

Mouse models move to Asian markets

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Last May, Taconic Biosciences of Hudson, NY partnered with India's Life Technologies, based in Delhi, to distribute its mouse models there and in 10 nearby countries, including Sri Lanka, Bangladesh and Pakistan. The deal came just a few months after Wilmington, MA-based research giant Charles River Laboratories announced it had licensed its rodent technology to Hylasco Bio-Technology in Hyderabad, India, which is now providing Charles River's animals, as well as services such as monitoring and training, throughout the country. The Taconic and Charles River deals in India came close on the heels of major expansion efforts both companies have undertaken in China.

Asia is emerging as the next hot market for research animals. The global market for mouse models is projected to grow 6.4% a year to \$1.79 billion by 2023, according to Transparency Market Research. But while the U.S. and Europe are still the top two markets, their overall share has been dropping since 2014, as demand rises in the Asia Pacific region. Now nearly half of the global market for mouse models is dominated by China, Singapore, Malaysia and India, Transparency notes in a 2016 report.

China is a particularly enticing opportunity, says Terry Fisher, project director for government affairs and the previous manager of the China operation at Charles River. In 2013, the company formed a joint venture with a company in Beijing to serve that market with research models. The partner had been licensing Charles River's technology prior to the deal, Fisher says, but the joint venture offered Charles River

the opportunity to gain more of a foothold in China.

Now Charles River has a 75% controlling interest in the joint venture, called Vital River. The operation, which started with two production facilities in the Beijing area, recently formed a partnership that brought it into the Nanjing market, and is now in the process of expanding to the Shanghai region, Fisher says. "The market is expanding rapidly there, and we see greater growth in China than we do elsewhere around the world," Fisher says. Charles River expects to double its market for research models in China over the next five years and predicts that country will be its second largest market after North America.

Charles River's strategy of partnering with regional suppliers is a popular tactic for breaking into Asian markets. Local partners not only have the necessary infrastructure in place to produce and deliver animal models to customers, but they are also well-connected to regional regulatory agencies and can help navigate what can be complex and rapidly changing rules for research facilities. "If the partner is capable of meeting the quality requirements, in terms of breeding and supplying lab animals, that's a much better situation for us" than establishing a presence from scratch, says Robert Rosenthal, chief executive officer of Taconic.

The growth of the Asian market for animal models is being driven by several trends, Rosenthal says. American and European-based pharmaceutical companies are shifting some of their basic research activities overseas to save money. At the same time, as the market for

pharmaceuticals in Asia grows, local governments are strengthening the approval process for new drugs, and in the process demanding that more of the basic research be done in the countries where the products will ultimately be marketed. "They want their own version of the FDA," he says, adding that homegrown suppliers of lab animals may not be prepared to meet stringent new quality requirements.

Another trend contributing to the increased demand for lab animals in Asia and elsewhere is that the selection of species—particularly mouse models—has grown both in quantity and quality. According to the Transparency report, inbred mice are still the most popular. But demand is rising for transgenic mice. "We're seeing a shift to humanized mouse models and super-immunodeficient animals," Fisher says. "Because of the ability to manipulate the mouse genome, those are becoming the models of choice." Academic labs in China, in particular, receive significant government support for medical research, which is driving demand there for sophisticated disease models, he says.

Suppliers of animal models like Taconic and Charles River predict the demand for lab animals will continue to grow in Asia. Some of the smaller markets, like Korea and Taiwan, are already well established, says Fisher, but China and India are still growing rapidly. As Charles River continues its march through China, it will look towards India for growth opportunities emerging from the 2016 Hylasco partnership. "India is not as far along the curve as China is," he says, "but it has potential."