as Nigel already mentioned, the Mission example is, that was all based on scientific l eadership and hands on experience in a previous company called Kudos, that was a key element for us to do such an early stage investment and then we need to have technology and IP, but this is something that everybody agrees is very important. But for us the key element is really the people round the table - either the scientific side or the entrepreneurial side.

CH: People, people, people.

MW: You've stolen my thunder completely. I mean there's a very clear correlation between the exits we're seeing in our two funds and the quality of the management and it's a truism that good management always has the IP sorted out, they have good assets, it just always happens like that.

Audience: It's not just looking at how innovative that science is, because it has to be innovative, it's looking to the future, what pharma is buying, where the buyers are coming from as well and where the unmet medical need is and its' a combination of those factors with the people that I think really builds truly great innovative new companies from the start.

NP: I guess when we're taking things straight out of university, the quality of science, the quality of the scientist, the IP always has to be pretty strong, then we try and marry that with management that we're typically bringing to bare around them, because they don't typically have management if they're coming straight out of an academic lab. So we're working pretty hard to create the right cornerstones to a business at that seed start-up stage.

I guess though we invest across a number of different companies and a number of different business models. There are some we're growing in order to try and find a trade sale or some form of exit in a nearer term view. But there are others where we're much more similar to Chris and Syncona, where we're actually trying to build businesses that will be the next generation of billion dollar companies that will sit at the heart of the UK technology arena. So those are the types of company we're always mindful of, and to Darrin's challenge, always mindful of supplying enough capital to those business and the key ingredient around them continue to evolve and strengthen so we give them the best opportunity to deliver that. That's because that's sort of what our LP's and our shareholders want, that's Investco, Woodford and Landsdown, who are prepared to back those types of business with significant amounts of capital alongside us. So we'll be investing across a wide variety of different type of company, but it's clearly our ambition to have 4 or 5 or 6 businesses that we can create into those billion pound companies in the future.

MW: If you assume the science is a given from the outset, let's assume that, then it is down to the people. We feel very strongly that you have to take people who not only can manage the business and run disciplines and so on through this period, but also have an ambition. You've got to give them enough capital to realise that ambition.

So we have a lot of people who tend to drift to the next funding round to pay the next round of salaries and so on or pay the next trial and setup, not even a real point of data. We want to encourage from the outset a business plan that takes them a long way through and to that end we tend to augment the VC model a little bit by having little pots of capital to come along side us. So as a fund you have investors and so on and you want exits from that. We've also tried to get to the stage where we have, and currently we have over 200 million pounds of co-investment standing right behind us who come into deals alongside us. We have all the Welsh grant pot which is 100 million plus over 10 years or so for companies that go to Wales. For all of that you can say to people "well you come to us with a plan to get to 2017," and we're saying no 2019 and another set of trials or whatever it is, and we can finance that for you , and try to work with them on their business plan to make them more ambitious. To take that science to a much greater further stage.

JP: One thing I just wanted to ask you about,is here we don't celebrate business failure at all. In the US it's almost a mark of honour that you've had some form of business failure, but here, certainly in the UK and maybe in Europe, there's a little bit more of a stigma about that, and management are therefore more frightened of failing. What do you think of that Chris?

CH: I agree with that. I think that we do need to show a bit more maturity as an industry to failure. I think we have been bad at that. We do need to dissect those failures that do fail purely on the science and not an execution, and take those teams and find them better things to work on.

The point I was going to make about management is I don't think that capital is the scarcest resource in this sector, I think it is good teams and now that we are in the sunny uplands and there is plenty of money around, we need to think about concentrating that capital into those teams rather than doing more businesses per se. We'll obviously do more biotechs, but disproportionately we should concentrate capital into our winners. Because while we're seeing big financing rounds in Europe, we're seeing massive financing rounds in the US. We're in similar technology spaces, and we run the risk of taking a European knife to a US gun fight. We need to really think about that.

DP: One of the issues about the UK not being good at failure, is one of the things we get very agitated in our house about which does happen is this management team that won't accept failure when it's staring it in the face, and then burns more money trying to resurrect something that should have been laid to rest a while before and that is the very bad habit and that to me is execution gone very wrong. So if people's worry about failure causes them do to that, that's very bad news.

JP: So there's good failure and bad failure?

DP: Absolutely. Good failure is cheap, bad failure is very expensive. ■

Chairman:
Nooman Haque,
Director, Healthcare,
Silicon Valley Bank

Panelists:
Deborah Harland,
Partner, SR-One

Röel Bulthuis,
Managing Director, MS Ventures

Mette Kirstine Agger,
Managing Partner,
LundbeckFond

Anja König,
Managing Director,
Novartis Venture Fund

Talking Points

What is driving the increased in corporate venture in life sciences

How are corporate venture differentiating their models

How does CVC differ in Europe versus US

What role can corporate venture play in syndication

Great science is great science, but without good people it's not going to translate into something that is meaningful product that has a commercial and medical need.

EXPANDING ROLES FOR CORPORATE VENTURE CAPITAL

NH: When we look across the landscape of venture investment, if I look back over 10, 12 years, corporate venture has typically been 8 to 10 per cent of the venture market. Now the last two years it's rocketed up, over 30 per cent. What is driving that?

DH: I think there's probably a difference between early stage and late stage in terms of where corporate venture capital has really upped the game, and I would say only about four, five years ago, the majority of the institutional investors, non co-operative investors, were focussing on their portfolio and follow on capital, late stage investing, and this created an opportunity for corporate venture; the majority of whom in the healthcare life sciences were doing early stage anyway, to do more. And that's certainly how we at SR One saw it. It coincided with us at SR One getting a mandate actually to really sign a cheque, within reason, as long as we believed in the investment thesis, of any size. But we still focused on early stage and it also coincided with a different way to syndicate deals, which we might get onto earlier.

AK: What I would also say is that the boundaries between traditional institutional investors and corporate investors have certainly blurred. The crisis of 2008 has greater opportunities not just for corporate investors, but also for other diverse sources of capital. You know, people had to get creative. I think people have a lot more experience with raising funds from diverse sources and that is certainly there to stay.

Some of the institutional, so called 'independent investors', have become much less independent and I think there's a much better and more nuanced appreciation that every fund could be potentially different. And corporate venture is not a monolithic block, and independent venture is not a monolithic block either, and so people just like to work with who they like to work with. It's down to the individual.

NH: I want to bring in Mette in here. Lunbeckfond is not obviously part of a traditional pharma, but you work alongside the people around this table and others. Just taking Anja's point about the different models within corporate venture capital, how do you differentiate them? What drives you to work with one partner over another?

MKA: To a very large extent I think it's actually Anja's point: people you work well with. There's a lot of

What's missing is actually a specialist global investor base. People with domain expertise.

challenges in any given investment and you need to be a good team around the table to carry investment forward to an exit.

So we are evidently not strategic corporate venture, but investing as any other VC for return - but we are evergreen. So we're not tied into specific time frames or finite funds and in that sense like to work on a longer term perspective, but we have an IR goal.

To the point before I would say I think the whole industry has matured and it's really a matter of what is the right composition around any given deal. I think the scale that was around five, six, seven years ago of working with corporate venture being afraid of information leaking back to the mother company or being tied into a specific deal, I think that's completely gone now. You don't have anyone any more questioning the risk of working with corporate venture. It's seen as a benefit to the deal and I think you have numerous examples now that exit doesn't go to the mother company of a given corporate venture. It's completely free in terms of competition.

NH: People talk about building companies behind strong management teams. I'd be interested in your perspectives here. Obviously you're not constrained from capital, not as much as a tenure VC fund would be, but do you see the same challenges in finding the management teams if you're building companies to take all the way through?

DH: It is certainly a common theme for all of us around this table. We generally syndicate with non-corporate VC's, so it's a challenge we deal with as a syndicate of investors. It's no different for us as corporate people.

Great science is great science, but without good people it's not going to translate into something that is meaningful, that's a product that has a commercial and medical need.

RB: Because of the emphasis on company creation, on early stage investing, we spend a lot of time building teams, coaching management teams. In a number of cases that is seasoned entrepreneurs coming on board to an idea, but in many cases it also a first time management team, scientists that need to grow into leadership roles in companies. I think that's part of our responsibility to not just bring people in from the outside, but also as boards, as investors, help support and coach our management teams to grow into those roles, to build new teams.

NH: Mette, I know this is an area the Lundbeck fund is very heavily invested in as well. From a sourcing perspective and supporting management teams, how do you go about that as your sort of non-traditional pharma? What's your perspective?

MKA: Not any different from the others around the table here in terms of supporting management and I think you always try to take a balanced view on bringing new people in while having some experience on board. But we would take exactly the same approach.

NH: Because of your focus on early stage, does that mean you interact more with the TTOs and the universities at early stage or are you relying on your networks to bring opportunities to you after they've gone through some of that early validation?

AK: It's both the network and being close to the originator. We each have our home market and it's our job to understand what's going on at the

In the end if we build those companies, if we return money to our LP's, the LP's of our co-investors, that is going to flow back into the market.

institutional level, even the individual scientific investigator level at those universities. But that's what we can bring back to the community.

DH: It's clear that the further you get away from home and home turf, the more difficult it is to build companies, so there this geographical tendency to concentrate and I think you will see that as a theme also in the US.

NH: How does your role as a corporate investor differ, if it does differ, in the US with respect to Europe and how much of that is affected by wider features of the capital market between the two countries?

DH: I think fundamentally it doesn't differ that much because the overall funds investment strategy is the same. In terms of deal flow, in Europe I think we probably see as SR One pretty much everything that gets done, I would say. There might be a few things we miss, but we pretty much see everything that gets done if it's a deal that falls within our scope and people know it falls within our scope.

I think the difference in the US for our teams even though we're in the hubs at Boston and in the Bay area in San Francisco, is there's much more competition there. So even as a corporate VC in a regular market there's more competition in the Boston and Bay area to get into deals. In a buoyant market like we have now, our focus as an early stage investor, as a corporate early stage investor, means that we're still not short of deal flow. I think if we were where we were when I joined SR One ten years ago now, we were predominately a Series B investor. I think if we were a Series B investor we'd be struggling in the US to get into deals right now because the market's buoyant. In a non-buoyant market it's very different. If the market's buoyant the IPO market is open. Even we're seeing in early stage deals right now at the current time cross over funds wanting to come into early stage deals.

So we're seeing them come in really, really early. So if we were not a Series A and seed investor I think in the US we'd struggle. I've not seen that in Europe yet and I don't know how the others feel, but I'm not sure that it will be coming in the near term.

