

## West Coast biotechs finding partners across Pacific

by Terri Somers

If you think your commute is tough, perhaps you'll have empathy for a growing number of San Diego biotech workers who are splitting their time between their local office, Beijing or Shanghai.

WORLD MARKET - BioDuro Vice President Paul Conlon (right) introduces managers of BioDuro client Ambit Biosciences to workers in China via teleconference. The company's Beijing team handles outsourced work from 40 U.S. and European companies. CNS Photo by Sean M. Haffey. Just don't feel too sorry for those trans-Pacific commuters.

They subject themselves to 12-hour-plus flights for a reason: an opportunity to tap into the burgeoning biotechnology industry in China.

Some are working as consultants, using connections from China and the United States to bring together businesses on both sides of the Pacific. Others are overseeing scientific work that has been outsourced to take advantage of labor costs that are 60 percent to 65 percent lower.

"China is clearly one of the world's fastest-growing markets, and we want to participate in it," said Ben Hwang, vice president and general manager of Asia Pacific operations for Carlsbad, Calif.-based Invitrogen. "We want to be here to establish our footprint and expand as the pool of talent and the sophistication of technology continues to get better and better."

Invitrogen, which makes tools for drug discovery and scientific research, has about 250 employees throughout China. The company's Chinese operations give it a regional base for sales and distribution. It also has some manufacturing there and a small research and development operation, said Hwang, who is based in Shanghai.

Six years ago, those kinds of biotech connections between San Diego and China were sparse, said Zhu Shen of San Diego's Sino-American Biomedical and Pharmaceutical Professionals Association.

A few companies were outsourcing their chemistry needs to Asia to save money. They were the kind of repetitive jobs that American biotech chemists generally are not interested in performing, and the results of that chemistry work are easily verifiable.

"Nowadays you would be hard-pressed to find a decent local biotech that is not using a (foreign contract research organization) or at least seriously considering using a company from China or India," said Shen, head of business development at San Diego-based Immusol.

The level of services being performed by Chinese companies has increased significantly to include medicinal chemistry, biology and preclinical work on animals, Shen said. That shows that American companies have an increased trust in the work performed in China, she said, because more complicated scientific processes leave more room for human error.

The San Diego-China connections are bred through previous success.

The privately owned San Diego biotech TargeGen was one of the pioneers in China. While working for a previous employer, TargeGen Chief Scientific Officer Richard Soll was searching for a company that could provide simple chemistry work. A scientist friend told him about a Columbia University-trained Ph.D., who had started just such a contracting company in Shanghai.

It is called WuXi Pharma Tech and went public on the New York Stock Exchange at \$14 a share. Five months later, shares have doubled in value.

Major pharmaceutical companies have also established a presence in China, Soll said, providing further evidence of the growing interest in the country's biotechnology sector.

Pharmaceutical powerhouse Eli Lilly & Co. announced a collaboration with Shanghai-based Hutchison MediPharma in August to co-develop oncology and anti-inflammatory therapies. Hutchison will receive milestone payments of up to \$29 million, along with an upfront fee, annual research and development support, and potential royalties.

Shen said the deal highlights how China's biotechnology industry has advanced to the point that it can be a collaborator with Big Pharma rather than a service provider.

China's biotechnology industry has progressed because it has made a concerted effort in several areas, including science, intellectual property rules and investment, according to San Diego biotech insiders.

"In just the last two years the improvement in the sophistication of the scientific research has been amazing," Invitrogen's Hwang said.

Greg Scott, a San Diego resident and founder of Life Science Angels, an investor network for biotechnology, went to China on vacation a year ago. It was a life-changing experience, he said.

In Shanghai he saw a business park that is home to 4,000 high-tech and biotech companies and offices of the world's largest pharmaceutical companies, in what is the world's highest concentration of life science companies.

"Like most Westerners, I had the view that there wasn't much going on in the biotech area in China and they were mainly replicating drugs that weren't patented in China," Scott said.

