Shawn Leung â?? CEO, SinoMab Bioscience, Hong Kong

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Shawn, as I understand, SinoMab today is a clinical stage biopharma company focusing on the development of therapeutic monoclonal antibodies (mAbs) â?? hence the name. Can you tell us a little about the genesis of the company?

Having previously studied and worked in the UK and US, I was asked to return in 2000 to head the Hong Kong Institute of Biotechnology (HKIB) to spearhead Hong Kongâ??s foray into the biotech sphere, a field previously undeveloped here. At that time, the focus on antibodies was just beginning to emerge and no one was exploring it in Asia. I thought it would be a good opportunity for Hong Kong to seize â?? among other things, we would have the huge, untapped Chinese market in our backyard that other countries like Singapore would not. Hong Kong was not only my home country but it had also sponsored my education, including my PhD in the University of Oxford in the UK, so I felt that it was my duty and obligation to return.

It soon became apparent that the Hong Kong government was more interested in using HKIB to explore the so-called â??rationalizationâ?? of Chinese medicine. While I tried to introduce certain biotechnology concepts to help Hong Kong develop a nascent biotech industry, I decided in 2002 to pursue my own project focusing specifically on mAbs.

I strongly believed â?? and still do â?? in antibodies. Back then, I started by writing a few patents, working on a few projects and raising money. In 2002, I obtained funding from MorningSide, a Hong Kong investment group to establish SinoMab.

While antibodies themselves are a very simple concept, it took technology over 25 years to realize the concept. In 1984, three immunologists received the Nobel Prize in Medicine for their work on the immune system and the production of monoclonal antibodies â?? and everyone thought that it would

be a magic bullet. But it took until 1997 for the first monoclonal antibody to be approved by the FDA for the treatment of lymphoma. Today, everyone is talking about antibodies and it has become a widely accepted field. Thirty years ago, however, it was not seen as a sexy or even potentially successful area. Genentech was the only established biotech company in the 1990s to focus on antibodies. Frankly speaking, in the early-1990s, I was embarrassed to even tell people I was working on antibodies because I would be frowned at!

Today the top selling drug is an antibody, Abbvieâ??s Humira, and competition in general is fierce. But I felt like a loner three, and even two decades ago.

With such fierce competition today, what differentiates SinoMab from all the other mAbs-focused biotech companies out there?

I am convinced that we are absolutely first-in-class globally. SinoMab has our own proprietary platform technology as well as a strong pipeline of three IND products catering to auto-immune diseases and cancer. I believe our technology and products work, but that is still a prediction until we conclude our ongoing phase III trials.

In brief, an antibody cannot enter a human without eliciting an immunological response. You have to use re-engineering technology to â??humanizeâ?? it. Humanizing technology is heavily patented, which means licensing fees need to be paid if a company wants to use a particular one. I came up with a new antibody framework re-engineering technology that I believe rivals existing technology. The two key advantages is flexibility in the choice of framework sequences, which increases speed and success rate, and the substantial reduction of potential immunogenicity.

mAbs may not be a particularly sexy field but it is very functional. It works, and it serves serious unmet medical needs. This is what we are focusing on: delivering serious products for serious medical needs backed by serious science.

What are your current priorities for SinoMab?

What we lack is money. Biotechs â?? and SinoMab specifically â?? are a cash-burning machine. This is the most difficult part â?? because many people can have a good, or even great, idea but you cannot just say you have this idea. You need to produce or realize it. Many start-ups in Hong Kong began with professors but they often lack the knowledge to commercialize their ideas into viable products. It is not just about money and technology, it is about the know-how, for instance, relating to the implementation of necessary industry procedures like Good Manufacturing Practice (GMP) for production and Good Clinical Practice (GCP) for clinical trials.

We are also open to collaboration, whether with Big Pharma or other biotech players. Big Pharma partners will help to validate our technology but sharing with them can be risky because they have the resources and facilities to adopt or adapt your innovation without even having to copy or replicate it. For other biotechs, I can offer expertise in both raising capital as well as the production platform and processes, at least in China. A small biotech company with a product lead will find that difficult to do, even with sufficient money. Time is also money and our knowhow can help other companies save time. With additional support, SinoMab can also look into expanding into more indications.

I have already been contacted by companies regarding licensing agreements. I always ask them, what sort of partner are you looking for? What sort of products can you offer? Our strategy is to

develop win-win relationships with partners of the right fit. It does not matter how interesting the product is per se; what is important is which product has sufficient market need.

We are also in the process of restructuring for the better. While Hong Kong is still our headquarters today, we have an office in Shenzhen and a cGMP production plant in Hainan. In future, we expect to lean more towards China because we are increasingly seeing that that is where the talent, the market and the money are. As we are looking to position ourselves for market approval, we are currently investing in a new manufacturing plant in China and we need channels to source the money for that. An expanded presence in China will also help us expand our portfolio and gain more collaboration, both locally and globally.

On that note, how do you evaluate Hong Kongâ??s attractiveness as a biotech innovation start-up hub?

As I explained, I had returned to Hong Kong in 2000 to contribute to the development of its biotech sector. 17 years on, the biotech industry here is still in its infancy and much of the governmentâ??s pitch sounds very familiar. Hong Kongâ??s proximity to China has always been a huge advantage but this is much less of a selling point today than it was two decades ago because China has opened up. Today, Big Pharma, top academics and financial investors are going directly into China, be it in Shenzhen, Shanghai or elsewhere. China today also has the capital. I believe that if you have a viable product, it is actually a lot easier to raise money in China than it is in the US â?? and the valuation is also higher. The financial sectorâ??s understanding of biotech in Hong Kong is still underdeveloped. Biotech companies would need to explain antibodies to them, for instance, and the risk is that the technology will be undervalued.

Chinaâ??s pharma market used to be associated with copycat, low-quality products like copycat antibiotics, for instance. Today, the Chinese healthcare and pharma markets have advanced rapidly and local companies that made it big on copycat drugs realize that they need to transform, acquire new technology or die out! As a result, these large, rich companies are now on the prowl to acquire new technology and companies. They realize that, having basically copied everything that is possible to copy, they now need to innovate to survive. From the regulatory side, the Chinese FDA is implementing far-reaching reforms as well so the regulatory environment in China is becoming more sophisticated. There is also a developing ecosystem of CROs, CMOs, clinician scientists, and so on, that can help biotech start-ups so they do not have to do everything on their own. That is very important. The most critical thing is that the biotech landscape in China is advancing at a dizzying pace and you can see changes every week! The time has definitely come for China to be the biotech center of Asia.

Nevertheless, Hong Kong retains a crucial edge. It has very conducive intellectual property (IP), legal and communication systems in place to develop research-intensive, high-value, proprietary products. This is not something that companies necessarily want to do in China; if an employee decides to leave with valuable data, the sheer physical size and population density of China mean that he can easily disappear without a trace. In Hong Kong, the infrastructure is trustworthy and robust. The biotech community is also rather close-knit. This is why no matter how SinoMab grows in the future, prototype R&D will always be done here and we will only go to China for the scale-up. It has always been my belief that this is Hong Kongâ??s largest selling point and the niche that Hong Kong should occupy â?? especially because it leverages on our physical proximity to China.

Do you have a final message on behalf of SinoMab?

To the global life sciences community, I would like to say that, SinoMab is doing serious science. Our goal is to develop a blockbuster drug!

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