AK: One of the reasons why we struggle is because we're very valuation sensitive. So if you pay up you can get in, but we don't want to pay up. We are very driven by fundamentals, I would say. I mean that's definitely true for the Novartis venture fund.

Audience: I'm with a rather small Swedish biotech company called Bioment and we're interested in getting better funding. I find it amazing that we can sometimes have difficulties attracting our neighbours just across the Zund whilst the Americans are chasing us. Have you any thoughts on this?

AK: What we suffer from in Europe is that we don't have a European Stock Exchange. So there's no European IPO window at the moment. There has been a few IPO's, one on the Swiss exchange, one on the London Stock Exchange, a couple on EuroNext, but it's not added up to what they have in the US.

The favourable environment in the US and especially the IPO has created competitiveness in the exit market and has also increased the valuations and the ease of getting an M&A exit, including in Europe. And it has opened up the possibility of taking your European companies public in the US. And it has also created the phenomenon where US money is chasing fewer US deals and they're becoming interested in assets, ex-US. So that's certainly true.

MKA: We saw that in the year 2000 / 2001 and as soon as the market changed the US dollars goes back to US and we have to have that infrastructure in Europe in order to get the business up and running the way you see in US sustainable. But it doesn't mean that it's not good also for European biotech right now, what you are seeing in the US. I mean if you take Denmark, we talk about there's no public market whatsoever for new companies, but we've had two companies listed last year in the US.

DH: But you know what I would like to work on as Europeans is why can't we have a European exchange and why couldn't that be at the LSE? We attend a lot of meetings with British government officials or European Union, whatever, and everybody's talking about how can we make the UK bigger? How can we make Switzerland bigger? But the way to make anything bigger is to make it European. It doesn't really matter which exchange it is. It would benefit everybody. So this has been a bit of an issue that the money is still pretty parochial and the LP's have strings attached where if you're raising money from the EIF then you have to spend it in Germany rather than on the best deal. And that leads to also parochial investments downstream, and if you look at some of the IPOs in Euronext, and if you take it public in France typically all the money is French. You can't compete with the US like this.

Audience: I guess these guys are doing a great job, but ultimately long term there needs to be more money available if you want to finance all these great ideas which we have in Europe.

RB: I think it's an interesting discussion but it's completely beyond the point. It's all wishful thinking and really depressing. Realistically, yes, there's less capital available in Europe. We don't have a Stock Exchange and we're not going to have one European Stock Exchange. The only way for us in sort of the industry making an effort to bring more money to the table, it doesn't work like that. The only thing we can do is create good companies, build good companies and around the table we invest based on the fundamentals. It's the sciences, the people, we try to build good companies, and whether that's in Europe or in the US, frankly I don't care. But in the end if we build those companies, if we return money to our LP's, the LP's of our co-investors, that is going to flow back into the market.

The challenge right now is that when you look at the venture side there's going to be a lack of time for that. So public markets are great right now, especially in the US. There's money flowing back to investors that comes from some of the public market exits. And that money goes back to LP's that have in the last probably seven to eight years moved away from biotech and especially moved away from investing in funds that invest in early stage biotech because that was not a popular topic. So until people move to invest in those funds again, it's going to take a couple of years to do then but that money will come back.

But it's completely beyond the point to think that there's some kind of general movement to make money flow into the sector. It doesn't work like that.

NH: At the start of the panel we talked about how corporate VC's are as a group becoming more aligned with each other and more aligned perhaps with evergreen funds that might share the same unlimited or relatively unlimited time horizon. How do you see that sort of playing out? I mean do you see sort of traditional VC's and yourselves almost clear blue water almost separating them with respect to how you invest? Would you still invest alongside tenure funds given that the issues that can sometimes arise?

DH: Yeah, absolutely. I think in a way as Allios was a great success story, it's an exception. I think conceptually the best possible syndicate is a mixture of corporate and non-corporate funds. It's a good balance. It's a different balance of motivation and to Anja's point it's not really the funds. It's the people that you invest alongside within those funds. And in reality when I've got a deal that I want to do, there's probably only four, five or six people that I would call up to say "Do you want to do this deal with me?" And that's a reflection of the number of funds that are active here and doing the same stage of investments as well as the people that I want to work with.

AK: I agree with Debbie. It's the individual. But also what's important is there's interest. I don't necessarily think that interest is the same as conflict of interest. Interests when they're misaligned can become conflicts of interest, but what's the most important thing about syndication and board governance in general I think is that it should be clear what everyone's incentives are. So if somebody is a strategic corporate fund that has a clear strategic interest in the company I'm investing in, that could be a good thing as long as we all know about it. And as long as the process is set up to honour the situation that there is this interest, then it doesn't even become a conflict of interest.

And this also is true for independent funds. They may be at the end of an investment cycle. They may not be able to participate in the next round so they may have different pressures on them than we do. ■

Chairman:
Joe PIllman,
Partner, Wilmer Hale

Panelists:
Keith Blundy,
CEO, Cancer Research Technology

Simon Kerry,
CEO, Karus Therapeutics

Eddy Littler,
CEO, Domainex

Simon Russell,
CBO, Creabilis

Martin Judge,
Innovation Sourcing Director, Novo Nordisk

Talking Points

What do Pharma and Biotech bring to the party

What do Pharma and BIotech want from deals

Where do asset centric vehicles sit in Pharma appetite

How does US and European appetite differ

What is it that a Biotech really brings to a party? I think it is really around biological and clinical insights.

LICENSING AND PARTNERSHIPS: WHAT PHARMA WANTS

JP: We are here to try and work out what big Pharma wants from Biotech, and vice versa and I think if I could advance on that accurately in the last ten years, I probably wouldn't be here – I would be sunning myself in some tremendous spot in retirement! I am going to tip Martin in straight away to have a go at this.

MJ: I am working with Novo Nordisk's innovation sourcing group looking for new opportunities and partnerships, so the question is excellent. What we are really looking for is innovative new therapeutics. Innovation is the key word: it has to be something that really has a chance to be a game changer. It is very significant, but also something with enough data behind it to allow us to make a convincing case. We need a really good case to progress these opportunities up to management. Biotech seems to be looking for good partners: groups that will work with them, that will not just take in a project and expect to run with it.

JP: Thank you. Simon, you are our cross dresser I think in this particular topic, having been on both sides of the fence. Perhaps, you can comment?

SR: I have been in Biotech now for almost 3 years, but, as you said, I was a cross dresser in that I was with AstraZeneca, and then more lately with Novartis for many years. The one area I just wanted to pick up on is how to ensure that the products that Biotech are bringing forward can be translated in to the sort of language that big Pharma understands.

Martin has made a very good point – there is clearly innovation in that, and clearly we want to bring forward innovative products that big pharma have not covered in their own research and development portfolio. What I am also talking about is being able to translate what a product actually looks like. Being able to say, perhaps at an early stage, "I certainly don't agree" as we said earlier on in defining a price, but at least being able to put forward a value proposition: why is it that an insurer or payer is actually going to pay for this thing when it finally reaches the market – expressing a profile in terms, and a commercial perspective that a big pharma would actually appreciate and understand. That's one element that I think is important in that dialog between the two.

KB: I am coming much more from the funders' perspective. I think what we've seen is a real appetite to come

The major difference wasn't the financial terms, they were fairly similar. It was the commitment from the company. And that is what I think Biotech should be looking at when choosing a partner, not so much the money. That is simple to judge - it is that commitment.

earlier and earlier in collaborative partnerships. I would say, over the time I have been there, increasingly it's a willingness to work earlier and earlier in a variety of creative partnerships, and particularly if you can bring, as well as the science, some of your own infrastructures, you can risk share and they can leverage assets off you – that is very attractive for biotech and pharma. I guess we are in the fortunate position where we can offer that.

SK: I don't think it is complicated actually. Pharma are looking for things that are going to give them a commercial advantage – that's all they are interested in. What's it looking for from a biotech company? In the first instance, looking for something from a biotech company it can't get itself in house. That might sound blindingly obvious but it's much easier for a Pharma if they can do something easily in house. If they can make a second or third generation compound in house - they already have an established target – they will do it. A biotech company is very rarely able to compete with a pharma company in things like chemistry.

So, what is it that a Biotech really brings to a party? I think it is really around biological and clinical insights. Those are really the two things that make Biotech unique and it is those insights really that pharma can't get internally; those insights are unique for biotech. From a biotech perspective: building yourself to a point where you can really do that great super-duper deal, and if I look at the deals that have been done in companies, good deals that have all been aware that good clinical people, good clinicians, good biologists have got together and understood something and have a unique insight in the treatment pathway of a disease. But it is uniqueness - pharma wants uniqueness. It want's something that is going to give it that commercial advantage, and that is what we have to keep in mind when we look at what pharma wants from biotech.

EL: In my last company at Medivir, we were out licensing a Hepatitis C product. We were fortunate, almost uniquely, that we had 3 pharma with term sheets. I won't go into details, but basically we had to choose between these. One was fairly easy to eliminate because they were very late and took a hell of a long time to come off the term sheet. The other two were actually very good deals - sort of apples and oranges. In the end, we chose to go with J&J, and the reason was that they absolutely convinced us that they were committed to the project. I think for Medivir, which at that time was a typical biotech, this product was essential for us to take forward for the future of the organisation, and we wanted to have somebody who was going to be equally committed. And that's why we went with J&J. They proved to be in this project an excellent partner and that product went all the way, and now it is marketed and earns J&J $10bn a year. It was a great success story. But the major difference wasn't the financial terms, they were fairly similar. It was the commitment from the company. And that is what I think Biotech should be looking at when choosing a partner, not so much the money. That is simple to judge - it is that commitment.

JP: Some people say in the UK we are too scientific bottom up, and we are not looking at the market? Do you think the US market does that better?

SK: I actually don't think Americans are necessarily better salesman or better speakers. I think that they just focus their message differently. I think a lot of companies think about the market in the UK all the time. But I do think it is a problem and I think it is manifested. When you look at deals that UK companies do for their assets, they are lower than deals that the American companies do for their assets. That is for a number of reasons, as much as they say different things. It has probably to do with the way in which the projects are capitalised, probably to do with the proximity of the market, to the buyers the American companies have. But it is noticeable and I can think of examples in areas of therapeutic interest to us, where the UK companies have done a deal but the US equivalent, who may not have such a good molecule, if you like, and maybe another year or two late to the party, have done a deal that is two or three times bigger than the UK counterpart.

I don't know if I know the answer, but I am curious to understand why that is. Are we doing something here in Europe or in the UK in particular what makes us different or not as good a partner than our American counterparts?

