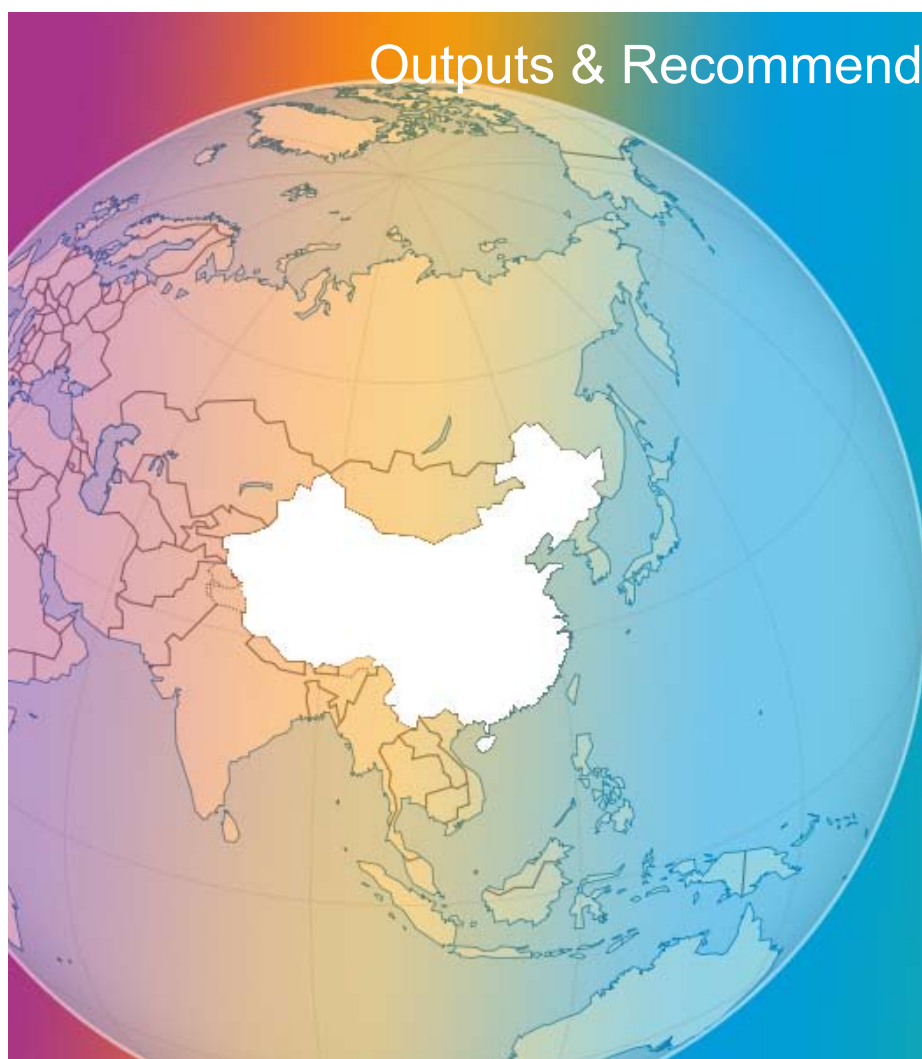




## Outputs & Recommendations after the Mission

27th - 31st May 2013



# China

# COUNTRY REPORT

# Mission to China - Shanghai

## Objective

The objective of the mission in China was to discover and detect key entry points of the lifescience market in this country. The Chinese market offers huge opportunities in the health care sector: it has undergone yearly growth rates above 20% during the last 10 years. However, cultural gap and a difficult IP regulation, among others, are to be taken into account when establishing commercial and technological relations with local Chinese partners. The question that the bioXclusters partners tried to answer through this mission was how to help the European SMEs penetrate this very fast growing market and keep a long-lasting position on it.

Far from being only addressed to clusters' managers, this mission was open to SMEs. From this point of view, it was very successful as 11 of them from 4 different countries joined the program.

In order to evaluate the repercussions and results of the mission, we distributed a follow-up questionnaire to the members of the delegation. In this way, we count to support them to achieve their objectives on the market.

## Agenda

During 5 days, we had the opportunity to:

- Visit some of the most relevant technological parks in China (Zhangjiang High-Tech Park, Juke Biotech Park, Suzhou New district Park, Suzhou BioBay ...), hospitals and other institutions involved in the health care sector in the Shanghai area. The purpose of these visits was to better understand the Chinese healthcare system and identify the best peers in the market.
- Be co-organiser of the first Sino-European Bio-Partnering Event (SEBP). In addition to provide an overview on industry and innovation, this event gave us the possibility to present our project and companies during a roadshow.
- Participate to the Shanghai International Forum on Biotechnology & Pharmaceutical Industry (Bio-Forum 2013). Nearly 100 well-known experts, scholars, entrepreneurs and government officials from home and abroad were invited to give excellent speech and about 600 delegates were expected to attend the forum. This event was an interesting platform to have a better visibility on the Chinese market.
- Establish some long-lasting relationships with two technological parks, Zhangjiang High-Tech Park and Juke Biotech Park, through the signature of two MOUs.

