Interview: Sheng Sitong – Founder and CEO, Considerin Group, China

"We are the only Chinese company to have our own patented gene sequencing and analysis technology – with CFDA approval and the CE mark."

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Sheng Sitong, founder and CEO of gene sequencing device company, Considerin Group (formerly HYK Gene), discusses Considerin's rapid expansion and the development of precision medicine in China.

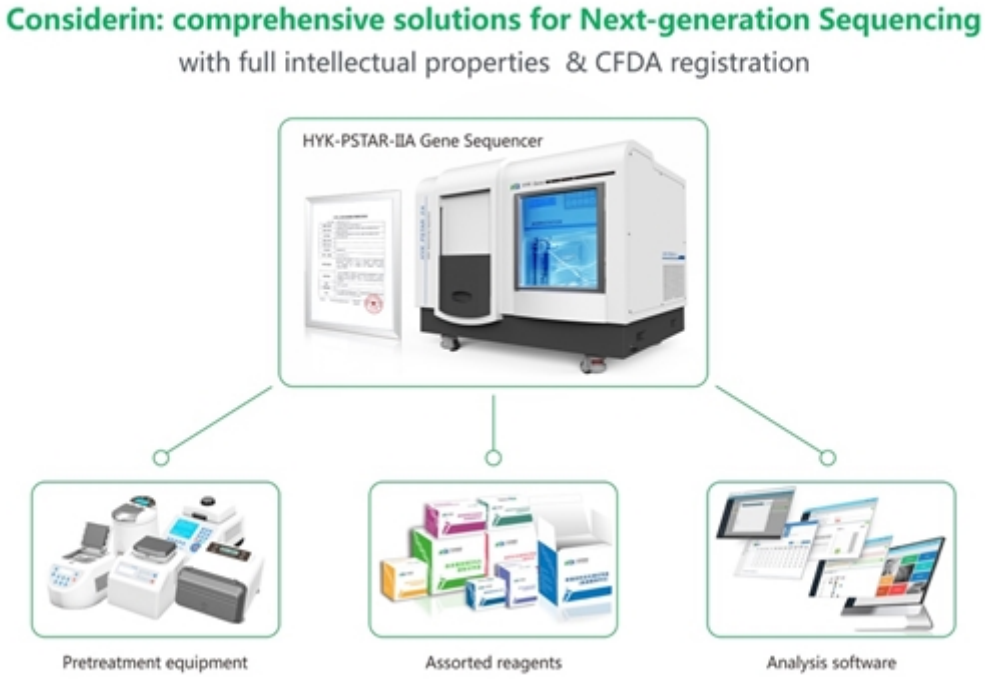
Mr. Sheng, could you briefly introduce your company, Considerin Group, to our international audience?

As a company, HYK Gene was officially established in Shenzhen in 2008 but the R&D began before, while I was doing research at my own laboratory at the University of Virginia Medical School. At that time, I already had an idea to start a company and commercialize the technology but I did not know if it was better to do it in the US or in China. What convinced me was the encouragement of then-Minister of Health of China Minister Chen Zhu to take my novel technology to China to establish a truly Chinese innovative gene sequencing company – with its own independent intellectual property rights and patents. I was therefore invited back as one of the first batch of China's 'Thousand Talents Plan'.

What is unique about HYK Gene is that we are a product company. While China is now a global giant in the field of genome sequencing, the vast majority of players here do not have their own products but rather, acts as users or distributors of foreign products. We are the only Chinese

company to have our own patented gene sequencing and analysis technology – with CFDA approval and the CE mark.

We provide medical devices to hospitals and testing laboratories, along with diagnostic assay reagent kits. Gene sequencing is increasingly essential to medical diagnosis and treatment to ensure that patients receive the most effective drugs. We decided to focus on smaller devices that could be used in bedside testing and clinical practice both to shorten our timeline to market and to increase the potential reach of our technology.



What is really exciting is that we are now on the cusp of explosive growth and fast expansion domestically. This year alone, we would have sent our products into over 100 Chinese hospitals, many of them top-tier hospitals.

Given our rapid development and in order to keep pace with the times, we decided to expand into new areas and have now established six business segments: medical device, medical R&D, medical services, agriculture, healthcare and big data. This is why we decided to rename our company Considerin Group, and now have a number of affiliates in different Chinese cities, including Shenzhen, Guangzhou and Wuhan.

Finally, we are also proud to have been recognized by the Chinese Ministry of Health. In 2014, our technology was actually defined as the national standard for domestic gene sequencing platforms, which is testament to our quality and innovation. We rank number 1 globally in terms of the total number of core patents in the area of gene sequencing.

Having experienced such exciting successes over the past few years, what are the current priorities for the company?

The paramount priority for us now is to have our products reach our customers and end-users as quickly as possible. The company is ready, our products are ready, and most importantly, the market is also ready. The Chinese gene sequencing market is now the largest in the world, having grown steadily over the past few years.

The concept of ‘precision medicine’ has been filtering through Chinese society, from industry to healthcare practitioners to patients and consumers, over the past few years. Not only do doctors understand that they can use gene testing to diagnose patients at a more precise, molecular level as well as to prescribe the most effective treatment, patients themselves are also increasingly becoming well-educated enough to understand the concept of precision medicine.

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This is why I believe the Chinese gene sequencing market is at a critical turning point. In the next two years, we want to penetrate the domestic market as quickly as possible. Precision medicine used to be just a dream, a buzzword. Now it has become reality.

The concept of ‘precision medicine’ is becoming more widely known and accepted but the challenge, at least in Western countries, is that precision medicine requires close coordination of multidisciplinary teams. Healthcare practitioners need to adapt to a new style of working. How advanced is this transition in China?

