Bing Xu – General Manager, Vital River Laboratories, China



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Bing Xu, GM of Vital River Laboratories, shares the company's development in the last 20 years; the challenges of advantages of their JV with Charles River Laboratories; the importance of lab animals for the research & development of new drugs and therapies; their core capabilities and competitive advantage as the market leader; and his mission to continue their expansion in China in the coming years.

Could you start by introducing your background as well as the story of Vital River?

Before joining Vital River, I worked for multiple MNCs, such as Schering Plough, Roche and Virbac. Since the beginning of my career, my main focus has always been on large animals for vaccines and feed additives.

I joined Vital River in 2014, after the acquisition by Charles River. My role was to combine and integrate the two companies together: Vital River was a typical local company and Charles River was an MNC, hence, they had different cultures, people and languages.

Vital River was founded in 1999 by five scientists in China. At that time, the business for lab animals was very small – very few people knew that lab animals could be used for drug research – and mainly owned by the government. These five scientists were returnees from Europe or the US,

and they identified the increasing need for high-standard lab animals as a future trend for drug development in China. Consequently, they decided to set up their own company to introduce them to China.

Their collaboration with Charles River started very early on – they contacted Charles River in order to get the license for the breeding, care, production and distribution of animals in China. After almost 10 years, in October 2012 both parties agreed on the acquisition by Charles River. In the first quarter of 2013, the whole transaction was completed.

The motivation behind the acquisition by Charles River was clear: the market in China was booming – at that time more and more international companies were setting up their R&D centres in China – and they noticed the efforts by the Chinese government to invest in innovation and drug development for academia, universities and research centres. For Vital River, the acquisition meant access to know-how from Charles River on breeding, delivery, management, biosecurity and safe production. We learnt how to carefully manage the colonies in order to keep the same genetic information for scientists to generate reproducible or comparable results within their own research scope or in a global context.

The transaction allowed us to bring know-how into China and to introduce high-standard lab animals into the Chinese market. Even though lab animals make up only a limited portion of the total cost of new drug development, they are very important for every R&D process – without the data from in-vivo research using animals, scientists cannot continue their studies with patients. Therefore, our business is key to the development of new drugs and therapies.

What are the main challenges you faced when bringing together Vital River, a local company, and an MNC like Charles River?

First, the culture – our thinking and working styles were very different. For example, Charles River was used to having very efficient half an hour or one-hour calls, while Vital River needed a longer process to understand the situation and create an action plan.

Second, since Charles River is a listed company in the US, we had to adapt to stricter standards in terms of compliance and regulations.

Third, the language. There was a lot of communication between Charles River and Vital River from the beginning, so this was a big challenge for us. Fortunately, our people learn and adapt fast. Of course, we also recruited new talents to solve this issue. In addition, we had some experts coming

from Charles River and we sent some people to the US. After a while, we realized it was just a matter of time and continuous improvement.

In recent years, the situation has improved significantly, and we still get a lot of support from our corporate management team. This way, our people can learn from them, and our corporate can learn from us – in China the regulations, the market and our customers are different from those in the US, and so is the way we apply our management models.

Can you describe Vital River's core capabilities? Which service is driving the growth of the company?

We provide our customers with different lab animal strains. Before the JV, Vital River had only 11 strains, while now there are 50 strains that we can bring into China to serve our clients. Also, our services include humanized models, Genetically Engineered Models and Services (GEMS), rats for diagnostics and animal health monitoring services. Humanized models help us monitor the effects of a drug in an immune system that is similar to ours.

Our world-class laboratory allows us to provide high-quality services and maintain high standards. In addition, we receive all our reagents from our US laboratory. Therefore, we can support our clients with very specific animal models, disease models and genetically modified models imported from the US and Europe, keeping the same genetic and health standards. Our clients can 'store' these animal models or colonies in our facilities for future studies. We have the capacity to manage lab animals and colonies, as well as to monitor the animal's health status. Moreover, we offer our facilities and research staff to professors or students who are short of time or resources to conduct animal research. Right now, we have two research facilities – one in Beijing and one in Shanghai.

Finally, we offer some value-added services such as helping our clients humanize models, design their animal facilities at university and/or manage their facilities by sending some of our own technicians and managers. We have collaborated with Nanjing Medical University and Beijing Medical University in this way. We also help them validate their laboratory equipment, such as autoclaves (a sterilization device that operates at very high pressure and temperature), to ensure the device is functioning as intended to satisfy their research requirements.

Overall, our services are focused on research models and how to support our customers' success in research.

Who are your main customers?

Our main customers are quite different from the ones in the US. In China, it is mainly academia – almost 40 per cent of our research models are delivered to this segment –, local mid-tier biotech, pharmaceutical companies, and CROs, which also prefer our animal models because of our world standard. We work with very few global pharmaceutical companies in China, because they usually outsource their R&D to CROs instead of doing it in-house.

How do you see the competitive environment in pre-clinical services? What is Vital River's competitive advantage?

Currently, we do not have any international competitors; although, some companies like Jackson and Taconic are starting to plan activities in China. Our main competitors in the research model business are publicly funded state-owned enterprises (SOEs). In recent years, I have observed that local competitors have been investing in improving the quality of their services, signifying that the whole industry is maturing. I am very glad to see this. We also have some private competitors; they simply set up their companies and start selling animals, but their numbers are few.

There are many advantages of working with Vital River. First, we adhere to our International Genetic Standards (IGS) program, which applies to the management of the health and genetics of outbreak stocks and inbred strains of research animal models. We periodically send samples of our strains back to our HQ facilities, to ensure they remain genetically unchanged. I think this costly management program is quite challenging but at the same time, it is one of the major differentiators of Vital River. Secondly, we are known for the premium quality of our animal models. We are committed to providing high-quality genetically standardized models that are free of select infectious agents and parasites: VAF/Plus and VAF/Elite (Virus Antibody Free) animals. The latter is the highest level – being free of 39 infectious agents and parasites if taking mice as an example.