Date		Where
27/05	09:30	RenJi Hospital
27/05	14:30	Shanghai Juke Biotech Park

28/05	10:00	Suzhou Industrial park
28/05	11:30	BioBay
28/05	14:30	Suzhou Institute of Nanotech and Nanobionics
29/05		Sino-European Bio-Partnering Event
30/05	09:00	ZhangJiang High Tech Park
30/05	14:30	BioForum Shanghai
31/05	09:00	BioForum Shanghai
31/05	14:30	Rhône-Alpes complex: internal meeting bioXclusters

## European companies that joined the mission



[www.adocia.com](http://www.adocia.com)



[www.genovax.it](http://www.genovax.it)



[www.archivelfarma.com](http://www.archivelfarma.com)



[www.iris-biotech.de](http://www.iris-biotech.de)



[www.metabolys.com](http://www.metabolys.com)



[www.ctibiotech.com](http://www.ctibiotech.com)



[www.morphosys.com](http://www.morphosys.com)



[www.enantia.com](http://www.enantia.com)



[www.cfmot.de](http://www.cfmot.de)



[www.fabentech.com](http://www.fabentech.com)



[www.verum.de](http://www.verum.de)

In addition to these companies, the German Trade and Investment (GTAI) GmbH also joined the mission.



For more information about the companies, please consult the leaflet of the mission at:  
<http://bioxclusters.eu/2013/05/23/china-mission-delegation-brochure/>

# General overview after the mission and opportunities

Key drivers for the development of the health sector in China:

- growth of GDP & individual income;
- ageing population;
- healthcare reforms;
- improvement of the medical services;
- urbanization.

Tips for European companies/clusters:

- check very carefully the Chinese partners' backgrounds;
- take your time;
- speaking Chinese is a very important asset;
- build relations take time but the *guangxi* (networking) is very important.

## Hospitals

In China there are 4 categories of hospitals:

Tertiary Hospitals	
	<ul style="list-style-type: none"> <li>• The biggest ones</li> <li>• They provide specialist services, do clinical research and are used to deal with difficult cases and severe diseases.</li> <li>• They aim at becoming regionally and internationally renowned.</li> </ul>
Secondary Hospitals	
	<ul style="list-style-type: none"> <li>• Often regional.</li> <li>• They provide general health services and emergency treatment.</li> </ul>
Primary Hospitals	
	<ul style="list-style-type: none"> <li>• The smallest ones.</li> <li>• They provide general health services to a community of patients.</li> </ul>
Special Services Hospitals	
	<ul style="list-style-type: none"> <li>• They provide specialised treatments like cosmetic surgery.</li> <li>• They are mainly used by foreigners and rich people</li> </ul>

In addition to that, there are the International Hospitals. Mainly used by the foreigners living in the country and quite expensive.

The new healthcare Chinese reforms encourage a new trend: to move services from the larger hospitals to the community health centers.

Patients may decide to be treated in every hospital in the country (the choice is not based on geographical criteria). But the insurance system is regional and if they are treated out of their region, expen-

ses are not reimbursed by the insurance system. These have important impact on migrant population.

## Insurance System

Concerning the insurance system, according to the government 90% of the population is covered. The urban population has two kinds of basic medical insurance: one for the employees working for the private or state-owned companies and the other for the people who are not included in the first category (young and retired people, students, disabled and unemployed). The Urban employee basic medical insurance is mandatory, funded by employers and employees and the current annual premiums are from 8 to 15% of the annual salary of the employee. On the contrary, the urban resident basic medical insurance is voluntary, funded by government and individuals and the current annual premiums are \$20-100. The rural residents may have a new rural insurance, which is voluntary, funded by government and individuals and whose current annual premiums are \$5-10.

The new reforms aim at expanding the health insurance coverage.

## Clinical Trials

China is a very attractive country for clinical trials because of the lower costs, the faster enrollment of patients, large pool of naïve patient and the extremely competitive market. In its “eleventh-five plan”, the government planned to invest 6.6 billion RMB to create 24 pre-clinical and clinical trial platforms.

