

China: Opportunities for biotech firms

China is serious about medicine. Universal access to basic healthcare, an improving IP environment, Chinese companies desire for innovation and substantial funding opportunities are opening up possibilities for Western companies of all sizes. Despite this, biotech's business development priorities are US, EU and Japan. Now, it's time to engage with China. By Robert Johnson (Partner) and Li Zeng (Consultant)

A new partnering landscape

China's economic rise is immense and well documented. Year on year GDP growth of 10% since 1990 turns western mandarins green with envy. With it, tax receipts have soared, 21st century infrastructure has been rolled out and the ranks of middle class have swollen. Generally speaking, big pharma has been attuned to the opportunities. They have seen strong sales of their old drugs and begun to see faster market penetration of their high priced products.

Cognisant of the spiralling healthcare costs in US, China realises drug prices cannot be a one-way street. There's no question the current system is inefficient: hospital

pharmacies are allowed to charge large mark-ups on drugs, creating an automatic incentive for over-prescription of expensive medicines. Despite rumours that health economists from UK's NICE have been strolling the corridors of power in Beijing, the general consensus is that meaningful, system-wide change is years away. But when change comes, immense volume will soften the blow of squeezed margin.

In April 2009 the Chinese government announced its long awaited "Guidelines on Deepening Reform of the Healthcare System".

Many believe that implementing a policy of universal healthcare coverage will feed through into further economic growth. Chinese savers are prodigious, recent data suggest 25% of income is saved. Having a safety net below which no one can fall, the hope is that a portion of this capital will be reallocated to discretionary consumption. Goods will be imported from the west, trade imbalances will ease and US senators with a protectionist bent can stop growling.

"China overtaken Germany as the world's third largest prescription medicine market"

This blueprint for healthcare reform over the next decade promised to put in place, by 2020, a basic healthcare system for all rural and urban residents. In addition, it included a three year plan where \$124bn would be deployed to ensure 90% of the population (1.2bn people) would have basic healthcare provision by 2011.

This, coupled with additional investment by local (provincial and municipal) government, is expected to unlock huge potential for healthcare

providers. Rising wealth and an ageing population has led to China overtaking Germany as the world's third largest prescription medicine market, with a growth rate of 27% (IMS Health). AstraZeneca and

Bayer both have local sales of more than \$1bn.

To help meet the swelling domestic demand for healthcare, Chinese pharma companies are turning to the public equity markets. In just the last 12 months, \$5.4bn has been raised to help them meet the challenge. And the money keeps coming. Shanghai Pharmaceuticals, Roche's Chinese partner, recently announced plans to raise at least \$1.2bn and Shanghai Pharma plans to raise \$1.2 billion in an IPO in April.

IP environment is favourable for pharma

Traditionally, western firms were wary of China's relaxed IP laws and engaged Chinese partners to help at the lower end of the value chain, supplying, for example, bulk chemicals. Now, Government policy is being directed towards an innovative R&D sector and IP reform is a critical development. Big Pharma are sufficiently encouraged to engage in significant technology transfer, matching commercial expansion with local R&D and manufacture. Shanghai's science park accommodates so many western drug

companies that even a local eatery is named in their honour: the Pharma Valley Restaurant. Last year, GSK committed \$42m to a joint venture with Jiangsu Walvax Biotech for paediatric vaccines and a similar amount for flu vaccines with Shenzhen Neptunus. Research investment is also strong, with Novartis pledging \$1bn for its Shanghai research centre by 2015.

Judicial enforcement of IP rights in China has seen a number of improvements, though foreign firms are still slow to embrace Chinese patents and pursue litigation. Nevertheless, several western companies are succeeding in Chinese courts. Neoplan, a German bus company, won an award of \$3 million in January 2009 against two Chinese companies for their infringement of its design patent on buses. In January this year, a Beijing court ordered two Chinese companies to pay a combined \$1.3 million in damages to a British manufacturer of electric kettle components. China is now the most litigious country in the world for IP disputes, with 24,406 suits filed as compared to about 8,000 in the U.S.

A bridge across the 'equity gap'?

The Government is also fostering the organic growth of a biotechnology sector. The same approach to economic development that led to

the famed rise of the Pearl River and Yangtze River Delta regions in the 80's and 90's is now being applied elsewhere, this time with biotechnology as a priority. For example, the Tianjin Binhai New Area, just an hour away from Beijing by bullet train, has been marked out as an area of particular strategic importance. A recent paper released by the China State Council describes how \$15bn will be spent over the next

2-3 years to foster emerging industries, with biotech one of the seven identified priority sectors.

