Interview with Leigh Berryman , Chief Executive Officer, Maccine

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Which previous professional experiences have led you to join Maccine?

Getting my own company to go public in 2006 in Canada was a success for me; the company had grown quickly to 425 employees and we had 4 facilities around the globe: San Diego, Montreal, Denmark and Hungary.

At that time, whenever we had an inquiry that didnâ??t quite fit into our development pathway, we would pass it to the Veterinary Services department, or what I called â??the weird science deptâ?•. The veterinary department was always full of interesting projects that were very well supported scientifically; there was lot of rationale in finding solutions while using cutting-edge technologies. I was fascinated by all this and at a particular point realized that what I was calling â??weird scienceâ?• all along was actually translational research.

As I got more involved, I heard about this company, Maccine, which was being set up in Singapore with a focus on translational research models in monkeys. Fascinated by the idea and with translational research in general, because of its strong rational-base and direct relevance to the human condition, I stored it in the back of my head. Two years later I heard that Maccine was looking for a new CEO, so I made a phone call and 2 months later I was in Singapore heading the operations.

What have been the milestones in the collaboration with A*Star to establish the preclinical synergies and how will this impact the progress of translational research?

In order to examine the synergies, the reasons behind translational research and what is actually happening in the world needs to be examined. In the last 4 years we have seen significant financial turbulence., biotech funding has taken a major downturn and CROs have also experienced significant setbacks in their financial targets, which has led to the shutdown of facilities and general retrenchment.

The mantra in the late 90â??s and early 2000â??s was speed to market. Everything revolved around speed and there were many publications emphasising how many millions of dollars were lost every day that a product was not on the market.. At that time, equity investors were very happy to invest money into biotech and get the product into humans as quickly as possible because that of course meant getting closer to the market quicker. The problem with this acceleration was that it resulted in the premature movement into Phase II studies (costing in the order of 150 million USD each) that subsequently failed. The results were: no quick entrance into the market, no product and approx.

$150 million lost. These disappointments were responsible for slowly changing the industry mindset from a â??speedâ?? mentality to a â??successâ?? mentality. â?? if a study got into Phase II, make sure it worked. This is where translational research began playing a significant role, because it pays to fully understand the biology of what you are doing before getting into the commercial development process.

The change in mindset is why Maccine, as a research CRO, has seen an increase in revenues. For the past 5 years Maccine has had a year on year growth while the big companies like Covance, Charles River, amongst others, have experienced very significant decreases in revenues.

Coming back to A* Star, Maccine is focused on high-end research and in order to offset the high capital costs that such research demands, we set up a joint venture with A*Star. We have diverse medical imaging capabilities such as PET, MRI, CT and Dexa. We also have cognition models, animal models of human disease, and we explore and interrogate those animalsâ?? models of human disease using human (clinical) diagnostic technologies. Some of these diagnostic technologies are contained in the TIIL (Translational Imaging Industrial Laboratory), the A*star collaboration laboratory.

A* Star (being primarily an academic group) has access to high-end equipment and want to realise some port of payback for this, but they didnâ??t want to be involved in the commercial aspects. Hence, we are able to provide the commercial interface and supplement Maccineâ??s service offering by making use of their specialized equipment without Maccine having to carry the full cost of capital purchase. I believe that this has been beneficial for both parties since we found a way of levering an investment in academic capabilities onto a commercial fee for service model.

Are there any more partnerships in the pipeline?

We are in talks with two smaller organizations to form strategic alliances, but nothing is concrete. Because we have such high-end capabilities, we work with 12 of the top 13 pharmaceutical companies worldwide; a very positive endorsement of Maccineâ??s science.

Why was Maccine set up in Singapore?

Planning at the time was strategic rather than tactical. In building the biopharmaceutical infrastructure in Singapore there were a lot of initiatives undertaken: the construction of the Biopolis, the attraction of big pharma to establish research facilities in Singapore and developing high-end services providers like Maccine.

