Dai Xiaochang – Executive Director & CSO, Sirnaomics Ltd

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Executive director & chief strategy officer at HKEX-listed RNA therapeutics biotech Sirnaomics, Dr Dai Xiaochang is no stranger to Hong Kong and mainland China's pharma and biotech ecosystem, having held leadership roles at Yunnan Walvax , Kunming Baker Norton and the Kunyao Group. He outlines the company's RNAi therapeutics pipeline for metabolic diseases, anticoagulant therapeutics and oncology, its leading late-stage candidate for non-melanoma skin cancers and the choice of the Hong Kong Stock Exchange.

Can you begin by telling us a little bit about yourself?

I received my Master's degree in 1988 from the Shanghai Institute of Biochemistry, which is renowned for its total synthesis of insulin. Subsequently, I moved to La Jolla, California to pursue my PhD in Chemistry & Biology at The Scripps Research Institute, which is one of the world's leading biomedical research institutes and their Ph.D. programs are highly regarded. I did my post-doctoral training in Biology at the California Institute of Technology.

Upon my return to China, I rejoined a biotech startup company I cofounded before moving to the US. This company went public on The Shanghai Stock Exchange in 1998. Subsequently, I became the Chairman of Walvax, a leading Chinese pharmaceutical company specialized in vaccine development. I have also held leadership roles in two public companies in the pharmaceutical

sector, as well as a joint venture of Teva's in China.

How did your career journey lead you to Sirnaomics?

I was trained as a scientist and was familiar with the research side of the biotech industry. Through the business engagements previously mentioned, I gained investment and capital market knowledge. However, I had never been exposed to marketing, sales and branding. Therefore, when I was presented the opportunity to lead a joint venture for Teva in China, I took it resolutely with that curiosity in mind.

The joint venture had a unique 50/50 ownership structure, which made it hard for its shareholders to agree on anything, but it gave me the opportunity to run the company based on my ideas. I was fully immersed in marketing, branding and sales, as well as managing the sales team.

I was dealing not only with the mainland China market, but also with partners from Japan, Taiwan and China. This role allowed me to connect with global pharmaceutical partners. In 2015, the joint venture was acquired by its Chinese parent company, and I was asked to be the CEO and I led the company during a transformative period in the Chinese pharmaceutical industry.

I got the chance to do this for more than two years, an experience that brought me up to date with the Chinese regulatory ecosystem. In June 2017, during my tenure, the Chinese regulatory authority joined the International Conference on Harmonization and around the same time I joined Sirnaomics.

Sirnaomics was originally set up in 2007. Can you tell us about the company's beginnings and how it has evolved?

Sirnaomics was established in Maryland, US in 2007, focusing on applying RNA interference (RNAi) technology to address unmet medical needs in a variety of diseases and cancers. The founder, Dr. Patrick Lu, has a similar background to mine. He completed his doctoral degree in China and then moved to the US for post-doctoral training. Dr. Lu had a successful career in the pharmaceutical industry before he co-founded his first company, which was acquired in 2005 by a venture capital group backed by Roche.

Sirnaomics set up an R&D center in Suzhou in 2008. It was among the first companies to establish a local presence and receive local government support. Later on, the company established a pilot

plant in Guangzhou, supplying the products for clinical and preclinical studies, and in December 2021 Sirnaomics completed a successful IPO in Hong Kong.

The company is working with RNAi technology. What is the significance of this technology?

In the history of drug development, 90 percent of drugs have come from small molecules. For example, Aspirin, Cisplatin and Taxol are all small molecules. This is why many organic chemists are employed in the pharma industry. They synthesize, screen and advance molecules into clinical trials that eventually become approved drugs. Later, proteins, more importantly antibodies, became major sources of innovative drugs.

The advantage of biologics is that they can specifically target their cell surface receptors. They are very effective in regulating certain cellule signal pathways. The pharmaceutical industry realized that the nature of antibodies makes them advantageous in many ways to small molecules. Biologics and antibodies have tox profiles that can be better predicted, resulting in a higher hitting rate and many of these antibodies have become blockbuster drugs. The landscape of pharmaceutical industry was therefore transformed.

Today, small molecules still play an important role in the pharmaceutical industry. However, biologics increasingly have become more important sources of innovative drugs and with the breakthrough in RNAi technology, the pharmaceutical industry has a third weapon in its arsenal.

What therapeutic areas is Sirnaomics working on with RNAi technology?

Metabolic diseases, anticoagulant therapeutics and in the oncology space. Recently, one of Sirnaomics' RNAi therapeutics, STP705, moved into late-stage clinical development for squamous cell carcinoma (isSCC) after encouraging Phase IIa/b clinical results. Sirnaomics is also studying STP705 for basal cell carcinoma (BCC), which will be the next candidate to move into late-stage development pending FDA review.

What does the company's pipeline look like today and what other candidates is Sirnaomics advancing?

Sirnaomics has developed two proprietary platforms, PNP and GalAhead™, for applications in five therapeutic areas with multiple candidates. As mentioned, its leading candidate, STP705, is initiating late-stage clinical trials for non-melanoma skin cancers (isSCC, BCC). Another candidate, STP707, is running a Phase I clinical trial on solid tumors including liver, lung, pancreatic and colon cancers. STP122G, a candidate developed with Sirnaomics' proprietary platform GalAhead™, is running a Phase I clinical trial for an anti-coagulant indication.

Sirnaomics has conducted clinical trials mainly in the US. Are there any plans to carry out trials in Hong Kong and in Asia beyond Hong Kong?

Sirnaomics has first filed INDs with the FDA and conducted clinical trials in the US. When we have proof of concept , we will then expand into multi-centre international trials in countries and regions, such as Singapore and Hong Kong, Taiwan and mainland China. We are currently evaluating clinical sites in Hong Kong and Singapore.

Liver disease is prevalent in Asia. Therefore, our candidate STP707 will have significant clinical trials running in Asia for liver and other GI-related tumors. We have received research funding support from HKSAR for these studies and as a listed company, Sirnaomics will also take full advantage of the capital market to raise fund to support future development.

One of your assets you mentioned is in late-stage development for non-melanoma skin cancer. Can you tell us about that asset?

STP705 is a first-in-class asset, with its leading indication in non-melanoma skin cancer. The trial for STP705 has been conducted mainly in Florida. Non-melanoma skin cancer is prevalent in countries such as the US and Australia, so there is a high unmet need for new treatments. The market potential for this indication is tremendous. STP705 is also being developed for submental fat reduction, and is currently in a Phase I trial.

What made Sirnaomics choose to list on the Hong Kong Stock Exchange?

The Hong Kong Stock Exchange (HKEX) created Chapter 18A for helping pre-revenue, pre-profit biotech companies and HKEX is among the top exchanges for fundraising.

Since establishing Chapter 18A five years ago, the capital market in Hong Kong has become familiar with the dynamics of the biotech industry. The number of research analysts that cover our sector has seen tremendous improvement and growth. Currently, Sirnaomics is covered by four major banks' research teams.

Is there a final message you would like to share with our audience?

Hong Kong is strategically positioned in the Greater Bay Area. It has a very robust and efficient capital market, with a thriving biotech ecosystem, a large talent pool, and policies that embrace biotech startups are in place. I believe Hong Kong will become a very important biotech hub in Asia. And, the community is also building platforms such as HKBIO 2023, that will continue to improve the visibility of the biotech industry.

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