Sector Life Sciences and Health Care in Jiangsu Province
NBSO Nanjing
Colofon

This survey has been conducted by the Netherlands Business Support Office in Nanjing.

If you have any questions regarding this business sector in Jiangsu Province or need any form of business support, please can contact at NBSO Nanjing:
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For further information on the Netherlands Business Support Offices, see www.nbso.nl.
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1. Introduction

Jiangsu Province is one of the most prosperous provinces in China, with in 2013 a GDP per capita of almost 75,000 RMB per year (around 10,000 Euro). The province has a population of 79.2 million, with a density of 770 persons per km$^2$ and an average life expectancy of 75.3 years. The GDP per capita in the southern part of the province is almost double of that in the much more rural north, due to the south's location along the Yangtze River and proximity to Shanghai. As a consequence, the quality of health services also differs strongly between these two parts of the province, as does the position of the LSH industry.

Jiangsu has one of the largest medical industries in China, in both biopharmaceutical and medical devices. The province has high ambitions to let this industry grow into world leading, but at this stage it is still far behind Western enterprises in the field of innovation and quality. Therefore, the Jiangsu government is strongly supporting cooperation with Western business and governments, which offers ample opportunities for cooperation.

For general information about developments and opportunities in the Chinese LSH market, see the survey "China Topsector Life Sciences, Opportunities for Dutch companies", published by the Dutch government network in China in 2013.

2. Provincial development plan for LSH sector

In order to meet the fast growing demand for health care in Jiangsu Province, in terms of both quality and quantity, the provincial government aims at improving the health system for its citizens. To do this, the province strives for **upgrading all health care centers** in Jiangsu and extending the coverage of the health insurance to all citizens. Besides, it considers LSH as one of the target markets for economic development, aiming at a **strong growth of pharmaceuticals and biotech products** and becoming one of the most active pharma and biotech regions worldwide.

In its provincial 12th Five Year Plan (2011-2015), Jiangsu government has defined the following **targets**: optimize the structure of chemical medicines, improve the drug products quality and grades, promote the modernization of Traditional Chinese Medicine, promote the industrialization of modern bio-pharma technologies and develop new medical devices. In order to realize these targets, the province is speeding up the establishment and growth of biopharma industrial parks in Nanjing, Suzhou, Wuxi, Changzhou, Taizhou and Lianyungang.
3. Development of the bio-pharmaceutical sector

Jiangsu Province has formed a complete industrial chain in the field of bio-pharma, including preclinical studies, clinical trials, pharmaceutical manufacturing operations, logistics and distribution.

At the end 2012, a total of 12,723 new drug varieties had received state approval, with which Jiangsu ranked 2nd in the country. Of these varieties were 32 A-Class drugs, accounting for about one-third of the total in China.

With over 450 pharmaceutical companies and a total turn-over of about 126 billion RMB (around 18 billion Euro), Jiangsu's pharmaceutical industry ranks 2nd in China. 17 of the China's top 100 pharmaceutical companies are located in Jiangsu. Most of these companies feature chemically synthesized drugs or drugs obtained from Traditional Chinese Medicine, but biopharmaceuticals such as recombinant insulin or endostatin are also produced. 1/5th of China’s first line drugs for cancer treatment are located in Jiangsu.

For the production of industrial enzymes, Jiangsu ranks no. 1 in China and regarding sales of fermentation products (alcoholic beverages not included) Jiangsu supplies 1/6th of the national market, with a combined sales volume of 118 billion Yuan (about 13 billion €). Changmao Biochemical Engineering Co. is a prominent Jiangsu company in this field. Bio-environmental products such as bio-pesticides are another growth area of Jiangsu Province, and other areas of environmental biotechnology such as water protection are actively pursued.

In addition, with the sustainable industrial and commercial development of pharmaceutical industry, new industries like pharmaceutical R&D service outsourcing and modern medical logistics have strongly been upgraded in Jiangsu. In 2012 there were 549 pharmaceutical wholesale and retail chains, and more than 22,000 retail pharmacies located in Jiangsu Province.

In 2012, there were 119 foreign invested enterprises in Jiangsu in the field of medicine production. Over the last decade, a number of Fortune 500 multinational pharmaceutical companies, like Pfizer, Novartis, GlaxoSmithKline, AstraZeneca, Bayer and Eli Lily have built factories in Jiangsu. Glaxo invested 230 million USD in Suzhou Industrial Park, the largest investment of the group in China.

Suzhou, Wuxi, Taizhou and Nanjing have increasingly become major clusters for foreign investment in pharmaceutical industry. In Suzhou the sales revenue of foreign funded enterprises have accounted for more than half of the city’s overall pharmaceutical industry sales revenue.
4. Development of the medical devices industry

Within China, Jiangsu Province is one of the regions with the highest concentration of domestic manufacturers of medical devices. Over 80% of these local companies are SME’s, mainly focusing on the lower-end medical device market, for a major part manufacturing disposables for Chinese and overseas hospitals.

