Interview with Dr. John R. Thornback, Chief Executive Officer, Dx assays

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Tags: Dx assays

Nine months ago you were appointed CEO of the company. What brought you to Dx assays?

I think Dx Assays is a very interesting opportunity, which is why I came here. It is unusual in that it is not a traditional start-up diagnostics company. We are a company that carries out, primarily contract development work for other diagnostic companies as well as pharmaceutical companies and clinical laboratories.

This is advantageous because it has given us the financial base to actually look beyond where we are now and look ahead to where we will be in the future. I was really brought in at the beginning of 2012 to look at where the company wanted to go in the future. My remit is to move the company, expand on our current contract offering, and also look to develop products in collaboration with corporate partners and to develop our own products for the Asia Pacific market. We feel that those products are very underserved by the main diagnostic companies and there is a need for diagnostics developed in the Asia Pacific region by Asia Pacific companies. We have had a lot of good responses from people now on that basis. There are specific diseases that are found here in this part of the world which are not typically found in Western Europe or in the US.

Being able to test our diagnostics products on an Asia Pacific patient base also allows us to focus our development on those products. The company has a very strong base for a start-up business in that it is profitable and generates cash; we are now looking at ways where we can use that cash to expand and grow the business.

What is the time frame to introduce these new services?

We are in the middle of doing our new five-year plan. At the end of those five years, we expect to be a company that has a strong base with an expanded contract service business especially in the companion diagnostics area, has its own products on the market, a global distribution network, and has a strong pipeline of products coming through.

What services do you offer at the moment?

Dx assays' business model revolves around providing contract services to other diagnostic, pharmaceutical and biotech companies. We focus on molecular diagnostics and that is either pathogen detection diagnostics or companion diagnostics. We have a strong expertise in the whole process from start to finish for molecular diagnostics. We can take a project from the start. A company can come to us and say "We want an assay for this pathogen," and we will develop it the whole way through to all the verification and validation and deliver that package to the standards, which they can submit to a regulatory authority. Typically that will take anything from 6 to 18 months. Some complex tests can take up to two years.

On the other hand, we can also do a project, which we just did for a large multi-national, where they wanted to look at a sample matrix, in this case a different swab and us to validate for CE marking. So we can do that, and that may take us a month or two.

We are very flexible and we have experience in doing over 90 different projects in five years for a number of different companies as well as projects for hospitals.

Our business model is unusual in that we do not to take long-term royalties, and instead we just do it as a fee-for-service. As a result, it is very attractive for smaller biotechnology companies. Also we recently launched the same approach for pharmaceutical companies who want companion diagnostics. This has generated a lot of favourable comments. We will develop the assays for them and we will give them the assay. They do not have to worry about paying us for many years. If they go to a lot of other companies they will want royalties for developing the assays. We purely work on a fee-for-service basis. As we have noted before, this can be anything from one month to a one or two year project.

We are also platform-neutral, so we are not tied to one diagnostic platform. In our laboratories, we have four or five different platforms, or machines that we work with. So we can develop assays on all those different platforms depending on what the customer wants.

We can also work with different technologies as well. We are not just tied to real-time PCR. We have experience in other technologies, such as Luminex as well. So we are technology-neutral, machine device-neutral, and we can carry out projects of any length as well. This flexibility makes

Dx assays very attractive to our customers.

What about risk?

With the experience we have in molecular diagnostics, there is relatively little risk to the customer. We have done over 90 different projects. The risk of failure is always there, but it is a relatively low. For us, we are always looking to improve our quality standards and we are at the level now where we are producing data and reports, which allow our customers to just go forward and submit to the regulators.

Are most of your customers European and American?

We do a lot of work for multinational companies, which by definition, are typically based in Europe or the US. However, we do have strong contacts with Japan in the pharmaceutical and diagnostics industries. Our head of research spent 17 years in Japan, so we have very good links and expertise with Japanese companies.

In terms of innovation, what can Dx assays bring to the business process?

Going forward, clearly it is how can we develop products that meet the market needs, primarily within the Asia Pacific region. That is where the innovation comes in, either in terms of technology, or whether it is innovation in terms of devices that we can adapt. Innovation from my point of view is developing products, which meet the specific markets needs. You cannot take a product that is designed for a Western European or US market and assume it is going to work; the healthcare system is different, the access to healthcare is different. That is a critical point. It is different in Singapore than what it is in China, Korea and Taiwan, for example, because they are all different markets.

All business processes for new products begin with what the product is going to look like. That is always the first thing we consider. We do not look at what kind of PCR technology we are going to use. We ask what is it going to look like, what is it going to do, how is it going to fit with what the customer wants? Then everything else falls in place after that.