Audience: I think it is very very valid point that we are not as good in general at understanding the commercial focus on outcome.

MJ: That is difficult. I do see the trend – we have a lot of contact with American companies and I think they do tend to present a very clear focus on the outcome rather than their history. Really, a strong focus on what you are offering, and what it is capable of doing is the most important, and I would disagree with the emphasis on biotechs having a strong clinical knowledge, biological knowledge, that is certainly true but we also encounter a lot of groups that are working with technologies. Especially if they are working with disruptive technologies hearing from the source of something creative and new, who can make it interesting in a way that leads you to want to work with them to bring this in. If you think of examples that Simon said, that took a lot of work by some dedicated people who listed something completely new to bring that into play, and that is I think moving ahead rather well now. Having a really good case for what you are bringing to the table and what you can do is the most significant aspect.

KB: I would say about being commercial that is very difficult if for example you are in therapeutics. Sometimes, you are not absolutely clear at the outset of a drug discovery programme where it is going to end up and that is part of what you are doing in the discovery phase, to work out where the absolute clinical positioning is. By the time you come to want to engage with partners, you have just got to have that proposition.

JP: Let's move on and talk about asset centric vehicles. Are they more attractive to pharma or are they less attractive. I think Eddy has quite some strong views on this so I'm going to let him go first.

EL: I think one way of looking at this is about perception. In our experience, the perception of an asset focused vehicle is that you have a very clear idea of the risk involved in that process, the timelines and the clear milestones. The other way to look at this is that you don't have protection against attrition. You basically usually focus on one unique project, and if that happens not to be successful, than you are heavily exposed. If you are a biotech looking at these in terms of tying to get a licencing deal or investment, it is more important to look at it from the other direction which is: look at your own company and work out in terms of your strategy what is the most important format for you to take your projects forward, not to directly follow what you perceive to be the investment chain but instead to work out what is important for your company. I think it is the perception risk, and I think that

> ***"We have a lot of contact with American companies and I think they do tend to present a very clear focus on the outcome rather than their history."***

different investors have a different perception. For biotech, it is important not to take that route but to work out what is important for your organisation, and to make sure you follow that route. It is easy to get sort of seduced by the dark side by following what you think as well as where the money is, and not to lose track of your strategy. That is my major concern about it, that sort of following the money chain.

JP: Martin, how do you look at asset centric vehicles?

MJ: Basically look at it as falling into two categories. One is very clearly focused on bringing a new therapeutic in and often very narrowly focused on a particular one then they become a very narrow asset focus company with a very high risk profile and a significant job to try to convince the right people to buy into this, particularly if it is innovative as opposed to the other end of the spectrum, which is the technology based groups, that are generally bringing some sort of platform that could be used to partner with many companies.

In terms of investing, certainly you are taking less of a risk with a good technology based company than you are with a streamlined very focused asset based company, but you will probably get less in return of your investment. In terms of partnering, a company that is not so asset centric probably has more capability to contribute to the various projects you might work with on the long run, because they are applying a knowledge base to a number of projects, and increasing their knowledge in more generals area as opposed to driving one forward.

In terms of opportunities, if it is a single asset company that has a really great opportunity that our management, our scientists buy in to, we would be happy to partner with them. Our expectation would be that they probably wouldn't survive that long as an independent company unless they broaden their perspectives but that's okay. For us, if we are getting a product out of it and it's okay for them and the patients that would benefit from, so it can go really either way.

SK: The asset centric vehicle is really an investor driven thing rather than a company driven thing. I am not sure, if there are many entrepreneurs that get out of bed in the morning thinking that's it, I am going to set up an asset centric company. We are not in an asset centric vehicle and it is terrific fun. We have got some great investors on board. And they are VCs, and they are not nasty. If anybody thinks otherwise, I take him out or a fight afterwards. It is possible to build a company with more than one asset, and hopefully, bring a return to all of our investors. There are pros and cons it depends more on the investors than it does on the asset or the company.

KB: Maybe a slightly different perspective, but for me, the whole push behind asset centricity, if you like, was about not building companies around one single project. So, not wasting your time in all that infrastructure to do things once. We ourselves set up a fund exactly in that model. We don't create legal new companies, SPV vehicles, but we still are asset centric in that this Pioneer fund will only develop and then license projects. It doesn't get into all of the bricks and mortar and management that goes with single project companies. I think sometimes, there is a cross over there where people have forgotten. I thinks that is where the genesis of this was.
I think there are situations where perhaps people like the idea of having and spinning out single projects into companies, and you have seen companies being willing to do that, and some others going to talk here today. Because it is a way of preserving value, and maximising value to the individual assets they got. But if you got a lead asset, do you want your company swallowed just for that and not realise the value from the other assets. I think there are advantages but again, you have to think through, and not just be taken by a fad or a fashion. Think what is best to develop and maximise the value from the assets you have got, and spinning them out one by one particularly if you have got a platform might be a good way to go. ■

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SUCCESS STORY

Speakers:
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Freddy Crossley,
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Talking Points

Horizon Discovery secured £68.6m to fuel global growth through an IPO in March 2014 on London's AIM.

Here the men behind the float share their story, lessons and secrets to the success.

The triple alignment success factor: leadership, investor and market.

Dr Darrin Disley, CEO

CREATING THE WIN WIN WIN: ANATOMY OF AN IPO

DD: So what we're talking about today is the win, win, win. I think business is actually a lot simpler than people make it out to be. You make something for X, you sell it for a multiple of X. Your business is about customers, not you.

The businesses that go best in my view are the ones that create the win, win, win: a triple alignment between founder/shareholders, tech transfer offices and investors, and delivers return directly in proportion to risk taken.

I think for me the success of Horizon is not about how much funds you've raised, because that can vary depend on when times are good and times are bad etc... Sometimes you get lucky with timing, I think we probably did that. But it was actually from IP to IPO in 6 years and 1 day, how we were able to maintain those alignments of interest, return capital as a pre-IPO company to early shareholders.

When it came to the IPO, yes people made a big exit as well, but it was the returns of 2 to 40X, which is the range that people got in Horizon, were returned in proportion to the risk taken by the people who participated in the company.

We're an unusual biotech company in that we do products, we do services, and where we have intellectual property and knowledge in oncology research and drug discovery and development we're able to leverage into that biotech value chain and get milestones and product royalties as well. But we're focused very much on short term internal rate of return on that portfolio rather than the traditional long term for biotechs. We're aiming to power genomic research and personalised medicine. Here are the quick facts. We raised our seed funding on March 26 2008, £150,000 from angel investors including myself, Jonathan Milner and University of Cambridge. Then we went to AIM on March 2014 and raised £68.6 million. We initially went to raise £25 million and the book was 7 times covered, so we were able to take a much larger amount of funding and place out £28.6 of old money.

Heavily subscribed as we say at the top of the range. The market cap was 120 the current market cap 180. The share price after some initial over-hangs we had to clear where there was a drop in share price of about 20%, it's now back up at 25% above its IPO price. During that period of last year it outperformed FTSE, AIM and NASDAQ market.

The IPO becomes a really important time of realignment of your investor base.

Why was it successful? If you look at our IP to IPO timeline, we started in a pig shed in March 2008. We very much focussed on deploying genome editing. This was something that was very much in vogue now. Spark therapeutics raised £161 million on NASDAQ with our technology, RAV, in gene therapy only in the last couple of days. But back in then the worst recession in a hundred years it was not the time to be expansive and think about how you're going to change the whole healthcare paradigm. So we did what we could. We focussed on customers, generated revenues, we were profitable, break even in the first 3 trading years so that enabled us to build confidence in a really declining market. So investors were knocking on the door to invest in Horizon.

Coming to the other end, as we got to the business end we started to marry this growth in revenues around 6.6 million last year, consensus 11 million, we've reported 11.8 this year. Plus this milestone upside. We got into position to IPO on a very simple story. We called it the bread, butter and jam on top model. We've got a very complex business, those product services and leverage happen in every stage of drug discovery and development from DNA sequence to patient treatment and every stage in between. So we had to crystallise out a very simple story, and we'll talk about the importance of messaging in a little bit.

But here was the success. It was about leveraging what we had at all stages. It enabled us to raise money on our own terms, so we were able to return £7 million to founders and early shareholders in the pre-IPO phase, and that was by secondary place outs when the venture capital eventually came into the business. We retained control of our business and developed the business that we wanted to with the expanse of vision that we wanted to.

I'm going to hand over to Richard who is going to talk about the key to the business which I think has been alignment of these shareholders.

RV: We call this the triple alignment. This is what we've worked very hard on since the inception of Horizon and it's a combination of three things. First of all creating the business alignment, and that's creating the right alignment of your leadership team, making sure everyone has the same ambition and vision for the company and how you're going to go ahead and deliver that. It's about building the visibility and predictability of your business, of your revenue streams and your investment decisions so you know you can manage the expectations of the public market and always try and outperform that. It's about investor alignment, creating the aligned ambition between all of the key investors you have and making sure everyone is pulling in one direction there.

The IPO becomes a really important time of realignment of your investor base. Whereas you go through your VC rounds over a period of time, your interests can diverge. This is a great time to pull people back together again and get that realignment.

Then finally the one that is probably least under your control is the market alignment. We all know in biotech more than perhaps any other sector it's very cyclical. So you have to be prepared and agile and be ready to go as soon as the window has opened. One of the great successes of the Horizon IPO which I think Freddy will talk about shortly is the execution time. It was the preparation of the business in advance to be ready to go when that window was open, and delivering in that time frame, a 3 month time frame.

Now one thing I would say just before we move on from that, if we're able to go backwards. Is that this is not a Newtonian thing with the planets coming into alignment. This is an active management process so you have to physically go out there and lead the business to get this alignment in place. Sometimes you need tough discussions to make these things happen. So it really takes quality leadership and management to create this triple alignment.

So we all know this phrase, the harder I work the luckier I get. Well we worked really hard to act as a quasi-public company in advance of the IPO so that we were ready to go when that window was open. We had our diligence data room ready and up to date through a succession of VC rounds and customer diligence exercises, so there was no major effort required to populate the diligence room. We ran a board as best we could with the public company mentality, producing the high quality information you need to make effective decisions as a board and we picked great advisors to work with, and again teeing up Freddy a little bit, I think the choice of your banker and broker is absolutely critical and Freddy's team did an absolutely stellar job of de-risking the IPO up front with a pilot fishing exercise and then delivering against a very tight time frame.