Although there was the intention to bring in a service provider, there was originally no vision of a service provider with a focus on translational science. This came later, in the mid 2000â??s, almost concurrent with the realization and understanding of the financial necessity of understanding the science prior to going into the development process.

A significant number of the MNC that are in Singapore wanted access to what we do. That pushed us to develop a range of high-value models and we quickly achieved a self-sustaining, critical mass of capability. For the average CRO, the development of a model is not something that is generally desirable because it is costly and, often, can only be applied once or twice, making it difficult for them to recover the investment. However, for a company like us, we have a range of models that have achieved critical mass, and it is relatively easy for us to modify, enhance, extend and further develop each model. This ability attracts the attention of an increasing number of clients, which, in turn, allows us to recover the investment in the model.

Has it been easy to build credibility?

Yes, indeed it was reinforced by the fact that global pharma companies based in Singapore were using our services. The high-end research we were able to provide in turn spread out through their internal networks and worldwide. We quickly established a reputation as a translational research laboratory par excellance.

Moreover, it was facilitated by the fact that Singapore has a very western environment, English is the business language, there are no worries about intellectual property, and the country is full of great scientists â?? all of these elements have helped Maccine grow.

Has the growth of India and China had an impact on Maccineâ??s business?

It hasnâ??t had an impact on our business.

Without a doubt the West is fascinated with the growth of the East, but at the same time there is a Foreign Fear Factor (the 3 Fâ??s) : can we trust ? can we communicate ?â?¦ and do we get value ? I think this is a very interesting lesson and something to keep in mind since almost all of the western CROs that have tried to set up something in China have failed. Nevertheless, the west is still fascinated, investing money into China (and India to a leer extent) in order to establish a footprint. This makes sense because certainly China has the promise of future market. However, I would be interested in a cost-benefit analysis that looks at the cost of research in China and India and analyses whether it is really cheaper than equivalent level research in western environments. If we take into consideration the softer costs: infrastructure, communication, program management, concern of IP, I would not be surprised to see that R&D costs of western based companies operating in China or India are actually higher than in a western environment. It would be enlightening to be able to see the real differences and cost-benefits of the Eastern low-cost research compared to the West.

What are the advantages of translational research?

The understanding of how to adjust and interfere with a biochemical process and, more importantly, the accurate observation and measuring of how you have affected that biochemical process using interventional technology, is central to knowing whether or not what you are doing will or will not have a clinical benefit.

Translational research means being able to correctly interpret and apply data from non-human biological systems to the understanding of the human circumstance. Furthermore, if you can identify what is happening at the cellular and sub-cellular level in the progression of a disease, and interrogate it using specialized technology level, it will enable the correct deduction of what will happen clinically over the course of time.

What are your future expectations from Maccine?

We are one of the few CROs that for the past 5 years has been growing. I donâ??t see any reason for that to stop as the pendulum swings from development into research and discovery. That is to say, there is a greater focus on the research and discovery phase in order to re-risk development phase of a product life cycle.

It is always easy to say you want grow, but for a preclinical CRO that is very facility dependent, it is a balance between capital injection and realization of capacity. A successful CRO grows by a steady accretion of expertise and client base and we are planning to continue in that line. There is definitely intent to grow and I expect Maccine to be 2.5 to 3 times the size that it is now within 3-4 years.

What would be your final message to our international readers?

Of course, I encourage drug developers to pick up the phone and call â?? I am sure Maccine can contribute to the acceleration and de-risking of their drug development program. â?¦.but the main message is to be cautious about following macro trends in science, meaning be cautious about reading stories about the growth of India and China and assume that this is where the science should be done. It is unquestionable that production has been successful in those countries, but science is an intangible and requires close communication. We have to be aware, and understanding, of cross-cultural challenges. The translation capabilities in Singapore clinical and pre-clinical research are incredible, and it is definitely a major hot spot for translational research globally.

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