

Growing a lab culture

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Beginning with contract research, Chinese leaders are hoping to foster their own pharmaceutical industry

By Jehangir S. Pocha, Globe Correspondent | August 14, 2006

BEIJING -- Kevin Chen smiled as a centrifuge whirled silently in a small biotechnology laboratory tucked away on the outskirts of China's burgeoning capital. Chen and the handful of white-coated technicians huddled around the machine knew they weren't just mixing chemicals; they were spinning dreams.

China, already the world's favorite manufacturing destination, is aiming to turn itself into a competitive location for new, value-added knowledge industries, such as contract research outsourced by foreign companies.

"There's no reason the things that make China so powerful in manufacturing cannot apply to knowledge-driven industries," said Chen, vice president of Bioduro Co., a San Diego-based contract research firm with offices in Boston and Beijing.

Bioduro has expanded its services in China to cover the entire range of drug development, from discovery to pharmacology to drug safety and clinical trials.

"Today, if a biotech company doesn't have a strategy for both China and India, investors and clients will ask why," said Bioduro cofounder John V. Oyler, who also founded Galenea Corp. of Cambridge. "The cost imperatives are too powerful to ignore. We can give our clients the same quality of research they get in the US, for 30 percent of the cost."

So far, Western firms have shied away from that argument. Though global pharmaceutical firms will outsource research worth \$3.5 billion this year, according to the research firm Kalorama Information, less than 5 percent of that is earmarked for China. In fact, only about 20 percent of the world's leading pharmaceutical companies have any research and development investment plans in China, according to a recent report from Ernst & Young.

The main reasons the outsourcing phenomenon has not disrupted the established regimens of the biotech industry the same way it has forced a restructuring of global manufacturing are concerns over China's lax intellectual property rights, language barriers, and quality control.

But the Chinese government is moving aggressively to combat quality and intellectual property concerns. Officials here have understood that high-margin, high-wage industries such as biotech can really improve China's economy and scientific prowess.

With India currently holding a significant lead over China in pharmaceuticals and biotech, China's State Council, its cabinet, has formed a leadership committee to develop the national biotech industry.

That's a move usually reserved for very crucial sectors, and the results have been telling. Over the last few years, several biotech parks designed from scratch to meet the regulations and standards of the US Food and Drug Administration have been built around Beijing, which is fast becoming China's leading biotech center.

Most of these parks -- such as the China Bio-tech Research Center, which has been touted as Asia's largest biotech incubator -- have risen from the emerald rice fields that once ringed this historic capital city. They are equipped to house the operations of start-ups, research centers, and venture capital firms.

That's making it easier for foreign firms to contemplate working in China. Last month Bridge Pharmaceuticals Inc., a research firm in San Francisco, opened a 100,000-square-foot, 200-person research center in Beijing.

Tianjing Deng -- Bioduro's director of analytical chemistry, who worked for several years with the pharmaceutical firm PPD Inc. of Wilmington, N.C. -- said that one of the main changes driving growth in the contract research industry is that Chinese scientists who have worked in the United States are immigrating back to China in large numbers.

“There are huge growth opportunities and a great lifestyle here, and people like me are seeing that,” said Deng, who is originally from China’s central Sichuan province. “The skills and experience they bring is a crucial element [because], without Western-trained people, Chinese outsourcing firms would find it hard to get American clients.”

The expertise of people such as Chen -- who has coauthored scientific papers with Nobel laureate Phillip A. Sharp, cofounder of [Biogen Inc.](#) of Cambridge -- is helping Chinese firms to establish the processes and procedures that are expected of world-class companies and which, as India found in information technology, are essential to attract foreign clients.

At Bioduro, Chen and Deng have instituted security measures that strategically determine which employees have access to foreign clients’ information, weekly video conference calls with overseas managers, physical controls over which employees can enter different sections of the laboratory, and intensive training on both technical and legal issues.

That a handful of Chinese companies have already mastered world-class standards is best exemplified by WuXi Pharmatech of Shanghai, which now performs outsourced chemical research and development for 18 of the world’s 20 largest pharmaceutical companies.

The company is also leveraging the virtual absence of animal rights groups in authoritarian China by focusing on animal testing. That is rapidly becoming a major niche market for China. Bridge Pharmaceuticals chief executive Glenn Rice said the reason the company had chosen China as a base was the ease with which the firm could conduct experiments on beagles, something banned in India because of animal welfare concerns.

China’s improvements in contract research are also enhancing the capabilities of its overall pharmaceutical industry.

Xu Ming Bo, director of Beijing Shuanglu Biopharmaceutical Co., a local pharmaceutical firm, said that his 300-person operation intends to develop its own patented anticancer drug within a decade.

“Right now it’s very hard for Chinese pharmaceuticals to enter the US market, not only for technical reasons, but also because of invisible barriers” such as consumer concerns, he said. “But we’ll soon overcome all that. China will be a force in pharma. Just give us time.” ■