DD: Can I just set Freddy up a little bit, because it was a real challenge that IP to IPO process. It was perfect alignment initially, as a scientific founder of the business, we had our tough discussions and we built this business the way we wanted to build it. But naturally when we brought venture capital in much later those misalignments started to appear, you're almost pushing the problem further downstream by the way we ran business. It was very difficult to convince people who had only invested in the business for 18 months or 2/2.5 years to then go to an IPO when they hadn't then necessarily taken the investment further down the line. It was really challenging and this is where I think Panmure did a great job for us. We went out to see 20 funds and we were able to convince our board with real data that our story could be told in a simple way with our market that the market was there for us.

So for us, scarcity value drove multiples. We did this pilot fishing, we created a buzz and we created unstoppable momentum in the IPO. After the first 2 or 3 days the book was well covered and so people were in order to get their allocations they put in larger orders etc... so that built up that 7 times oversubscription. I think this is where Panmure really helped us in our view. There were two real decisions. Do we go very broad with our shareholder base or do we go very narrow, do we target a small number of cornerstones that take up the entire investment and then have quite a low liquidity company in the aftermarket that is susceptible to up and down swings on relatively small trading volumes. And we were actually persuaded by the approach that Panmure took to take a broad approach so we went out to see about 80 funds in 60 meetings, and we had over 60 orders in a very sort of broad shareholder base and I think that served us well in the long term.

FC: The first thing we did when we really got onto the IPO process with Horizon was to set up some pre-marketing meetings, because it's a complex story. People needed to understand things that generalist investors wouldn't necessarily be familiar with. So what we did, the first meeting I did was I took a large institutional investor up to see them in Cambridge, and from that one meeting we had an order of £10 million. We had a price done on that order and so we had immediately first meeting, we had established

> ***We were able to convince our board with real data that our story could be told in a simple way.***

a pilot cornerstone institution that gave us... and the existing shareholders, a lot of confidence going into the IPO.

Suddenly it wasn't a black box anymore, it wasn't what the broker was saying going to be the price and the sort of appetite. We'd proved it out. So I think going into an IPO make sure that pre-marketing happens. As Darren said we did 20 pre-marketing meetings, so it was very widely pre-marketed. So before we went in there were no surprises.

The other thing that was remarkable about the Horizon IPO was the timetable we did it in as well. We say when we're asked how long an IPO takes, it's 4 to 6 months really. With Horizon we did it in under 3, we did it in just over 2 and a half months. That was the level and preparation that Richard and the management team at Horizon had put in place, but it was also down to the fact that they'd chosen good advisers, and I'm not just talking about Panmure as the nomad broker, but also the lawyers. There are so many companies that come to us and say we're going into an IPO process, we've had our lawyers working with us for years and years, and we want to use these guys. And what we say is actually what you want is some capital market lawyers who know what they're doing, and it's absolutely fundamental to get the right advisory team in place. Because I think if we hadn't have done that the under 3 month schedule would have been harder. At that stage that schedule was very important because there was a window there and I think we took it.

Some other key lessons: make sure the management team's presentation is spot on. Get that presentation right. Make sure the presentation encapsulates the investment case from the off, because that's the document you're going to use going forward and also

Richard Vellacott, CFO

make sure you get the right analyst as well, someone who can do a real deep dive into the science and present the investment case as Mike Mitchell did at the case of the IPO is important as well and get the right advisors on side early on.

DD: So what has the IPO done for us? I mean I'm someone who has always worked in the private company sector, and I was concerned about being a public company CEO. I was concerned about all sorts of things people tell you about it. It was actually the best thing this company has ever done, not just because it could raise lots of money. I like having a board where you can actually sit and talk about real strategy of the business and aligning the interest of the company and how you manage market expectations. The vested interests are not in the company, whether it's private investors or institutional investors etc. they're on the outside of the company and you can bring in experts that can actually really help.

The second is the availability of capital. Since the IPO we've had an organic plan in combination with an M&A strategy, so we've made 3 acquisitions. One from a company previously listed on NASDAQ. One was our biggest competitor, Sigma Advance Genetic Engineering and then recently a company in Vienna called Haplogen Genomics. It's enabled us very rapidly to put this capability from sequence to treatment together, plus drive scale in our revenues. Then by delivering on what we say, and we have now reported on our pre-close at least and we're 7% ahead of expectations, that we now can build that confidence so if we need more capital for example we could go back to the market and it wouldn't be a 6 month process to do that. You wouldn't constantly be on the road you can access that capital you need to drive scale into the business.

So for us it's been a very enjoyable experience. But I would want to re-iterate one thing, that when you go into this process you spend a lot of time with your brokers and advisers etc... so pick them well.

This isn't just a plug for Freddy, you've got to want to work with the people every day. You pick your founders, you pick your management team. But these people you kind of don't know them that well, and you do spend an awful lot of time with them, so make sure you pick them wisely and you actually want to look at their face in the morning. ■

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HORIZON DISCOVERY: 1 YEAR ON FROM IPO

B&M: It's fair to say that the last 12 months for Horizon and yourself have been extremely positive so what I want to do is review the progress you've made since the IPO in March last year.

If we start by looking at the acquisitions you've made, CombinatoRx, Sage Labs and most recently Haplogen Genomics it would be good for readers to understand the drivers behind the choices of these acquisitions and how you expect to leverage them in terms of the group as a whole.

DD: 2014 was transformational year for the business as completing a very successful IPO enabled us to consider rapid scale-up both in terms of investment in organic revenue growth and by acquiring additional technology, IP, capability and revenue via acquisition.

The first of the acquisitions was CombinatoRx in June 2014. I had been aware of them for a long time and they were doing drug combination screening before large scale cancer genetics studies became possible post completion of the human genome project. The addition of their combination HTS and Chalice informatics platforms I saw as an essential part of the implementation of personalised medicine as it enables the identification of secondary genetic contexts for existing drugs or combinations of therapies that may target a specific genetic driver synergistically.

It has been an excellent acquisition actually although one of my regrets however, was the timing. We completed and announced the acquisition before the first post IPO initiation research note came out. So it was almost lumped in at the start. Whereas the differential effect it would have presented to investors would have been impactful. We bought it for effectively 1X revenue. And we've gained significantly more value reflected in our share price than that.

The next acquisition was Sage labs the founders of whom we had been talking to for a long period of time and they were a natural fit for us because we didn't have any expertise or infrastructure that would enable in vivo gene editing and we were not going to build it from the ground up. The management team were a very experienced, ambitious and backed by US private equity they had bought the division out of Sigma Aldrich, and they would have started competing with us eventually in the in vitro gene editing space as well. So it made a lot of

ACCOLADES

2012 - Business Leader of the Year at the European Life Science Awards

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sense to bring those organisations together to create a powerhouse gene editing outfit capable of leading the industry.

The other acquisition was Haplogen Genomics which I believe is potentially the most transformational to the group, Whilst we historically had a large number of collaborative relationships with academic researchers, Horizon had less than 600 relevant products to sell to the 100,000 or so labs that make up the basic research community.

The Haplogen Genomics platform represents a novel way to generate precisely engineered human cell lines at large scale (10X vs historical rate) and at a price (10% vs historical cost) that places genome editing within the reach of the broader academic research market through an inventory of over 12,000 genetically modified haploid cells. Whats more, there is a route to go to 100,000 and start creating the equivalent of the antibody libraries for every gene in the genome.

This really opened up the academic market as it is now an e-commerce play; $990 whether you pick it from the shelf or whether you want it made. You don't even have to talk to us – you can purchase in 3 steps on the Internet, it's literally like back ordering. But the quid pro quo is the product goes back into our inventory so we can disseminate to other researchers.

So that's what you'll see a lot from Horizon over the next period is now driving that products piece of the business. That's what they were focussing on as a key future value driver of the business. The services business unit is well set as we've now got scale, good revenue growth rate and good gross margins. But it's the product business unit with over 50% growth rates forecast by analysts for years to come you should watch out for.

So they were the 3 acquisitions. The bottom line is we went from a £45m market cap company at close of business on 31st March to £175m market cap now. We are nearly exclusively export driven, with over 90% of our c£11.8 million FY14 revenue (£6.6 million FY13; 77% growth) from non UK customers. Customer numbers tripled to c1,000, and we've got an international footprint now with c18,000 sq. ft.in the UK (soon to be 30,000 sq. ft.), 8,000 sq. ft.in Vienna and 60,000 sq. ft. in the US.

B&M: What do you think are the principle challenges now for Horizon?

DD: The major challenges before us are integration of the current business units to deliver the One Horizon vision and the development of the operational systems that will enable us to scale into a global life sciences company. We are growing incredibly fast and trying to build at the same time as grow and addressing all these parallel markets is a big challenge.

Another big challenge is market penetration. Historically our sales have been peer to peer type sales with only our niche cell line and diagnostic reagent business being transactional. Thus revenue has been visible but with long lead times for new service sales (which have predominated) less predictable. We would like to become a little more like that great company Abcam where revenue is less visible but because of the long history of transactional product sales you know it's coming.

So we have begun building an ERP system and an e-commerce platform and have recently hired Dr Juergen Harter (VP Information Systems) and Elaine O-Brien (e-commerce Director). Both have extensive experience including recently at AbCam a company we look up to.

> *There is no genome editing platform that can be deployed to answer the wide variety of questions that researchers need answered than ours.*

Elaine is leading the build of an e-commerce platform that will house all of these 14,000 products by the second half of the year with the diagnostic products going live in Q2 on that system. This is an education for us as the new Products Business Unit is focussed on volume, sales channels, driving down COGS so products increasingly of <$1,000 sticker price can be made significantly profitable. This is very different to when we used to sell cell lines for $10,000 to $20,000 with annual renewals so you could afford to send them in big fancy boxes of dry ice with gorgeous stickers and plastic cases that cost $3 each. Not now, that's a chunk of your profit.

B&M: How important are the partnerships you've developed with pharma companies in the medium to long term goals?

DD: I think they continue to be very important and drive revenue leveraged milestone and royalty upside and also is where we continue to develop an outstanding scientific reputation in the industry. But increasingly the organic growth rates achievable with services will not be as high although you can drive margin via enhanced content and you can have transformational deals that will add large revenue streams that are a little lumpy. So what you hope to do is build a nice condition service/revenue thing that's growing at 25 or 30%, with the occasional big deal, the alliance you can add on top of that.

B&M: There are obviously other players in personalised medicine, How would you say you differentiate yourself? What are the real USPs for Horizon?

DD: I think from a genome editing perspective we have by far the most powerful and flexible platform (combining rAAV, ZFN and CRISPR), know how and experience as well as the strongest IP position. There's a lot of hype about genome editing, but it's very simple: you want to be able to perform the type of precision genome editing experiment you need, in the time you need it, at the cost you can afford and to ultimately answer your biological question - and there is no genome editing platform that can be deployed to answer the wide variety of questions that researchers need answered than ours.

