

China's Leading CRO Helps Transform The Way Drugs Are Discovered

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Li Ge, the founder of WuXi PharmaTech, China's largest contract research organization (CRO), is a man with a modest goal. He says his dream is to help his customers improve the efficiency of their drug discovery efforts.



WuXi PharmaTech

LI

"The R&D success rate, from the discovery of a lead compound to commercialization of an actual drug, is presently only 0.1%," Li says. "We want to help the pharmaceutical industry double its success rate to 0.2% or more." A 99.9% failure rate, he reasons, is something that can be improved upon.

Doubling the success rate, Li says, would have a great impact on the cost of bringing a drug to market, a price that has now ballooned to an estimated \$1.2 billion (C&EN, June 19, 2006, page 50). The pharmaceutical industry cannot sustain such astronomical R&D costs, he notes.

WuXi, Li says, is entirely focused on improving the efficiency of the drug discovery process. It is not seeking to develop its own products. "We provide a platform that anyone can use to improve their chances of discovering a new drug." The company employs 2,700 people at its labs and manufacturing facilities in the Chinese cities of Shanghai, Suzhou, and Tianjin.

In its early days, Li relates, WuXi made use of China's low labor costs to provide competitively priced chemistry services. But because costs are rising rapidly in China, this labor advantage is eroding. "What we've been doing is to refine our service delivery—the ways in which we can be faster and more effective—while at the same time improving quality," he says.

Nowadays, he says, pharmaceutical researchers, even ones at major drug companies, often do not have access within their own firms to the research infrastructure that would enable them to properly explore promising ideas.



WuXi PharmaTech

REDUCING FAILURES WuXi has grown fast as a Shanghai-based provider of research services to the global pharmaceutical industry.

"If you visit the discovery labs of a big pharmaceutical company, there are very experienced people, with perhaps 20 to 30 years of drug discovery experience," Li says. "They are great scientists with many good ideas, but because they have just a few associates working with them, they cannot see many of their ideas come to fruition."

A leader in the trend among Chinese CROs to offer a more complete range of drug development and manufacturing services, WuXi is building up its biological capabilities. In Suzhou, an affluent and picturesque city that is 30 minutes by train from Shanghai, WuXi has begun the construction of a 265,000-sq-ft toxicology lab.

Earlier this year, it announced plans to acquire [Apptec](#), a U.S.-based supplier of biology services and medical devices ([C&EN, Jan. 14, page 12](#)). According to Li, one of the major reasons WuXi is expanding its biology capabilities is because several of the company's customers have started to work on programs involving both large and small molecules.

One of the founding scientists of the New Jersey-based drug discovery firm [Pharmacopeia](#), Li holds a bachelor's degree in chemistry from the elite [Peking University](#) and a doctorate in organic chemistry from [Columbia University](#). He formed WuXi in 2000 after leaving Pharmacopeia and returning to China.

From its very beginning, WuXi has remained committed to a business model by which customers pay a predetermined rate to see their projects brought to completion. Or, under an alternate "full-time equivalent" pricing system, customers gain the use of WuXi's lab facilities and scientific staff in exchange for a rent payment of sorts. WuXi takes numerous steps to ensure that customers' data are protected; any intellectual property generated under the arrangement is owned by the customer.

When asked why WuXi, like some other CROs, does not switch to a system of milestone payments for successfully bringing projects to completion, Li replies: "Milestone payments basically mean that you get paid later for the early work and the risk you run. We have received some proposals and are open to discussing opportunities."

Over the years, WuXi has recruited about 70 international scientists to boost its management, scientific, and manufacturing capabilities. This international headhunt will continue, Li promises. Moreover, "the acquisition of Apptec will obviously boost our pool of international talent," he notes.

WuXi listed on the New York Stock Exchange last August. Since then, its market capitalization has at times approached \$2 billion. Li says the stock market is assigning