## Medical Technologies reglamentation

Medical technologies products are divided in 3 categories:

	To set-up manufacturing in China	To import in China
Class I - low risk	Only need a city-level FDA registration	Need a “Product Registration Licence” at CFDA
Class II - medium risk	Need a “Production Permit” at provincial FDA and then a “Product Registration license” at Provincial FDA and CFDA	
Class III - high risk		

Class III products require human clinical trial and need at least 3 years to obtain the registration from CFDA.

## Short description and feedback of each organization

Renji Hospital /Shanghai Jiao Tong University / School of Medicine	Location: Shanghai
<a href="http://www.renji.com/lxwm.html">http://www.renji.com/lxwm.html</a>	
<p>The Renji Hospital was the first one specialized in western medicine in Shanghai. Dr. Lockhart, a British missionary, founded it in 1844. About one century later, in 1952 it became a teaching hospital and the west campus was founded. Nowadays, the Renji Hospital counts 5 campuses:</p> <ul style="list-style-type: none"> <li>• West campus (the historical one)</li> <li>• East Campus (it opened in 1999 in Pudong and is the headquarter of the hospital)</li> <li>• North and South campuses (inaugurated in 2012)</li> <li>• The Shanghai Cancer Institute (the state key laboratory of oncogenes and related genes).</li> </ul> <p>The hospital has 2050 beds, 3099 employees (more than 900 doctors), 42 departments and some laboratories with a national reputation (key lab of gynaecology cancer, tissue bank of major human diseases, etc.). In 2012, more than 76,000 patients were admitted in the hospital and 53,300 surgical interventions were made.</p> <p>The key areas are: gastroenterology, obstetrics, cardiology, neurosurgery, urology, nephrology, general surgery and hepatology.</p> <p>The hospital is very active in the clinical trials. Renji has the only platform dealing with chronic liver diseases in the country. They perform on average 30 global trials per year. For many clinical trials and research programs, the Renji hospital cooperates with foreign companies (USA, Europe, etc.) and peditry is one of the main areas.</p> <p>As to the medical education provided by the hospital, the program to become Doctor of Medicine lasts 8 years. They have several collaborations with Lyon, Louvain, Temple, Sydney. For this reason, an English Medical Program was created in 2011. Many Chinese students spend some months or do their internships in an English-speaking country (most of the time in Australia and USA).</p>	



## Shanghai Juke Biotech Park

Location: Shanghai

<http://www.jkbp.com/>

Shanghai Juke Biotech Park is a biotechnological and biomedical scientific park. It lies on an area of about 90,000 m<sup>2</sup>. Juke was founded in 2003 and in 2012 the phase II was in use. They have 3 incubator sites in Shanghai and 2 bases outside the city (dedicated to manufacturing).

At the beginning, its main mission was to help start-ups and spin-offs issued by universities to set up their business (acting as an incubator). They had a very selective approach to identify their members, based on a technological analysis and the patents owned. Then, they developed other systemic services as visiting exhibition and conferences, internal and external networking, internationalization, etc. They offer a technical platform of scientific services in the following sectors:

genomics, proteomics, bio-informatics, antibodies, fermentation, formulation, animal facility and public lab. The management of this platform is a profit activity although the investments are made by the government.

Now, they are diversifying their activities through the creation of translational medicine center and a nutraceutical one.

They count 238 members, 7 of whom are international (more than 2,500 employees). Most of them are dealing with drug discovery, fermentation technologies, nutraceuticals, diagnostics (infectious diseases), CROs, TCM and agriculture.

They have a global network: apart from bioXclusters, they have many relations with Austria, Malta, Korea, Australia, etc. It's worth noting that they are founding members of the Shanghai Bioclouds network whose aim is to provide a favourable environment to the European companies based in Shanghai.

Government finances partially their activity so the relations with them constitute an important part of Juke's work. Their business model is based on a government-academy collaboration. In effect, they have 2 shareholders: the Shanghai Xuhui Municipality (51%) and the Shanghai Institutes for Biological Sciences (SIBS), part of the Chinese Academy of Sciences (CAS) (49%).

bioXclusters partners signed a MoU with Shanghai Juke Biotech Park for future collaboration.