If you need absolute precision without error, our propriety platform RAAV is the only way to go. It's the reason it's the only one that is as a human gene therapy and there are >120 clinical trials on going. If time and cost are more important then we can deploy rAAV alongside ZFN or CRISPR to get a suitable answer within the constraints presented. We have an extensive pedigree and network in translational medicine and this expertise underpins the commercial offerings and support we offer customers. Our leadership was exemplified in 2008 and '09, when EGFR targeted therapies were in clinical trials for treatment of colorectal cancer.
Horizon founder Professor Alberto Bardelli and Horizon scientific advisory board member Professor Sabine Tejpar wrote papers showing that 40 percent of patients [who] had the concurrent KRAS mutation would likely not respond to these therapies. The papers were initially ignored by Pharma. Pharmas had to do new clinical trials in Europe, which resulted in label changes of these drugs, first by the EMEA in 2009, and then by the FDA in 2010. Initially, pharma was not happy with this retrospective finding. As it turned out, they made more money in the first year of KRAS testing than previously and the healthcare system saved $740 million, according to estimates from the American Society of Clinical Oncology. Reimbursement came with higher prices and pharma

made more money. The economics proved that smaller populations can generate greater revenue. The key, though, is prospective versus retrospective findings. With prospective findings, one can file patents earlier. If you find novel programs, clearly defined patient populations, you can file chemistry patents much earlier. This has been seen with many new drugs now like Pfizers Crizotinib targeting <5% patients with EM4-ALK fusion in non-small cell lung cancer and the tools and services Horizon offer are having a real impact in the development of these more targeted cancer medicines.

This pedigree helps elsewhere we're lobbying regulators on the need for genomic reference standards for the companion diagnostic that is required to match patients with the drug that comes out of the end, we're listened to. Many of the proficiency testing schemes in the world are using our materials to informally regulate the labs to perform a given test to a certain standard. I can't tell you forward looking stuff but we believe this aspect of our business will do very nicely. Because every genome sequencing test is going to need to be controlled. Both at the research end and then at the diagnostic end. So that's why we do that.

B&M: What do the next 12-18 months look like? We've been hearing about 'One Horizon',can you explain more about this?

DD: One Horizon is about creating a fully integrated company, and not having a group of companies that are operating in silos. We've reorganised the group from what were effectively 5 businesses operating at 5 locations around the world. We now just have 2 Businesses. There is a Products Business under its President Dr Paul Morrill (based in Cambridge, UK) and a Services Business under its

Horizon Discovery Cambridge HQ

president Dr Edward Weinstein (based in St Louis, USA), and they're fully integrated business units. Accountable to the Executive Team and the Board.

We've restructured the business fundamentally for a number of reasons. One it's the most efficient way to do it I think; and two it breaks down that sort of silo'd mentality from the acquired and historical business units and you will soon see a roll out of a unified brand. We're going to move away from precision gene editing as a strap-line as that's pretty narrowly focused commercially. Horizon will have very clear market brands for genomics, diagnostics, bio production and discovery for the services side of things. But internally they're not identifiers, they're external customer identifiers. Internally it's just products and services. So that's what we mean about creating the One Horizon culture.
Another part of that culture is transitioning the business into one that exhibits a profitable mind-set top to toe. We have a blend of offerings that are profitable already, and others that are investment mode. Making clear to everyone to see that each pound is invested rather than spent and that each pound of profit is one less pound we need to raise in equity dilutive funding is paramount.

We've now got a good of capability within the company but with just under £12 million of revenue, £20 million roughly forecast this year (by the analysts) we operate a number of interconnected but shallow P&Ls. So what we don't want to do is add more breadth with any M&A focus being placed on creating solidity, depth to that P&L.
It's a blend of driving organically those high growth areas like the products part of the business, delivering maximum scale and margin into the services by linking of capabilities built this year and then driving scale and profit into the P&L. We don't want to change the profitability trajectory, 2017 for a sustainable project.

B&M: If you can look at one thing over this next 12-18 months that you're looking forward to realising?

DD: For me I think this next year really is a key year. If we're looking to pick faults in what we've done, you'd say they've put a lot of pieces together that have real promise and should deliver more than the sum of their parts, but very few people actually integrate companies very well. I'd like if in 12 months people say this is one integrated company, a sustainable company, a great company. ■

Chairman:
Asaf Homossany,
Managing Director, EMEA
Nasdaq

Panelists:
Eduardo Bravo,
CEO, Tigenix

John Burt,
CEO, Abzena

Dan Mahoney,
Fund Manager, Polar
Capital

Talking Points

The current appetite for IPOs

Choosing one exchange over another

Educating investors and engagement

Running a public company versus a private one

Maybe this isn't an IPO window at all. Maybe we've actually gone to a state of normality.

APPROACHING PUBLIC MARKETS: AIM, NASDAQ AND EURONEXT

AH: If you look at the number of IPO's in the US we saw 305 companies going public in the US. 114 of them were life sciences. They realised 9.3 billion US dollars. The NASDAQ biotech index has done extremely well. We've seen lots of activity on the LSE as we've heard. However, do you think we're in a bubble?

DM: Personally I don't think we're in a bubble. I think what's different this time is when you think about the whole tech bubble and biotech bubble in the late '90's, it was really driven by concepts. Genomics was going to solve everything and we were suddenly going to be able to go from gene to drug in a matter of days it seems. Clearly that wasn't possible, although the market myopically thought it was.

If you look at the companies that are listing now, I think they're listing on their own merits. So if you look at say 50 biotech companies listed in the last 3-6 months, if one of them fails it doesn't really have a correlation to any others. Because one might have a cancer drug, one might have a drug for a rare disease etc. So I think these companies stand on their own merits.

I think the other thing to think about is that the market cap for the sector now in the US is about 800 billion dollars. We had about 114 IPO's over the last 2 years, so let's say that's an average raise of 70 million dollars, you're looking at 7 or 8 billion dollars a year, that's 1% of the industry market cap. It sounds like a lot of money, but in the grand scheme of things, maybe this isn't an IPO window at all. Maybe we've actually gone to a state of normality.

But I think that's for the US. I think we still have windows over here. But I think that I would argue that this idea of windows opening and closing is probably dissipating in the US to some degree.

AH: The sector itself can be very cyclical, but do you think this is smoothing out because people get more understanding of the sector, the sub sector, and the specific companies going out? Maybe we see more quality companies managing to go public?

DM: I think it is smoothing out to some degree and I think there's a number of things that figure into that. You've got scientific innovation cycles, business cycles, scientific innovation cycles are obviously a lot longer. Also you have to remember the sector is only really about 30-35 years old.

We'd started the education process for key investors as a private company and carried that relationship through to where we sit today as a public company.

I think what you've got is a sector that is growing up, it is maturing. The other thing is a structural change in the industry is that 15-18 years ago it was pretty much a big call to have a small company actually take a drug to market and sell it. What you're seeing is more companies getting to maturity. So I think the sector is maturing in that effect.

AH: John you took your company public last year on AIM. A very successful IPO raising 20 million pounds, can you tell us through the process of the thinking process behind choosing to go public and float on AIM rather than raising that money which ultimately it's not a large sum from private investors or strategic investors?

JB: Certainly, so if you can look back from where we are today as Abzena as a public company from the component part of the group. There are 3 businesses that have come together in the Abzena group over the course of the last 4 years. Polytherics, Warwick Effect Polymers and Antitope.

We took those businesses together and created the Abzena group, and it's a trajectory through acquisition, financing and growth. The next step in that evolution was the IPO. Given our business model, the scale we're at and our operations all being in the UK, we recognised very quickly that AIM was the market for us. Well looking at where we are today, it wouldn't have been appropriate for us to go to the main market. Although like Horizon the majority of our business is international and the majority of our customers are in North America, our operations are here in the UK. So it wouldn't have been appropriate to really think of NASDAQ as the market to come to as our IPO.

AH: So with your business model you found the UK investors knowledgeable and sophisticated enough to value you at the right point?

JB: When we put together and merged Polytherics and Antitope in July 2013 we'd had the long term support of Imperial Innovation. We got Invesco on board in a private financing round. So we'd educated Invesco about our business model and the strategy for growth in terms of combining those complementary technologies and services focussed on biologic, so we'd been through that education process with a major investor. We'd got their participation and support. We carried that through the IPO process. So we'd started the education process for key investors as a private company and carried that relationship through to where we sit today as a public company.

AH: Looking back would you have done anything differently throughout the process? Because we heard about the process that Horizon went through, so just getting your perspective on that.

JB: I think there's an interesting contrast in terms of the breadth of the investor base that Horizon came to the market with and us. You know 3 cornerstone investors in our business, Invesco, Woodford and Imperial Innovation who hold about 60% of the stock. I think the transition that we'd gone through from Polytherics as a private company to Abzena as a public group required the support of those cornerstone investors to manage that growth and evolution, to establish the critical mass and now obviously the key objective is to broaden that shareholder base. So in an ideal world you have a broader shareholder base, but you've actually got to have the support of your investors that will carry you through it. So it's a journey we're on, not a completed story.

AH: Eduardo you've been running

a public company which IPO'd in 2007. Can you share with us some of the lessons learned and what it actually means to run a public company versus a private company from a CEO perspective?

EB: The company went public in 2007 at 5 euros a share. We hit a low in 2013 at 18 cents a share. We didn't get FDA approval and the stock tanked. We had troubles to raise capital. Then retail investors, which in Belgium are very important, started dropping the shares. Suddenly you start going down a cent a day, which goes very quickly by the way. Then suddenly we were worth 25 million Euros. Amazingly enough 4 months later we're worth 160 million. So sometimes you can just not look at your share price or your market cap, and you need to forget about the share price, which I keep looking at least 5 times a day, and run the company with the fundamentals and that I think would be the best lesson that I can share.
AH: But you have managed to diversify your investor base throughout the years? So some of the investors are Europeans, some are American, do you have any insights into the differences between those types of investors?

EB: I think that we have 3 types of investors. We have what I would call institutional investors, which are a specialised and come mainly from the US. Then we have some generalist investors, mainly from Europe. Then we have quite a large portion of our shareholder base is Belgium retail investors, which is very typical in Belgium. They are much more knowledgeable than the generalist investors. They are in between generalist and specialised and they read everything, and I can tell you following the blogs of those investors is good, it's interesting. So you need to adapt your message and you need to adapt your strategy. I think we didn't do enough in 2011 when we merged the two companies to really change the perception of the retail investors. Again it's easy to underestimate the amount of effort and communication and money to change the perception on a company, especially by retail investors. Institutional investors I think they get used to the new story, they change up or down or they like the new story or not. But retail investors you just need to go there 100 times and they need to listen to the news story or new idea a lot before they actually start changing their approach. We didn't change enough.