For advanced medical equipment such as x-ray, surgical equipment and ultrasound diagnostic equipment, Jiangsu still relies heavily on foreign manufacturers. About half of the medical device market consists of these imported, high-end products. Of all imported products, almost 40% originates from the EU, 30% from the USA and 16% from Japan. Within the EU, The Netherlands (3.1%) is the 3rd exporting country to China, after Germany (17.5%) and Sweden (3.7%).

In the field of medical equipment production, in 2012 there were almost 2000 companies located in Jiangsu Province, of which 120 were foreign invested. The main clusters of medical device companies can be found in the southern-Jiangsu cities Suzhou, Nanjing, Changzhou, Wuxi and Yangzhou. Some large local medical device companies are:

<table>
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<tr>
<th>Company name</th>
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<tr>
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5. Hospital system in Jiangsu Province

As in China as a whole, the hospitals in Jiangsu are ranked into 3 levels, based on their quality and scope of services. Level 3 hospitals are relatively sophisticated and located in the largest cities, level 2 hospitals are located in medium-sized cities, and level 1 hospitals are small, township hospitals for rural residents with minor health issues. In Jiangsu Province there currently are 76 level 3, about 250 level 2 and a few thousand level 1 hospitals.

Jiangsu government is currently improving the equipment and services in hospitals of all 3 levels. Many county level hospitals are being built or upgraded and the cooperation between larger urban hospitals and rural health centers is encouraged. One of the key issues is to eliminate the current incentive for hospital doctors to increase their low salaries by prescribing unnecessary drugs or operations.

According to statistics of the Chinese Ministry of Human Resources and Social Security, as one of 8 municipalities and provinces in China, Jiangsu would have succeeded in realizing full insurance coverage of medical expenses at public hospitals in both urban and rural areas.

Besides the public hospitals as described above, in the last few years the number of private health care centers is growing fast. These centers, which mainly cater to wealthy Chinese citizens, are for the major part specialized clinics in the cities Nanjing, Suzhou and Wuxi.

In August 2014, China’s national government announced that foreign investors are allowed to set up wholly foreign-owned medical institutions in seven cities in China, which are Beijing, Tianjin, Shanghai, Jiangsu, Fujian, Guangdong and Hainan.

6. Elderly care in Jiangsu Province

Ageing is a major social and economical challenge in China, with Jiangsu being one of China’s most aged regions. Currently the 60+ account for almost 20% of Jiangsu's population, and this percentage is going up rapidly. This development coincides with increasing wealth among elderly Chinese and a decreasing willingness of children to take their parents in their house. These factors are expected to strongly increase the demands for elderly care, in terms of both number of beds (now only 1:40) and quality of healthcare services.

The current market for elderly care can be divided in 3 segments:

1. Top-end private facilities

   During the last few years, several initiatives for up-market care centers have been started up, mostly initiated by large Chinese real estate enterprises and backed by local governments. Most of these experiments focus on offering high quality care in private elderly homes, catering to wealthy Chinese. Some examples are:

   - Joint venture between Zhongshan College in Nanjing and the Australian Royal District Nursing Service to develop an aged-care facility with 1500 integrated care places, a 400 bed hospital and direct link to the college's education faculty.
   - Wuxi International Health City: an up-market elderly care center with 600 beds and high-level health services.
- American initiative for an elderly care center in Nantong, see www.aging2.com/blog/china/.

2. Basic public nursing homes
So-called ‘senior living resorts’ have been developed for elderly without sufficient income and other place to stay. However, these public homes have insufficient capacity and suffer under a reputation of low quality and very limited healthcare services. The government aims at expanding and improving these homes, but funding is lacking, both in terms of government funds for investment and elderly's long term care insurance and social security.

As a pilot city for elderly care: in 2007, Suzhou set up the first day care center in China and now encourages companies to invest in elderly care, for which it has issued a specific guideline.

3. Home-based care
By far the largest part of care for the elderly in China is still done in a traditional way: by their child and his family. However, most of these children and their spouses have to work full time to make a living. They have neither the time nor the money to take care of their parents, let alone provide comprehensive home care. Besides, Chinese has over 200 million migrant workers, who have left their parents behind in the country side. Some examples of dealing with these issue:
- In 2013 Suzhou started experimenting with a virtual home-based elderly care system.
- Nanjing government offers a (limited) subsidy to adults who have to take care of elderly people at home and have to give up their job for this.

The elderly care sector in China is still in its infancy, with only little experience and social acceptance. Despite the high potential demand, the number of pilot homes is still very limited and most of them rely on high government subsidies or run with a loss. New homes require high investments and the pay-back period is long, since living facilities are mainly rented and not bought. Besides, in this young industry, regulations of local governments very strongly, which adds a hurdle for investments.