We have recently started implementing our digital strategy for production with our *BRAIN&AIM* system to monitor our inventory and breeding status; this reduces human error. We also digitalized our transportation system with *Vital Express,* a technology based on a leading cloud transport management platform in China that allows our customers to monitor and trace the delivery of our products.

With regard to animal health surveillance, we use our Laboratory Testing Management (LTM) system. LTM allows our customers to get real-time, remote access to colony quality control

information our laboratory collected for them; they could also submit requests and orders for laboratory tests.

Next year we will implement our Internet Colony Management (ICM) system specifically for our GEMS – this is a custom web and mobile application that allows clients to access the number and status of the animals in our research facilities.

We talked about our genetic management control system and our digital enterprise strategy. We also ‘materialize’ animal welfare as one of our core competencies in the market. Thanks to a lot of know-how from Charles River in terms of biosecurity and surgical models. Through our biosecurity practices, we minimize the number of retired animals (ones that are not usable for scientific research and must be disposed of). The surgical models are ones that are preconditioned with customizable devices which greatly reduce the pain animals received during common experiments. As a result of this, the research data obtained when animals are calm is much more stable and reproducible for researchers. We now offer over 100 different surgical procedures in China.

What was the motivation behind Vital River’s partnership with LA-based company HemaCare?

This year we signed an agreement with HemaCare, the leader in the customization of human-derived biological products and services; this is an excellent collaboration! It will allow us to offer HemaCare’s full line of high-quality human primary cells and tissues to researchers in China. This way the researchers in China will no longer have concerns for the ethical aspects of their research: they could get all the certificates and documents required for ethical examinations.

Can you share more about your new facility in Shanghai?

Last year we finished building our new animal facility in Pinghu, the most modern facility in the world! This was a big milestone for Vital River. The facility will help us supply animals in a more efficient way to the Shanghai area – an even bigger market than Beijing. Before, we used to deliver strain animals to Shanghai by road transport through highways, which took almost 14 hours. With the new facility next to Shanghai, it will only take 1-2 hours.

Everyone emphasizes the HR challenge. How does Vital River attract and retain talent?

Even though HR is a great challenge in China, I believe we are doing much more than the industry average.

As the market leader, Vital River is the best company for those who want to work with lab animals. For us, the challenge lies on finding the right people for animal breeding, conforming to exquisitely designed SOPs and with a heart for animal welfare, especially in Beijing, where we are trying to find a way to grow with the market where we originated, and to task ourselves with the mission to pushing the frontier of quality standards. Therefore, we actively look for talent in more remote areas, such as Guangzhou or Sichuan, although these employees tend to leave for personal reasons due to the distance to their hometowns. However, those who choose to stay and grow with Vital River understand that the innovative businesses that we have in the US will come to China step by step, which present a lot of opportunities for them in their career paths with us. So, clearly communicating our visions, our development plans for the company's future play a vital role in talent retention here.

We have an internal training system adapted to the different levels: technicians, professionals and managers, and we also get a lot of support from our corporate management team to integrate the systems. In addition, we also invite training veterans from our industry and the segments we serve – key opinion leaders, industry professionals, and professors that we invite for special training sessions.

Moreover, Vital River has a great company culture and workplace environment. We fuse what corporate values with the local culture – we respect and support each other, we balance between analytical and holistic thinking – and so the communication between China and with corporate management team has been fairly smooth. In addition, we offer a very competitive package that increases depending on lengths of service to the company, personal and team contribution, and so much more varieties of awards that show our sincere recognition to the success of our employees.

What does the JV with Vital River mean for Charles River's global strategy?

Everyone is talking about China. It is not only an amazing country, but a great market to invest in – the economy is going well and even though the GDP growth is slowing down, we still keep a six per cent growth rate every year, which is fantastic.

For Charles River, the situation is the same – only in China we keep double-digit growth, while in the US and Europe the trend is relatively flat. This kind of growth is only possible here, which is why

Charles River have been investing so heavily on our Pinghu facility; next year we will have another one in Wuhan, Central China, followed by in Chengdu and Guangdong in the near future. Our priority is to keep expanding in China.

What are your goals for the next 5 years?

First, as I just mentioned, we want to continue expanding our production.

Second, we want our service offering to be another engine for our growth. For example, Charles River has a business model called the CRADL in Boston and San Francisco, which provide the customers with more on-site research support beyond research models. We are considering implementing this in our facilities in Beijing and Shanghai.

Third, we will continue our digital transformation. We already have an online ordering system; we are about to start using ICM, and we will upgrade both our BRAIN&AIM and shipment tracking systems to make our production and operations more efficient.

Fourth, we will focus on finding the right people, training them and retaining them. This is one of our big plans. When we started in 1999, we had less than 10 people, while now we have already 700. In five years, we would like to increase this number to 800 or 900. I am very excited!

What do you find so exciting about the industry in China?

In the last few years, the government has had a strategic focus on innovation, which includes life sciences. Due to the second-child policy and the urbanization strategy encouraging people to move from the countryside to the cities, the government is investing more and more on the development of new drugs and therapies to make medical products and services at a more affordable price for the people. This is a long-term investment, so I know that the life sciences industry has a bright future.

It is also exciting for me to see all the talent there is in China and all the returnees coming from Europe and the US who have faith in such an amazing market as to want to contribute by joining local companies or creating their own. Thanks to their previous experience in big pharma companies in the more developed market, they understand the importance and implications of world standards for animals, no matter who is the supplier. Given that they worked with Charles River on their projects before, the researchers would be excited to see that we are here for them as

well!

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