AH: When we talk to companies trying to go public, one of the key points we try to make is that once you go public you start selling your shares just like you're selling your product. So you must have a marketing strategy or investor relations strategy which you follow on a regular basis and communicate your story to the market.

So Dan, when you look at the US market and European market, do you see a difference in the understanding from the investor perspective and the way they understand and analyse and they support the companies? We do see difference in the liquidity between the US and Europe in the sector. We do see differences in the PE multiples when a company makes money, but valuations are higher in the US. Why is that? Is money really flowing globally?

DM: A lot of people think that the US is a panacea, and that going over to float on NASDAQ is going to be a crock of gold sitting there and you just go and scoop it up. I think one of the problems that we're beginning to see, which actually is an opportunity for us as investors, is we're beginning to see IPO orphans. The US is a very competitive market, so if you've had 115 IPO's what tends to happen is that the sell side the

> ***A lot of people think that the US is a panacea, and that going over to float on Nasdaq is going to be a crock of gold sitting there and you just go and scoop it up.***

banks, if you've been a so so performer, they'll quietly drop coverage of you because there's a next new thing that is going to come onto the market. So we're seeing sort of 10-20-30 in our companies that have essentially become orphans in the market. And if you've got a market cap of 300/350 million dollars, which seems a lot on the UK, you're in there with another 1,000 companies, and it's very difficult to get any visibility.
The advantage of the UK is someone like Horizon has a lot of visibility. You may not have a lot of people who can actually invest in you, but at least you can get out there and communicate. I think there are two big differences I see in investors. I used to broker. I was on the sell side in the states and I've been on the sell side over here.

In the States I think investors tend to invest in people. Over here, investors tend to invest in assets. So if you're a biotech company, and we now see virtual biotech companies that don't even have bricks and mortar. Some people struggle to get past that. A patent is a piece of paper. It's actually a really valuable piece of paper, but some people struggle with that. In the US what you find is there's a lot of talk about how investors in the US are so much better educated, I'm not sure if that's necessarily true. But what they do do is they get really good recycling of management teams. So you get the same people appearing again and again. You walk through the door, and I don't really care what the idea is, there's 10 million bucks, now tell me what the idea is, because you invest in the people. That's a big difference.

What I see in terms of company behaviour, and again this comes down to opportunity, is if I want to see a particular health care company every 3 weeks, I could probably go to a conference in the Atates and see the company, CEO, CFO, someone from the senior management team, probably every 3 weeks. Because there's a lot of opportunity, a lot of platforms. Harder if you're a smaller company, but if you're say a billion, 2 billion dollar company, you have a lot of opportunity to interact with investors. What I find over here, the UK is as guilty as Europe, people disappear. People, companies see IPO as push that rock up the hill, you've got money in. Then you might not see them until results next year. I think there's an opportunity that a lot of companies are missing, in terms of continuing to communicate their story. Because someone who doesn't buy at IPO or doesn't even buy on the third or fourth meeting you have with them, may come into that fund raising when you're going to need to raise 50/100 million quid 2 years down the road.

So the point about having the communications strategy, I think you need to think longer term. It's not just about today's investors, it's next year and the year after investor, particularly in an area like biotech where your need for capital. There are very few companies that raise enough capital in one go to see them all the way through for sustainability and break even, no matter what people tell you. That's our rule of thumb anyway.

AH: John and Eduardo, how do you communicate to the market, again you have every different investor bases, very different business models. So can you share with the audience how do you manage your investor activity as a public company?

JB: You have to recognise there are multiple channels to the investors, and there are also your existing investors and staying close to your existing investors and potential investors and staying close in communicating the story to them. Take the point Dan makes, perception in the US of investment is more management than assets as in the UK. But still you want to have that rapport with your investors. By way of example when I go and meet with Neil Woodford it's a conversation, it's not a pitch. You turn the pages but actually it's a conversation about the business, a very positive and enlightening conversation one has.
So you've got to have that personal interaction, have the meetings. There is the use of the analysts, using your house broker. N+1Singer started covering us today, so it's broadening the analyst coverage of the company. That's hard work, getting that coverage, but as you get that coverage it broadens the exposure and follow up to investors.

Then it's the news flow, and having the appropriate level of news flow and ensuring that is pushed through the IR channels to those investors to then follow up, so there's been some awareness of the company and the progress the company has made when you go in. So you can talk about progress being made through evidence of the news flow, and the future of what is coming. So it's picking those channels, the news flow channel, the analyst channel, the broker channel and the direct meetings. Ultimately it's engaging the mind of the investors across that broad base.

EB: Not much to add apart from general PR and communication to reach retail investors. Which again are very particular. But again you cannot underestimate the work and amount of times you need to go to the US, and visit investors every quarter or every 2 months. Just to make sure that you're being heard, becoming familiar and you are showing them that you've done exactly what you told them you'd be doing. ■

Dr Jim Phillips
Chief Executive Officer,
Midatech Pharma

Dr Phillips has a strong background in company leadership and business development, and is a physician by training. He founded Talisker Pharma in 2004, which was the first and cornerstone acquisition of EUSA Pharma in 2006. As President of Europe and Senior Vice President, Corporate Development of EUSA Pharma Inc., Dr Phillips led the strategy resulting in the acquisition of OPI and its ultimate acquisition by Jazz Pharmaceuticals in 2012. Dr Phillips is currently a Non-executive Director of Herantis Pharma plc (listed in Helsinki) and Insense Ltd (a private spin-out from Unilever).

Midatech is a nanomedicine company focused on the development and commercialisation of multiple, high-value, targeted therapies for major diseases with unmet medical need.

MIDATECH PHARMA: BUILDING A £3BN BUSINESS

B&M: Lets start with you telling me your company elevator pitch. What are your products and technologies and what makes you unique?

JP: Midatech Pharma is working towards building a speciality pharmaceutical business with multiple products, by developing our platform technologies. Our business model consists of three pillars. Firstly, the development and commercialisation of our own products, particularly for rare cancers. Secondly, the development and commercialisation of partner-supported and licensed products, particularly in diabetes and neuroscience/ophthalmology, and thirdly acquisition of later stage strategic and complementary opportunities. We are a company that is looking to acquire other businesses and to commercialise our own products to drive revenue growth rather than looking to become successful by licencing products.

B&M: What are your key focus areas at the moment?

JP: Our pipeline is divided into three therapeutic areas, endocrinology, cancer and neuroscience / ophthalmology. We have a joint venture in diabetes with a US company and our own programmes in rare cancers which we will take forward to commercialisation ourselves. Additionally, we have some rapidly advancing programmes in the treatment of eye diseases.

B&M: I understand you are currently working on about 15 projects. Out of those projects, are there any impending or recent product launches that you're particularly excited about?

JP: I'm excited by all of our projects, particularly because of their huge market potential. We estimate that any one of our products could deliver revenues of hundreds of millions. The projects in our pipeline that are most advanced and are most likely to generate those revenues in the short term, are both Transbuccal Insulin, which is in phase 2 with very exciting phase 1 data, and our relatively short term-to-market super generic, which is a form of Sandostatin LAR with the potential for far more advantageous product characteristics. More recently, we're fast-tracking a programme for uveitis where we've had stunning pre-clinical results with an existing drug being reformulated using our technologies. Those three are the lead programmes at this point in time. Following those is our glioblastoma programme, which is probably the most exciting in terms

Midatech's pipeline of candidates target diseases include diabetes, rare cancers including brain (glioblastoma), ovarian, liver and pancreatic cancer and neurological/ophthalmologic conditions.

For traditional biotech companies who are looking to go public, it is important to have a late stage pipeline. This way you can create a more de-risked company for your investors.

of saving people's lives in the future.

B&M: Thanks for that overview. Let's talk now about your IPO last December. Can you tell me what the reasons were behind the IPO and, now that it is complete, how satisfied you are with the outcome?

JP: We raised money in the public markets to do several things including funding the clinical development of the pipeline, covering clinical trials, developing our neuroscience and sustained release technology, for working capital and of course to fund our M&A strategy. There are three pillars to our corporate strategy. First, there are partnerships and partnership based revenues. Secondly, developing our own products to commercialisation and then thirdly, our M&A strategy to deliver revenue growth. Whilst we could develop partnerships and commercialise our own products with private funding, M&A requires an additional injection of equity.

We carefully considered the geography of our listing and after spending some time in the US, we decided that we should start out by being a London-listed and internationally-focused company; where our local investors would understand us better and it would be advantageous to complete our IPO in the UK.

The IPO was very well-executed in a difficult market. We got most of the book covered before the roadshow which is why we went out with a high level of confidence. The book was oversubscribed and we were able to cut back allocations and to increase the amount we raised from the original target amount. All of that has led to a successful aftermarket in the last 3 months in which our share price has been on a steady upward trend, even though we've had some shareholders sell out in the last three months.

B&M: So overall an extremely positive and satisfying outcome?

JP: So far, incredibly good, yes.

B&M: This isn't your first IPO; you've done it before. If you reflect on your experiences, are there any lessons you may have learnt that you could share with some life science companies that are currently thinking about going public?

JP: As a non-executive director, I was also involved in the flotation of a Finnish biotech company last year. The public markets, especially in London, are very choosy, so companies that are thinking of going public have to be very clear about differentiating their business. The market doesn't really value companies properly with only two or three novel products. The successful IPOs last year, such as Horizon Discovery, were the ones that had revenue from platforms, enabling lots of shots on goal. The traditional biotech is less attractive for public investors because of its less de-risked nature. That's what we also found with the Finnish biotech IPO and we also the experience of a difficult aftermarket.

For traditional biotech companies who are looking to go public, it is important to have a late stage pipeline. This way you can create a more de-risked company for your

We need more successes and we need to create more of a virtuous circle for investors. The European market is starved of venture capital compared to the US and even in places like Singapore.

investors. Investors want to hear and see how companies are going to grow revenue and become commercially successful businesses in the future.

B&M: What do you think it was about your own particular story with Midatech that investors found compelling?

JP: I believe that it's mainly the 3 parts to our story. We have revenues that are growing today, and some of those revenues will turn into licencing deals in the short-term. We also have the bandwidth and the ability to get products to market fast. We can also launch our own products and therefore get a huge upside from the potential of each of those products for developing our own commercial infrastructure. The other part they liked was that we would use acquisitions as and when appropriate to accelerate our revenue growth. So we have a revenue story and we're also able to demonstrate how we're going to execute our strategy to become what we hope will be a multi £bn valued British example of an international success story.