How would you grade the performance of Dx Assays in Singapore?

I think the company itself has done very well. We are profitable and we have hit a lot of our targets in the company. I think there are challenges in Singapore, which any developed country has. Singapore is not a third world country. Developing a knowledge-based economy is what the Singapore government is trying to do.

Singapore has done an excellent job of taking the country as it was 40 years ago to now, where it is

a first world country. So the challenge is how Singapore goes to that next level. It is a country that has made the leap to the first world and is now trying to grow to be a world-leading first world country. That is almost more of a challenge, because all the other countries like the UK, the US, Germany and France, are trying to do that as well. Singapore competes with European countries. It does not, in my mind, compete with Malaysia and other places. Our workforce is very experienced, well educated and professional. The business processes in Singapore all work in the way Europe works as well. So that is the big challenge. That is what I see the Singapore government is trying to do and they are coming up with innovative ways to do that.

In terms of what Dx assays has done, I think we have grown from nothing to a very successful company that has a stable financial position. We are growing very well and we are happy with our financial position. We are now able to use the money that we have to grow the business, which is what companies should be doing. It is unusual for a start-up company to be in our position so quickly. Normally, a start-up company like ours would be funded by venture capitalists; we would spend the money and then we would hope to get to a certain point in creating some revenues. However, from day one we have been generating revenues. From that respect, it is a very good model, because it is a much lower risk model than the traditional start-up biotech company.

So your next step is not going to be an IPO?

We are not at the stage of an IPO yet. I do not think the shareholders would get particularly good value, given the way the markets are. What we are looking to do is invest and grow the business organically by forming more partnerships.

Are the opportunities in Asia an opportunity or a risk for the company?

It is always good to have competitors. I would worry if we did not have competitors, because it would probably mean that we are not doing the right thing. I suspect that Taiwan and China will imitate the Singapore model—imitation is always the best.

The great thing about Singapore is that the business processes work. If you are setting up a business in Singapore, everything works. It is straightforward to set up a business— our laboratories work, our installations work, and if you need a plumber to fix something then they come and do it right away. It is a country where things work. If you are setting up a business like ours where we need the machines to be working in order to be able to do the science, then that is very important. I think Singapore probably still has the lead on that, which identifies it as a country where it is easy to do business.

What is your view about Singapore and research capabilities?

Singapore has a very educated workforce. It is a small country so the pool of people – Singaporeans – is quite small. There are very good people around, but we are all competing for a relatively limited pool of people. However, Singapore's immigration laws do allow us to bring people in. Hence, we have people from the Philippines, from Malaysia, and China who are permanent residents, and who have been educated in Europe and North America. In fact, we worked out that we have people in the company who are fluent in at least 10 languages.
Because it is a small country, and a relatively small body of people, there are a relatively small number of companies that do what we do at the moment. That will grow as time goes on and there will be more and more companies, which is not unusual, even in the UK. In Manchester, where I was based before I came to Singapore, there were basically three molecular diagnostic companies doing the diagnostics development and the pool of people that we were all working from was very small.
I think Singapore's challenge will be to grow that pool of talent, and to maintain it.

What do you expect of Dx assays in five years?

You will see a fully integrated, world-leading molecular diagnostics company, which will have its own products on the market in the fields of both oncology and pathogen detection. Dx assays will have multiple partnerships and will also have a strong expanded contract business as well.

How easy was it to move from academia to business, and do you regret making the move?

I left academia in 1988 when I was hired by one of the first European biotech companies as head of R&D. The industry has changed a lot since then. But to be honest, it is not something I have regretted at all.
When I left academia, the first thing I did was to bring ideas I had to the industry and take those forward as product developments. Biotechnology has a huge commercial focus as you move forward. I think that sometimes that takes a long time for many academics to acknowledge. That is what makes biotechnology exciting. One of the main things is that you see the best of both worlds if you are in the biotech industry, because you are still very much focused on innovation and developing new products, and starting from scratch.
We can take an idea, a concept, and we can actually get a product on the market in the diagnostics industry. The pharma industry is a bit different, as it can take 10-15 years. However, for a diagnostics company, we can take a product from scratch to the market in 18 months to two years. You can actually say, "Something I developed, which came from my idea, is now routinely being used in a clinic and is potentially helping save people's lives." That is really a nice thing to be able to say, which is, at the end of the day, why we come to work in the morning.

What is your final message?

Dx assays is a very successful business that is focused on providing high quality service to its customers. Singapore has very good infrastructure, very good government support, and a very strong academic background that we can tap into, as well as a great workforce. In addition, Singapore has a business environment, so it is a great place to work and to live. As a result, the components we want are all here, which makes it an extremely attractive place to set up companies like Dx assays.

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