<b>SIPAC (Suzhou Industrial Park Administrative Committee)</b>	<b>Location: Suzhou</b>
<a href="http://www.sipac.gov.cn/">http://www.sipac.gov.cn/</a>	
<p>The Suzhou Industrial Park (SIP) was created in 1994 in the framework of a 20-year cooperation between China and Singapore. About the current shareholding, 52% belongs to China and 28% to Singapore.</p> <p>The initial investment was about 100 mln USD (exchange rate: 1USD=8.8 RMB). In 2012, the profit was about 590 mln RMB.</p> <p>15,000 companies are located in the park. 5,000 are foreign and 10,000 are domestic (between them, there are also service facilities like restaurants and hotels).</p> <p>Among the 700,000 people working in the industrial park, 22,000 are foreigners (coming from Korea, USA, Europe (mostly Germany) and Japan).</p> <p>The construction of the industrial park lasted 15 years and it covers an area of 288 km<sup>2</sup>. As no more free land is available, they are developing 20 “go-out projects” (cooperations with other parks near Shanghai). The company managing the industrial park is called CSSD.</p> <p>Their first mission was to attract manufacturing companies. Nowadays, they are trying to attract high-tech and innovative companies and start-ups. For this reason, they created a specific office for innovation and transfer technology and two incubators: ICT and Biobay.</p>	



<b>BioBay</b>	<b>Location: Suzhou</b>
<a href="http://en.biobay.com.cn/main/index.asp">http://en.biobay.com.cn/main/index.asp</a>	
<p>Biobay is a bio and nano public service platform. It offers several services:</p> <ul style="list-style-type: none"> <li>• Office rental and incentive packages; Biopharmaceutical public technology labs;</li> <li>• Nanotechnology public labs;</li> <li>• Partnering and networking (including international communication and collaboration);</li> <li>• HR, financial and tenant services (consulting);</li> <li>• Special services for the foreign employees working in the companies located there.</li> </ul> <p>100 employees work for Biobay to provide these services (including research performing in the labs). Their profit comes from the office rental (40 RMB per m<sup>2</sup>) and the consulting services.</p> <p>330 companies are located in the incubator. Their industrial specialities are drug discovery (100), diagnostics and medical devices (90), biotech including reagents and nanotech/nanomaterials/nanoelectronic (more than 40 companies). Totally, 6,000 employees work for these companies.</p> <p>Some key companies: Qiagen (JV founded this year); Brightgene (biggest drug discovery firm in the incubator); Optotrace Technologies; Innovent biologics (the largest biopharmaceutical commercial technology platform and</p>	





manufacturing plant); Suzhou Nano-Micro Biotech Co.

The total revenue of the companies in Biobay was 20.1 mln RMB in 2011.

They have a cooperation agreement with Cold Spring Harbor Laboratory whose Asian site is located in Biobay.

About patents, they recorded 4 patent applications in 2008 and 763 in 2012!

They developed a soft-landing program with Finland. In September 2012, they signed an agreement with the VTT Technical research Center of Finland based on the MOU previously signed between the Ministry of Science and Technology (China) and the Ministry of Employment and Economy (Finland). There is a previous match-making between Finnish and Chinese companies, followed by delegations' visits. The Finnish companies have some offices at their disposal in Biobay and they can use them to meet clients, for instance, during their missions in China.

**SSTT (Suzhou Science&Technology Town)**

**Location: Suzhou (New District)**

<http://www.sstt.gov.cn/>

SSTT is an industrial park focused on medical devices. It is under the administration of SND (Suzhou New District). SND is a 20-year-old national-level park measuring 258 km<sup>2</sup> and counting 716,000 people working there. Companies located in SND are mostly manufacturers in ICT, electronics, precision machineries, fine chemicals. However, they are trying to attract companies in new strategic industries, such as medical devices, new energies and R&D. SND hosts 2,015 foreign-invested companies (ex. Areva, Eurofins, Pfizer, Schneider Electric, etc.). The SND 2nd development phase is SSTT. SSTT construction started 6 years ago. Designed to host 100,000 people, it covers an area of 25 km<sup>2</sup>.

The staff is composed of more than 100 employees.

SSTT is 100% public-funded (investments come from the Province not from the national government). It is the only professional med-tech park subsidized by the provincial government. They started to develop the medical devices industry 2 years ago because of the big concentration of medtech companies in the province (2,000 in the whole Jiangsu Province, id est 1/3 of China, and more than 500 in Suzhou). They try to attract uppermost high-tech companies (currently, 52 companies) and institutions (the Jiangsu branch of the State IP Administration Office; the CFDA (China Food and Drug Administration); the Suzhou Institute of Biomedical Engineering and Technology (SIBET); the Jiangsu Medical Instrument Test Center (JSMIT); etc.).



SSTT supports its clients in:

- Having good communication with authorities and easy access to government support;
- Getting access to quality distributors, sales channels, relevant agents;
- Shortening the pre-sales procedures and lowering the costs;
- Getting access to capital;

- Developing a favourable environment to attract talent employees, by building apartments, schools, restaurants, etc.