B&M: I've heard you before say your ambition is to make Midatech a £3bn company. What do you think are the key success factors necessary to achieve this?

JP: The first key to success will be the delivery of a couple of licencing deals and products into the market through partnerships we already have. This is relatively near-term and will drive us to profitability quickly. Secondly, we want to launch a new product every 18 months to 2 years throughout the 2020s from our own stable, selecting the best products from the ones we have in the pipeline and fast-tracking those into the market. Thirdly, we aim to build our valuation through strategic acquisitions.

B&M: What's going to stand in your way and prevent you from achieving that?

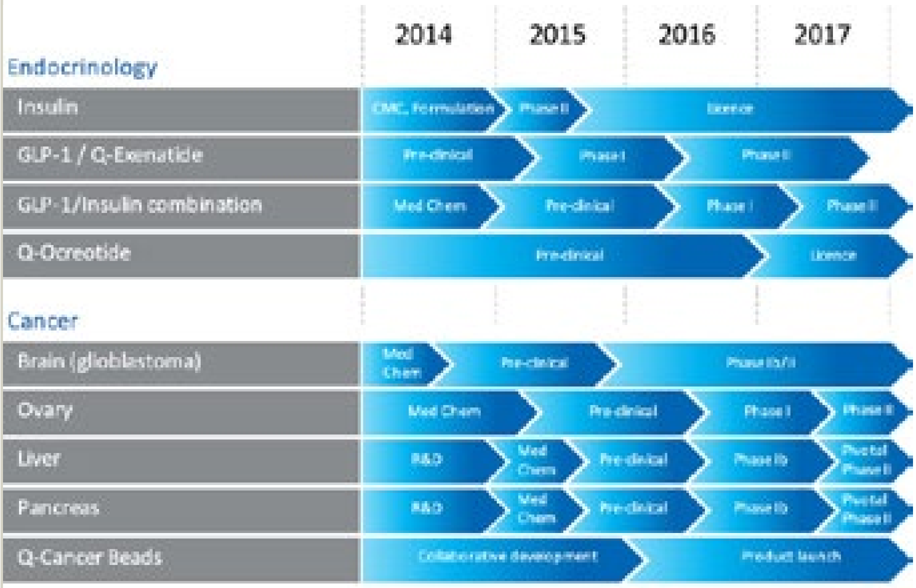
JP: As with any clinical programme, there is a risk in execution. Based on our technology we are developing two platforms, one which is a very low risk and the other which is a moderate risk as we have yet to launch the first product in the market based on that technology. Each program carries a level of risk and that's why our focus has been on the rare cancers because these are conditions in which, if the products work as we intend them to as guided missiles to the tumour, they present fewer potential issues than, for example, chronic therapy.

B&M: As a CEO, what do you think you can do to help mitigate that risk?

JP: The key part of my role is to conduct the orchestra and build a great team around me. With Midatech, that is what we have already done and it's been one of my jobs in the past two years to reinvigorate and bring in great talent to the management team. We have a phenomenal team now.

Beyond that, we need to be able to

Midatech's current pipeline of candidates



quickly stop programs that are not working, which I'm confident we're set up to do. We need to also continually look for other things that will help us de-risk the company, which is where our strategy of acquisitions comes into play as a way of fast-tracking us to producing significant revenues.

B&M: Are there any acquisitions or potential acquisitions on the horizon that you could talk about?

JP: It's our responsibility to always look for good investment opportunities but clearly we cannot comment on any acquisitions at this stage.

B&M: Of course. Let's turn now to the industry as a whole. If we look at the life sciences industry in the UK in particular, what do you think needs to happen for investment in this sector to grow?

JP: We need more successes and we need to create more of a virtuous circle for investors. The European market is starved of venture capital compared to the US and even in places like Singapore. There have been some good new funds raised recently but the risk capital available for private companies in Europe is far too low and it's only successes that will allow that pool of risk capital to grow. Unfortunately, the 1990s model of biotechnology didn't create a self-replenishing pool of risk capital because there were too many failures.

We also need to develop a pool of public specialist investors both in Europe and in London. Neil Woodford has just launched his new biotech fund which is private and public and that's a good step in the right direction but we don't yet have the Framlington Biotech-type funds that there are in the US or the pool of specialist investors that will allow companies to raise capital publically without going to generalists who don't necessarily understand the sector. These two things really are interlinked so we need success to drive more interest in the private funding mechanisms and then to allow us to develop a pool of specialist investors in the future. Many of the investment banking teams in healthcare were disbanded after 2008/9 and there's even a diminished pool of investment banking capability in Europe as well.

B&M: Do you think that success is being achieved at the moment to the level that is required? Some people say that floats of Circassia and Horizon Discovery, and probably also Midatech, might be the beginning of a major shift. What's your view on that?

JP: Circassia is a bit of a different story, so I'm not really going to comment on its place because it is more of a biotech player in a specific sector. Companies like Horizon and Midatech, and also Abzena to a certain extent, are a different story where revenue growth is important, where there's M&A involved and a drive towards developing and sustaining a fast growth company. That's not the be all and end all because it's only one part of the sector but it is a philosophy. It's a strategy that Abzena, Horizon and Midatech have all developed towards similar paths. Our differentiator is that we want to commercialise pipeline products whereas the other two companies don't. Because they are somewhat de-risked and focused on revenue they have the potential to drive a new interest in the sector through their success because they all have much lower risk profiles to investors than the old biotechs did. It's about execution. Each company carries execution risk and none of us want to miss our forecasts or our analysts' forecasts but they are also a much more positive story that generalist investors can understand and buy into because it's very difficult to value traditional biotech stocks.

B&M: A number of people complain that there is a lack of generalist investors keen on the biotech sector. What do you think it is that CEOs such as yourself and others can do to help educate and encourage generalist investors to engage more in the sector and get involved?

JP: It's all about communication and good investor relations. My personal view is that the investor relations world in London is much sleepier than it is in many other places, especially in the US, so if we can boost that side of our businesses and get our advisors to help us in doing that, it would help the sector and help generalist investors to understand the opportunities and develop more interest in the sector.

B&M: Finally, are you optimistic about the future of the sector in Europe and, if so, why and, if not, why not?

JP: Yes. I am optimistic about the future of the sector as a whole. However, as in any sector where companies work on innovation, there's always going to be fall-out along the way and that is why you have to try to back the winners, yet not everything is going to succeed. There have been reasonable inflows of money into the sector in the last 18 months. We raised about $770m in public IPOs last year in Europe but that's poor compared with the US which raised an estimated $5.5bn. The markets are definitely in a better place; the number of secondary investments in Europe last year was over $1.5bn and that shows that where companies start to succeed there is appetite to continue to invest and allow them to grow. That's very good news for the community as well, with positive new funds being raised within the European sector. ■

Chairwoman:
Surani Fernando,
Deputy Editor / Acting Editor, EMEA, BioPharm Insight

Panelists:
Kevin Johnson,
Partner, Index Ventures

Ajan Reginald,
CEO, Cell Therapy Ltd.

Beverley Carr,
VP, Business Development, Immunoinflammation Therapy Area, GSK

Jane Dancer,
CBO, F-Star

Talking Points

How has M&A been brought earlier into the R&D lifecycle?

M&A vs. IPO decision making: when and why should you opt for a trade sale.

How to best structure and optimise an M&A deal for mutual benefit?

How is risk affecting deal making decision in the current climate?

We're seeing stuff that's coming in very much earlier, even at the seed level. Which is fairly unexpected and unusual.

WHAT PHARMA WANT: ANATOMY OF A DEAL

SF: We saw the spike in M&A activity last year, why M&A, with all the other options that you've got on, why would you go M&A and when would you pull the trigger? Early/Late stage, there's a lot of debate there. A lot of different strategies being taken.

KJ: I'd say from the venture side we're seeing a couple of trends. One is we're having our companies tracked far earlier in the piece than we have done before. So we've had companies that really not many people outside of a very small sphere know exist, because there's no reason to put out press releases all the time. But none the less they are being tracked, and tracked fairly aggressively. Not only by big pharma but more increasingly now by the big biotech's.

So if you got any pharma or biotech presentation there's always a slide in there somewhere that points to where they're going to source their innovation. There's usually a big chunk of it that's got to come from outside. I think you know given that everyone has that same drive, then you know the tracking becomes much more aggressive. So we're seeing stuff that's coming in very much earlier at the piece, even at the seed level. So which is fairly unexpected and unusual.

The second thing that we're seeing is that of the type of deal, whether it's an option structure or whether it's a full take out, and that's generally driven by competition. So if at very early stages when there's so much ahead of you you've obviously got some optionality in that deal, it would be very difficult for it to be otherwise. But largely it's down to how many interested parties there are. That in our view drives almost completely what kind of deal structure you're looking at.

JD: From the biotech side, what drives M&A for us, we're a company that is now 9 years old, so we've obviously got VC's who have funded us for some time now. So biotechs like us face a challenge. Companies like ours which are platforms leading to products will often be under pressure from some of their investors to exit, they need their money back. This can result in perhaps sub-optimal valuations, unless you can get as Kevin says the competitive pressure.

So what we've done to try and resolve that conundrum is to tease apart the company. So we had a programme that was entering the clinic, we were able to put that in a separate company, get an option to acquire for that so as to provide an early exit on that for investors. So it

I would have said that the difference between an acquisition and a licencing deal is becoming a bit blurred, because you actually see acquisitions now that not only have milestones but royalties attached to them.

keeps the wolf from the door, you throw them a bone and they'll be a bit more patient about what we do with the rest of the company.

SF: On the topic of risk, what are we seeing in terms of contingent value rights, are we seeing more of them now, are they sort of a bit more structured? What's your experience with CVR's in deal making?

JD: I would have said that the difference between an acquisition and a licencing deal is becoming a bit blurred, because you actually see acquisitions now that not only have milestones buy royalties attached to them. I think probably the earlier stage the asset the more likely of course you're going to have to have the contingent rights.

The deal we've done is an option to acquire. So they've paid an upfront option and then they will pay an exercise fee and there are some contingent earn outset after that. Obviously we want as much up front as possible and they want to defer as much as possible, and that's part of the negotiation.

SF: Are there other ways to bring the M&A process earlier into the cycle? Because we all know the standard traditional model is to wait for something de-risked and something closer to the market and buy it then. But it's expensive and there is lots of competition. Obviously you have to be vigilant on sourcing these assets, but are there other ways to get M&A into the process early on?