"But there was a lot of new drug development going on there - roughly 150 companies doing new drug development," he said.

Scott has put together an investor network that has already funded and founded its first Chinese company, China Bio Therapeutics. He also formed the China Bio Accelerator to help turn good product ideas into companies, and he now spends up to three weeks at a time in China.

The San Diego-based company BioDuro also moved quickly to profit from China's biotech abilities.

Masood Tayebi, a high-tech entrepreneur, saw how outsourcing in China could help cash-strapped U.S. biotechnology companies. With 10 to 30 employees, a typical startup biotech was wasting a lot of effort trying to do its chemistry, biology and pharmacology in-house, he said.

For less overhead, companies could theoretically contract with one business in China for some of those services and save 40 percent to 45 percent of what their work would cost in the United States, he said.

Because Tayebi did not know anything about biotechnology, he recruited a management team of biotechnology and pharmaceutical executives, each with 15 to 20 years of experience. He also recruited Chinese nationals who had received training and experience in the United States and were interested in returning to their homeland to take part in its biotech boom.

That management team, put together in 2005, now oversees about 300 Beijing scientists who handle outsourced work from 40 companies across the United States and Europe, including nine of the top 12 pharmaceutical giants.

But the marketing, sales and customer service teams that deal directly with U.S. customers are in San Diego.

"From a communications and cultural perspective, our management in China and presence here in the United States make interaction in both countries much easier," Tayebi said.

"If a customer here in the United States wants to talk to someone, we are here in San Diego. They don't have to wait to call China," he said.

Communications innovations such as Internet-based phone service and videoconferencing allow the service to be nearly seamless, Tayebi said.

Another San Diego-based biotechnology company, Vital Therapies, is doing business in China because it offers a potentially huge market for the company's product candidate - a human-cell-based artificial liver.

Regulators in China are working with the company to bring the liver to market because there is such a high incidence of liver disease in that country, said Jack Florio, Vital's executive vice president.

"Many companies go there with the goal to bring (the product) back to the United States," Florio said. Vital Therapies went to China with the goal of commercializing it there first.

Although Vital is designing its clinical trials to meet Chinese regulatory standards, it will also meet what it anticipates will be the U.S. Food and Drug Administration standards, he said. The plan is to try to use the data gathered in China for approval, at least for clinical trials, in the United States, he said.

Florio had spent a long career with Eli Lilly & Co. traveling around the globe but had never set foot in China until two years ago. Now he's been there a dozen times.

"I was blown away by what I saw: There's extremely high-quality research going on in China," he said.

But in the wake of product recalls from China such as toys and food, how are Americans expected to trust drugs and medical devices coming out of that country?

Jack Lief, CEO of San Diego-based Arena Pharmaceuticals, said quality assurance is the responsibility of the U.S. companies doing business there. His company has chemistry work performed in China and uses controls including employees who travel to China to oversee the work.

"If you don't have the right controls associated with your product, you could get in trouble," Lief said. Florio said he has seen companies in China taking their quality assurance very seriously.

"My personal experience is that they are trying very, very hard," Florio said. "You don't change a country or culture overnight."

Florio is one of more than a dozen members of local industry working with the industry group Biocom to establish a task force to help San Diego companies looking to do business in China. Its objective is to find a selection of possible collaborators there and guide them in the cultural and regulatory way of doing business across the Pacific.

The idea for the task force emerged a few years ago after Ian Wisenberg, Biocom's senior vice president of business development, returned from a trip there amazed at its biotech scene.

"It became apparent to me that some sort of local (assistance) program was needed because the availability of partners in China did not necessarily mean all companies had access," Wisenberg said.



The task force wants to help smaller companies, or those just starting to think about collaborating in China, benefit from the trial and error of companies already working there, he said. The goal is to provide a network of vetted companies and suppliers.

"Biocom's mission statement says that we will position life science companies in our community to achieve individual and collective success - and that is not just on a local stage but the world stage," Wisenberg said.

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