Both the national as well as local governments realize that investment in and development of private elderly care facilities are needed. In 2014, the China State Council issued a circular calling for the construction of a nationwide elderly care network governed by a legal system, industry standards, and supervisory mechanism by 2020. Foreign investors can establish for-profit elderly care facilities either independently or with Chinese partners and will enjoy the same kinds of incentive policies as domestic investors.

City governments and investors in Jiangsu Province are looking abroad for expertise and often consider the Netherlands as one of the countries with the most developed elderly care. A number of Dutch companies in the field of elderly care are already exploring the Chinese market, but they mostly experience that a well-connected local partner and a long-term strategy are needed.
7. Institutes for education and R&D

In the Chinese LSH industry, there is a lack of breakthrough research and innovative ideas. The Jiangsu government and industry therefore strongly stimulates innovation and translational research by domestic companies and research institutes and welcomes strategic partnerships with foreign organisations to attract more cutting-edge technology and innovative products.

In the public domain, Jiangsu offers excellent academic centers involved in pharmaceutical and biotechnological research, such as Nanjing Pharmaceutical University, Nanjing University, Nanjing University of Technology and Jiangnan University in Wuxi. In total they operate 13 Key National Centers (national centers of excellence), of which 2 mains ones are:

State Key Laboratory of Pharmaceutical Biotechnology
Website: http://biopharm.nju.edu.cn
This laboratory at Nanjing University mainly focuses on applied basic research, and is mainly engaged in the applied basic research of genetic engineering, protein engineering and related important technologies as well as natural products by applying molecular biology, biochemistry and chemical methods.

Key National Center for Biotechnology at Jiangnan University
Website: http://biotech.jiangnan.edu.cn/english.asp
Besides, Jiangsu has more than 800 research institutions, 4 Drug Safety Evaluation Centers accredited by the National Non-Clinical Trials Quality Management Practices (GLP) and 30 drug clinical testing bodies certified by the National Drug Clinical Trials Quality Management Practice (GCP).

8. Main LSH development zones

Jiangsu has formed a rational layout of the industrial structure, such as China (Taizhou) Medical City, medical industrial zones in Suzhou, Wuxi and Changzhou, Nanjing Medical Valley, Liangyungang new pharmaceutical industrial base, etc. Among the many industrial parks which are (partly) devoted to life sciences and health care, the major ones are:

1. Taizhou China Medical City (CMC)
Website: www.medmax.cn
As the only state-level pharmaceutical and biomedical high-tech industrial park in China, this zone has grown rapidly since its start-up in 2005 and now covers an area of nearly 30 km². In addition to office and production facilities, university medical faculties and a hospital, a branch office of the Jiangsu provincial SFDA is also situated in the CMC. Registration applications of pharmaceuticals and medical devices can be submitted directly to this SFDA office. Depending on the category and origin of the product, certain applications (e.g. class I and II medical devices of domestic manufacturers) can also be processed locally by the SFDA in CMC.

2. Suzhou BioBay
Since the establishment in 2006 in Suzhou Industrial Park, Suzhou BioBay has attracted both domestic as international pharmaceutical and medical companies
which focus on drug discovery, diagnostic medical devices, and nanomaterials. 19 top scientists which are included in the "National 1000 Talents Plan" have started their own companies in BioBay. The Suzhou Institute of Nano-tech and Nano-bionics and China Academy of Medical Sciences are also present in BioBay, with which research platforms have been set up.

3. Nanjing Biotech and Pharmaceutical Valley
Website: [www.njbpv.cn](http://www.njbpv.cn)
This park is located in the State level Nanjing Hi-Tech Development Zone, on the north side of the Yangtze River. Being established in 2010, the park now covers over 10 hectares. In 2013 over 180 enterprises had established in the park, with a total turnover of 5 billion RMB. The enterprises are mainly engaged in bio-pharmaceutical manufacturing and processing, diagnostics and medical devices. The park strongly relies on a number of universities, such as China Pharmaceutical University, Nanjing University and Nanjing University of TCM.

9. Main health care related trade fairs and conferences

**ChinaBio Partnering Forum**
Annual conference and matchmaking event in the field of biotech and pharma. Website: [www.ebdgroup.com/cbpf/index.php](http://www.ebdgroup.com/cbpf/index.php)

**All China BioTech Conference & Exhibition**
Annual trade fair on biotech and pharma, held in September in the Nanjing International Expo Center. Website: [www.biotechchina-nj.com](http://www.biotechchina-nj.com)

**China International Medical Expo**
Held annually in November, in the Taizhou China Medical City (CMC). Website: [www.cim-expo.com](http://www.cim-expo.com)

**Nanjing AgedCare Exhibition**

For relevant trade fairs and conferences in other parts of China, please contact NBSO Nanjing.
10. Relevant authorities and branch organizations

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