BC: So contingent value rights are not so easy for GSK, which is a function of us being a UK accounting company. This is the third panel I've been on with Jane where we have this, and Kevin as well, where we have this dialogue about asset centric vehicles. They don't work so well for us because of the way we have to account for deals. What we like still is of course sharing the risk downstream. So we like upfront milestones and royalties. If something is competitive and we really want it of course we'll be flexible in terms of the deal structure. But an earn out in itself brings us quite a lot of internal challenges because of the way we are structured and the way the accounting works. So we kind of like licencing deals.

KJ: If I could just say, to some extent it depends whether you can afford that luxury. That's really what it boils down to. A lot of what we're seeing now, and I'd say this is another trend certainly we see in the venture industry, is that we're doing a lot more funky stuff now. It's ideal. You know what it is. You know what the market is going to look like. You know what the development track is going to look like. You can join the dots, that's ideal.

I think that the tolerance of risk is I think increasing, simply because everyone knows that's the case. You can't simply go and stick with your knitting, you have to actually do something that is challenging. If you think you have an alternative, you're deluding yourself, you actually don't.

AR: I think that is interesting to think about. So everyone is going towards one trend, which is you've either got to be best or first. There's only, in each therapeutic niche or indication you've only got room for two players, both from a reimbursement perspective but from a kind of pharma return on investment perspective.

So ideally if you're first, and best, or could be best, then you're acquisition target. If you're second then you've got some other options. But I think we are thinking about this from what pharma want, and I think as everyone has pointed out, all the deals I did there were at least 4 of the pharma companies in there.

> *I think all of the big pharma companies now talk about wanting to acquire to broaden their technology base, bring in new diversity of thought.*

I don't think we ever did a deal that nobody else wanted to do. Whereas I think about all the technologies that me being more risk seeking obviously, because I'm now in biotech, wanted to do that we didn't do only one other company picked them up. So I think for the stuff that fits pharma's target product profile, relatively known target, with some clinical data, in an indication they're interested in. If you've got all those three things of course everyone is going to be interested in it. So I think you can push that competitiveness towards and M&A if you wanted. If you've got that. If you haven't got that target product profile you have to be realistic, you're going to end up with a licencing deal.

SF: There has been a lot of criticism, especially with the mega mergers, where a lot of deals have happened where that hasn't been executed properly. A lot of the R&D aspect just goes down the drain. Obviously the big pharma, the bidder, sees something that they want and then forgets about the expertise that is needed to generate everything else in the pipeline. I guess that rings true for the smaller biotechs coming through as well.

AR: I think in the end we're talking about optionality. So how do you as a biotech company or you as an investor or a fund manager maintain that optionality where you can get the optimal deal running? I think in the end it has to go down to something as simple as target product profile.

So all the stuff we're talking about, Roche held Genentech within an arm's length, managed the R&D for about 20 years. But that's a nice to have, if you've got great technology. I think if you're a biotech company even if you've got a platform, we've got a platform technology, you need to have a product with the right target product profile. If you haven't got that actually the rest of it is mute. I think the dream scenario is you have the right product, profile, you have a platform technology with something unique which can get first to market or best in class. Then you have a culture, I don't know what that is, a culture that they're looking for. So you've got something new, innovative, what they want.

I think there's a lot of pharma companies that are really good at acquisitions and they're really good at stripping away everything, and they just keep the technology.

I think all of the big pharma companies now talk about not wanting to acquire, wanting to broaden their technology base, bringing in new diversity of thought etc. But I think if you've got the right target product profile, if you've got something that they can value easily, that's the key thing. A target product profile converts into a DCF or a valuation that everyone can understand. So then you get your competitive pressure. Then you can work out the right deal structure. If you haven't got that, then the conversation can't even start.

SF: Looking at what we saw last year, which was the therapeutic deal swap between GSK and Novartis. Everyone is wondering is this the way to move forward for big pharma now?

BC: Looking back over history, most pharma companies did most therapy areas. Perhaps we are moving into a phase where companies are being a bit more focussed. So you've got AstraZeneca being very clear about their areas of focus, and the areas which they are de-prioritising. Likewise the GSK Novartis deal is very clear about our investment in vaccines, building our investment in vaccines, building our investment in consumer and then within pharmaceuticals clearly we're still a very big player in respiratory

> You look at some of the big biotech companies now, they're really clamouring at the heels of big pharma, and actually overtaking them in some cases on market cap.

and in infectious disease. The oncology portfolio is a specific part of the deal where we figured potentially you could get more commercial value for those products from Novartis selling them as part of this construct rather than GSK. It doesn't mean we're out of oncology, we're still very much in early stage oncology, but that changes a little bit how we do things in oncology. But we will still be making a lot of investments actually in early stage, particularly immune oncology and epigenetics.

Will we see more of them? I don't know. It's a hugely complex deal to move all of those people, all of those products, marketed products, developing products around. So you can't bite off too many of them.

SF: What's the biotech response to that? Was that refreshing thing that pharma was doing or a little bit scary?

JD: I think it's a little bit confusing. Because we're an oncology company and so then you wonder whether GSK is a partner of choice if you want to do an early stage oncology deal, when they don't have a commercial oncology organisation. So I think that's the challenge.

So if you're going to hand your best loved lead programme over to them there might be other partners out there you might want to go to. So it is a little confusing from the outside.

KJ: I always thought it was a lot easier to build a sales force around a particular area than it was to find a great drug in a particular area. I don't really understand this whole drive from the marketing end. Well I do understand it but I don't agree with it, because actually it's so hard to find the stand out drugs. It is a real mission. And it is why we don't have a therapeutic focus. We just look for something outstanding, and we don't give a shit where it sits. We'll work that out.
It always strikes me that is much harder to do. Because everyone is stealing everyone else's sales reps all the time and you know if you're spending 40% of your budget on marketing, sure as hell you can work out how to market a new drug in a new area.

JD: I think maybe coming more from the biotech perspective where if you haven't got the commercial experience sometimes it's difficult to make the right decisions and identify the stand out drugs. Obviously you guys have got a lot of experience with that. But do you lose something by not having that in the market.

KJ: I honestly don't think you do. It's hardly beyond the wit of man. You hire some guys who know what they're doing, you go poaching just like every other area. There was a reason why you're in a particular therapeutic space in the first place, you know that's going to be driven by an understanding of a small group of people. So it's fairly easy to recapitulate that.

You look at some of the big biotech companies now, they're really clamouring at the heels of big pharma, and actually overtaking them in some cases on market cap. They're basically just going for it, right, they've generally got one product there that has put them where they are and now they need to diversify. And they're just going and getting what they need. It's quite refreshing actually.

So back to the original point, is this a surprising deal, no I don't think it is. It's just recognising what you're good at. ■

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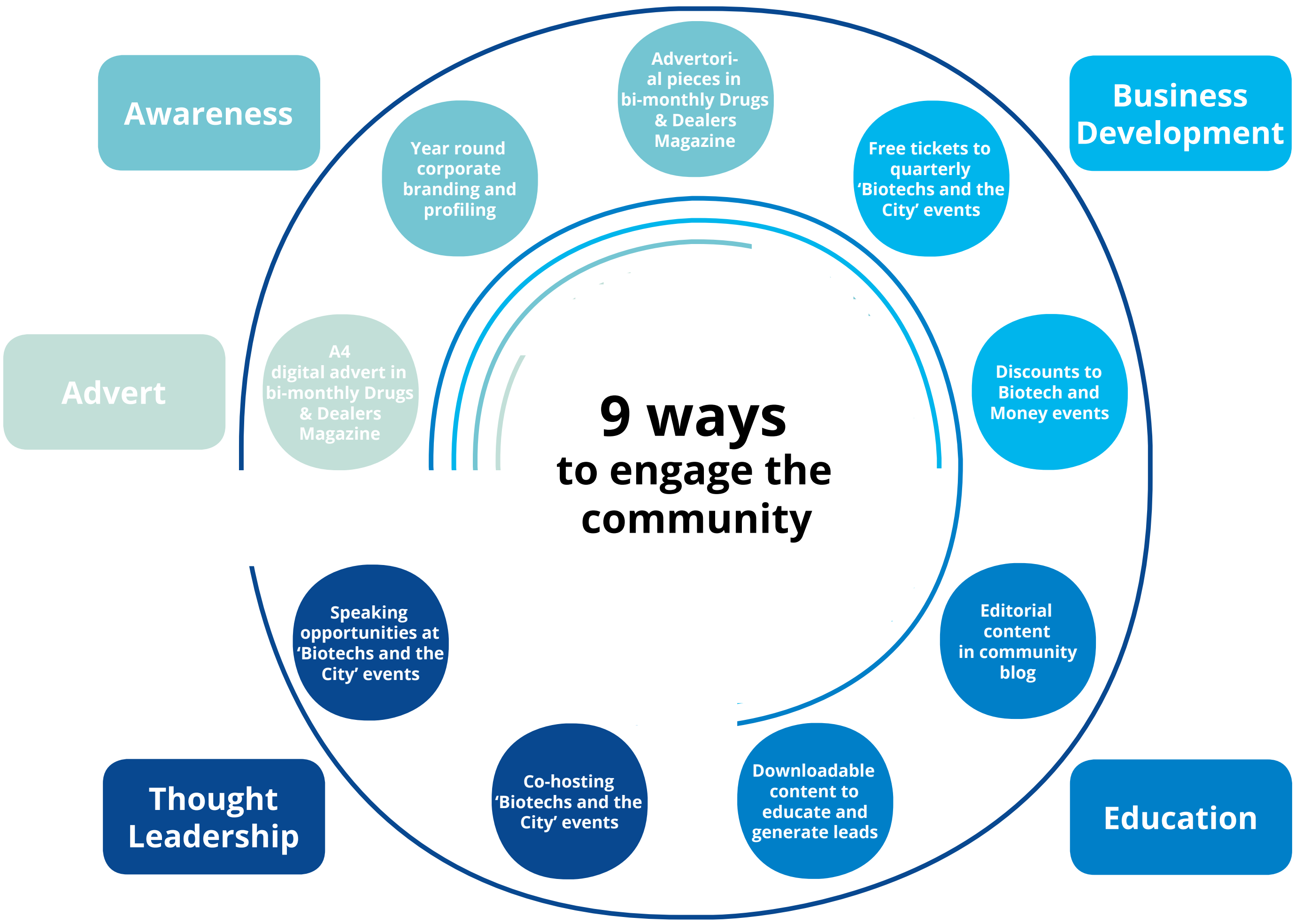

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