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China Generates New Opportunities for California Biomedical Companies

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China is Changing

While China is making great strides in biomedical technology and business infrastructure, it can still be a daunting place to do business, especially from 6,000 miles away. Despite the challenges, California life science companies are recognizing the immediate benefits and potential promise and are launching R&D, clinical, manufacturing and distribution operations in China.

The potential advantages for a biomedical company that establishes a business relationship or operations in China are three-fold:

- **Technology:** New, cutting-edge compounds and medical devices are now being developed there, and the technology is unfettered by the U.S.'s conservative political climate;
- **Cost Savings:** Drug development costs are 80% less than those in the U.S., and outsourced manufacturing of drugs and devices can be less than 1/10 the cost; and
- **Market Size:** China's huge potential market for healthcare products of 1.3 billion people is aging more rapidly than any other country, and its middle class of over 250 million is projected to double to 500 million by 2020.

The China pharmaceutical market today is about \$11 billion total, of which Western drugs represent \$8 billion and traditional Chinese medicine is \$3 billion. While this doesn't seem large compared to the U.S. market of over \$60 billion, it is growing at 17%+ CAGR. The medical device market, currently at about \$4 billion, is experiencing similar growth. Venture capitalists are also waking up to the potential in China, with over 30% saying it is a top target country for them.

There are over 2,000 Chinese-foreign joint ventures in the biomedical sector, including major players like Roche, Novartis, GSK, Pfizer, Medtronic, Becton Dickinson and Inverness Medical, just to name a few. Most are significantly expanding their operations and are investing heavily in research and development to move beyond just manufacturing and



Oriental Pearl Tower, Shanghai, China
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distribution. China is encouraging and even subsidizing this migration, as it recognizes that to sustain its incredible historic growth rate of 9% per year, it must move its economy toward R&D.

In addition to China's direct investment in R&D, there are several other factors contributing to biomedical companies looking to China to leverage their research and development activities.

- China is encouraging foreign investment in the life sciences by subsidizing foreign investment organizations and deregulating venture capital. (On a recent trip to Shanghai, I saw over 20 foreign-based VCs and investment groups housed in a single office building.)
- Distribution is a huge challenge given China's geographic size (3.7 million square miles), regional segmentation and cultural diversity.
- Drug development costs are not only 80% lower than those in the U.S., they are at least 50% less than most other OUS markets. The low cost of medical supplies services and animal and primate studies contribute to this.
- There is a large population of highly-educated scientists trained at the more 170 medical schools and 120 biomedical research institutes in China available at 1/10 the equivalent U.S. salaries.
- China's State Food and Drug Administration (SFDA) has been rapidly moving toward global GLP/GMP standards and has created drug and medical device approval processes that parallel the FDA's clinical path.
- IP protection is definitely improving, with patent laws now compliant with WTO/TRIPS requirements, increased legal enforcement supported directly by the SFDA, and an IP rights team from the USPTO now located in China.

California Companies in China

Much of the biomedical community is centered in Shanghai, China's largest city, and Beijing, its capital city. Shenzhen also has a viable biotech community, but smaller and more dispersed than those in either Shanghai or Beijing. California-based companies are actively establishing operations and creating joint ventures and collaborations with Chinese life science companies in these areas. A few examples follow, although there are many more.

HUYA Bioscience International, Inc., with offices in San Diego and Shanghai, believes that it is the first company to in-license a compound from a Chinese biopharma for clinical development in the U.S. Formed specifically to seek out such opportunities, HUYA also has five additional drugs under evaluation in cancer, cardio, HIV and other areas. HUYA received significant funding from angel investors, but plans to seek additional investment from its partners and others as it expands operations.

Contract Research Organizations (CROs) are an obvious fit for the China business model, given they are already in the outsourcing business. Bridge Pharmaceuticals, a San Francisco-based spinout of SRI International was founded in 2004



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specifically to combine SRI's strong pre-clinical track record with the cost and technology advantages offered in China. It has just opened its 100,000 square foot facility in Beijing, which is said to meet U.S. standards for preclinical drug development. Bridge has received about \$27 million in funding from WI Harper Group, an active investor in firms with China-based operations, among others.

AVIVA Biosciences Corp. is a diagnostics products development company based in San Diego that also has a clinical research facility in Beijing. It is planning to test its new cancer diagnostics product there and in the U.S. Founded in 1999, AVIVA previously raised \$22 million from investors including WI Harper Group, China Development Industrial Bank, Axon Instruments and Pac-Link Management, among others.

TargeGen of San Diego, a private company using small molecule medicinal chemistry to focus on vascular biology, has continued to expand its relationship with Wu Xi PharmaTech Co. Ltd. of Shanghai. Wu Xi, a leading drug R&D service company with 1,400 scientists and over one million square feet of research and GMP manufacturing space, has provided services to TargeGen since 2003. TargeGen has raised over \$70 million in three venture financing rounds from Forward Ventures and Enterprise Partners of San Diego, China Development Industrial Bank, and other investors.

China: Is Bigger Really Better?

Investment: 30% of U.S. venture capitalists think so – they identify China as their top “country of interest.”

Education: China has the largest number of college students in the world – 16 million.

Healthcare: There are over 17,000 major hospitals plus 48,000 smaller “township” hospitals in China, compared to 7,600 in the U.S.

Intellectual Property: 214,000 patents were issued in China in 2005, an increase of 44%, compared to 170,000 in the U.S.

Sources: NVCA, UNESCO, U.S. Census Bureau, China's Ministry of Health and SIPO

Several California VCs have established programs to review investment opportunities in China. WI Harper, investors in Bridge and AVIVA mentioned above, began its first fund in 1996, and is one of the most active funds investing in China. They were honored as the “Best Venture Capital Institution” in China, one of four awards garnered at the China Venture Capital Forum held in Shenzhen last April.

Other California-based groups known to have active programs seeking investment opportunities in China include Burrill & Co., IDG-Accel, Kleiner Perkins, Granite Global, Enterprise Partners, Paramount BioSciences and Panorama Research.

Negotiating in China

The Chinese are strategic thinkers. They have grown up with *The Art of War* and *The 36 Strategies*, both from the Warring States era (476-221 BC), as the basis for their approach to negotiation. This often involves manipulation and deception and drawing out as much information from your opponent as possible, while being “as unfathomable as the clouds” yourself. This is somewhat counter-intuitive to Americans, who (generally) believe that openness and clearly defined objectives are key to long term relationships.

Even a brief description of doing business in the People's Republic of China must mention “The State.” As a vestige of Mao's Cultural Revolution, the state is involved in almost everything in China. If you are looking to in-license a compound, it will likely be from a State University or a State-Owned Enterprise (SOE). If you want to register your VC



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firm or establish a business entity or joint venture there, you must deal with a variety of local, provincial and state officials.

Next Steps

Doing business in China is an exciting adventure than can reap significant rewards for those who execute properly and respect the cultural differences. To others, it may feel like beating your head against the wall while making little or no progress.

The best way to ensure success is to get help. Select someone who understands China's rapidly changing biomedical industry and business environment and who can build trusted relationships (*guanxi*) with your potential partners. This will save you time and expense by quickly identifying viable business partners and establishing the initial contact on your behalf. It will also save you many 20 to 30 hour round-trip flights, as you establish your company's *guanxi in China*.

Centient Consulting, Inc. assists U.S.-based biotechnology, pharmaceutical and medical device companies seeking to leverage the cost and technology advantages in China. If you're interested in reducing research, development or manufacturing costs, or in-licensing novel compounds or biologics for development, please contact:

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