It is true that while precision medicine is now a rather well-known concept, in terms of practice, there is still a learning curve. In addition, China entered this field later than the Western world. It takes time to train healthcare practitioners in the skills and technologies required to practice precision medicine – and for our technology platform specifically, a lot of training and expertise is required to use it, not only in terms of operating the hardware but also in terms of having specialist knowledge and experience in genetics.

Where China has an advantage – and how it is different from the West – is that regardless of the technology, the market is ahead of available technology. Very simply, it is because we have a staggeringly large population that market needs inevitably drive technology development and innovation. Furthermore, as China is still a developing area, and this is especially true in the Greater Bay Area, people here are much more hungry to grow, learn and innovative. Most Chinese people work a lot, including on weekends, because they feel like they have to catch up with the

rest of the world. This is why our economy is booming.

I feel like there is a lot of momentum in this country. We are really at a tipping point where we have already reached a strong economic and industrial level and yet growth continues to be rapid. Compared to ten years ago, the economy was perhaps booming even more quickly but because the base was so low at that time, there did not seem to be this sense of ‘catching up’, which brings about a special kind of urgency and motivation that really pushes China to be hungry for creating and adopting innovations.

As you have highlighted, what is unique about HYK Gene is that you have your own gene sequencing IP – and you brought it from the US back to China. How important is it that China has its own gene sequencing technology company with its own technology?

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As the past few weeks have indicated, despite all the talk of globalization, trade wars can flare up very suddenly. For many people, this has driven home the point that China needs to be self-sufficient in nationally strategic industry, which includes healthcare.

Firstly, for a company, if we do not have our own technology, products and IP, we would simply be a middleman, a service and distributor company, which brings less value. As HYK Gene, since we have the capabilities, of course we need to do it. Secondly, for a country of our size, in today’s global political and economic climate, we need to have our own national industrial capabilities, not only in heavy industries like automobiles or military infrastructure but also in high-tech sectors. In fact, in specific high-tech niches, I think China is either on par or even ahead of the West. For instance, I personally find the main Chinese taxi hailing app, Didi Chuxing, much better than Uber! Our tap-and-pay systems using apps like Wechat and Alipay are also far more advanced.

China has an advantage because with our resources, energy, capital and government coordination, we are able to focus all our efforts to develop a specific industry very quickly. Through this, we can achieve scale and development very easily. For instance, for large projects like highways or railways, unlike in the US, we do not need to seek planning permission or authority from all the local government entities and homeowners in the affected areas. For better or worse, when you have a huge country and you are pushing for rapid growth, this is the most efficient manner.

We can see that China now increasingly has capital and human resources. But is innovation, especially in high-tech sectors like biomedical, something that can be “efficiently” developed?

I think it is useful to differentiate between incremental and breakthrough innovation. What you need for economic growth and industrialization, and what you need for true breakthrough innovation, are very different. While China can now move very quickly to build and scale up a productive industry, for highly innovative, breakthrough inventions, I do think the US still has a much stronger advantage in this respect, because it is also a matter of culture. Having gone to medical school in the US, I am very familiar with the American education system, which emphasizes creativity, space for brainstorming, and 'messing around'. This is how you encourage creative, breakthrough innovations. In China, the system emphasizes more purpose-driven, focused innovation.

That said, while the US used to dominate biomedical research, now that China has the capital, infrastructure and talent, there is increasingly more high-quality research and products coming out of China. This year alone, five Chinese PD-1 oncology drugs have entered clinical trials! That is incredible. There are now Chinese-developed drug candidates undergoing international clinical trials, which would have been unheard of a few years ago. Whereas Chinese pharma products used to buy innovative products from the US, they are now out-licensing their own innovative compounds to US companies! This is incredible.

For a highly innovative company like HYK Gene, what are the advantages of being based in Shenzhen?

First and foremost, the Shenzhen government is extremely well-educated and open-minded. Many of the senior civil servants often have doctorate degrees, which is extremely impressive. In China, public servants already have to pass a very stringent examination in order to join the civil service, so government officials are typically an elite class, but in Shenzhen this is even more pronounced. Especially for highly innovative, educated and driven overseas returnees like us, we really find it easier to communicate our ambitions and ideas to them.

In addition, the industrial ecosystem in Shenzhen is extremely well-developed, particularly for biomedical devices. Innovative start-ups or companies with a new product do not need to build everything from scratch. As you know, the Shenzhen medtech industry represents a third of the entire Chinese medtech industry, with expertise and savoir-faire built up over decades.

What is striking about Shenzhen is that most of the publicly listed companies based in Shenzhen are private enterprises, not state-owned entities. This has contributed to a highly vibrant and dynamic ecosystem here.

Finally, in terms of the lifestyle and standard of living here, Shenzhen has become extremely attractive. Critics used to call Shenzhen a city with money but no culture. This is no longer true. The government has invested significantly in establishing new infrastructure and cultural facilities. Even the healthcare and education systems, which do still lag behind other major cities, have seen significant improvement over the past few years. All of this makes Shenzhen a very attractive city to live and work in!

With such a strong base in Shenzhen and big plans to expand within the domestic market, what do you see as HYK Gene's internationalization strategy?

Our internationalization efforts are fairly recent, having started in late-2017 with a company in Singapore, Vishuo Biomedical, another company dedicated to precision medicine. Singapore is a very strategic location for companies looking to expand in Asia, especially within Southeast Asia. We also have extensive collaboration networks in North America given my background there.

Most importantly, our products and technology are protected internationally so we are well-prepared to fully enter the global market. In 2016, we also received the CE mark so we are also already able to look at the European markets.

Do you have a final message for our international audience?

Gene technologies make life healthier and better!

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