The results are impressive. Last year, and \$170m later, Tianjin completed Phase I of its biotech construction programme. A 70,000m², 19 floor research facility, buzzing with state-of-the-art scientific equipment rivals the best of the US NIH. Companies, or even early stage research projects, are being welcomed in, with rent and other costs a fraction of those offered by western bio-incubators. Seed funding is available for companies who take up space in the facility and, for more mature projects, larger investors are standing by. One notable investor is TEDAVC, a state-backed regional fund with \$640m allocated to Tianjin biotechnology (and other sectors). Experienced western VCs are taking note, with French fund Ventech, Hong-Kong based Morningside Group and GSK's SR One keeping a watching brief.

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China operates four medical care schemes:

- Urban Employees' Medical Insurance programme (UEMI) covers all employees in urban areas working in government organisations, enterprises, social groups, and non-profit organisations
- Urban Residents Basic Medical Insurance scheme (URBMI) covers, with government subsidies, non-salaried people such as the elderly and the children
- New Rural Cooperative Medical Scheme (NRCMS) covers, on a family basis, all rural residents with government subsidies
- Tax-financed medical assistance programmes targeted at the needy in both urban and rural areas.

Under UEMI, the contribution rate is paid by the employee and the employer. The employee pays 2 per cent of payroll to an individual account, while the employer pays 6 per cent to the pooling fund. The individual account is used to pay medical expenses of up to 10 per cent of the local average annual wage income. The pooling fund will reimburse the amount from 10 to 400 per cent of the average annual income, according to a schedule. Medical treatment in high-grade hospitals should result in a low percentage of reimbursement, and vice versa. Payment for costs above 400 per cent rests with private insurance schemes or public-run supplementary schemes, if these exist.

And it's not just Tianjin. Similar developments are taking place across China in Beijing, Shanghai, Shenzhen, Wuhan and Chongqing. 2011 marks the beginning of the twelfth 'five year plan' which is rolling out even more aggressive investment in life science clusters.

Early stage life science projects in the west, starved of development capital and confronting a cavernous 'equity gap', are beginning to explore opportunities in the east. Oxford University spin-outs Zyoxel and G-Nostics have dipped a toe in the water.

An untapped exit opportunity

However, some argue that China can do better. James Li, a partner in Kleiner Perkins Caufield and Byers China office argues there is still a lack of translational research from universities "with lots of funding going from government to non-viable projects"¹. Despite impressive progress, China still lacks the depth of experience and expertise required to discover and develop new, innovative medicines on a scale that matches its ambition.

There are deep pools of life science expertise in the west and China has the opportunity to tap them on a massive scale. Knowledge and expertise doesn't have to be obtained gradually. When AstraZeneca wanted to learn biologics, it spent \$16bn buying Medimmune and CAT. When BMS wanted to learn antibodies, it splashed out \$2.1bn to buy Medarex.

Chinese companies have pursued a similarly aggressive approach to knowledge acquisition in

other sectors. In April 2010 Chongqing machinery and Electric Company, a subsidiary of one of China's biggest state-owned holding companies, acquired Precision Technologies Group, one of Britain's most famous machine tool makers. Chongqing is among China's biggest tool makers, with sales last year of about \$300m, but is technologically not as advanced as many rival machine makers outside China.

"My Chinese colleagues know that – with present levels of technology – they would be unable to make in China machine tools of the

same level of sophistication that we are now producing in PTG's British plants" says Tony Bannan, PTG's Chief Executive².

A second example took place three years ago when China National Bluestar, a large state-owned chemicals business, bought a factory in northern England that was formerly part of Courtaulds, the British chemicals company. The Chinese company has spent \$30m upgrading the plant's production so it is capable of making high tech carbon fibre for aircraft production. At the same time, Bluestar, in which Blackstone, the New York-based financial group has a 20% stake, has used the know-how of its UK subsidiary to play a part in the construction of a large plant to make carbon fibre in an industrial complex in Lanzhou, northern China.

It is not clear why transactions of this scope and magnitude have not yet been conducted in the life science sector. Given the time and effort required to strike a trusted relationship with a Chinese partner, canny biotech CEOs should be spending more time travelling east.

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Chinese firms aggressively acquire knowledge from western firms:

- 1) In May 2005, Lenovo buys IBM's personal computer division for \$1.75bn
- 2) In March 2010, Zhejiang Geely Holding Group signs deal to buy Ford Motor's Volvo car unit for \$1.8 billion, the country's biggest overseas auto purchase
- 3) In August 2010, the Aviation Industry Corporation of China (AVIC) announces it is planning to acquire additional aerospace companies in Europe or US as part of its plan to compete against Boeing and EADS.

¹ Financial Times, August 2010.

² Financial Times, September 2010.