They are planning to build their own hospital, which would be a clinical trial hospital used by their companies.

SND and G-med organize an event called “China Medtech Partnering” (November 7-8, 2013). It is an annual international conference for medtech executives and investors whose participants come mainly from China, US, Europe and Isreal.

The bioXclusters partners are invited to participate to this event.

Zhangjiang High-Tech Park / Zhangjiang Life Science Cluster	Location: Shanghai
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<http://www.zjpark.com/>

The Zhangjiang High-Tech Park covers 3 main sectors: life sciences, IT and Culture/creativity. It was established in 1992 and counts about 8,000 companies (among them 2,600 are foreign-owned) with more than 218,000 employees.

The Zhangjiang Life Science Cluster is considered to be the China’s most advanced bio-pharma innovation cluster. It covers all the life science value chain (from the small biotech firms to the big companies). They have a particular focus on biotechnology, modernization of TCM, chemical drugs, Medical devices&diagnostics and specialty chemicals. The Cluster’s mission is to encourage and facilitate bio/pharma innovation and high-value manufacturing for and from China. In particular, they:

- support innovative entrepreneurs and companies,
- provide first class infrastructure (technical platforms, incubator services, shared fully equipped labs, etc.),
- attract talents,
- help Chinese companies to become global,
- give funds to companies to contribute to their growth.

To sum up, Zhangjiang have many strenghts: its location, the government support, the fact to be part of the Shanghai academic network (2 universities and 13 national level institutes), the capacity to attract talents and the financing resources.

The **Shanghai Pudong Bio Industry Association** was founded in 2002 to federate the pharmaceutical and medical companies in the Pudong area.

In 2002 they counted 46 members. Today, they have 215 members. They cover more than 50% companies in the bio-pharmaceutical industry. Their business model is very similar to the cluster one: they have many connections with public labs and hospitals.

bioXclusters partners have signed a MoU with ZhangJiang for developing future collaboration.



# SEBP – Sino-European BioPartnering Event

## Overview

bioXclusters partners have co-organised, together with G-Med consulting and BioWin from Wallonia, the first edition of the Sino-Europe Bio partnering (SEBP2013) in Shanghai. This event has been hosted by the Zhangjiang Hi-tech Park, the most advanced and largest life science park in China.

This event is the result of the collaboration between the bioXclusters partners, Shanghai Bioclusters members and Mr Gao Ronghui, who visited the four European regions last January 2013 and was able to give some recommendations about the landing in China in the different workshops. Mr Gao is the CEO of G-Med Consulting.

In the morning, Isabelle Scarabin, Economic & International Affairs Director of Lyonbiopôle, presented to bioXclusters project as an exemple of how some European clusters go international.

During the whole day, 20 EU Companies and among them 7 companies of the BioXcluster delegation had the possibility to present themselves and illustrate the kind of collaboration they were looking for: Metabolys, Iris Biotech/Cfm O. Tropiczsch, Verum.de, Morphosys, Adocia, Fabentech, Archivel.

In the afternoon, a parallel session, focused on BioClusters models, both from Europe and from China, was held. Around forty people attended this workshop that was chaired by Dr. Zhang Jiong, GM of the Shanghai Juke Biotech Park (China) and Mr. Fabrizio Conicella, Coordinator of bioPmed Innovation Cluster (Italy).

## Keynote speech: China life science industry

- By 2015, China is expected to reach the 2nd place in the world in the pharmaceutical sector.
- The Chinese government, both on national and local level, launched many programs to support the life science industry.
- Science and high-tech park represent a key aspect of the Chinese policy.
- Funds are provided by the government to finance both fundamental and applied research. However, it is worth noting that the funds focus more on qualitative than quantitative projects. Many Chinese researchers are coming back to China and are contributing to a sort of modernization of the research. As a result, more and more Chinese companies are involved in early-stage drug discovery activities.
- Health was identified as a strategic emerging industry.

## BioCluster Workshop - Abstract

Especially in China, SMEs and clusters sometimes consider internationalization as an issue. In life science it is not an option because the market as well as the competition are global. However, SMEs haven't got internal skills and/or the critical mass to dedicate themselves to international activities. They need support to define an internationalisation strategy, to identify goals, skills, resources, entry points and partners in such faraway markets. On the one hand, European and Chinese markets offer

big development opportunities; on the other hand, companies have to face big challenges to enter these markets. In such scenario, which is the role of clusters?

To answer this question and to develop a mutual understanding and knowledge, 13 Chinese and European clusters and science parks introduced themselves and their international strategies during a roundtable.

- Biocat, Barcelona, Spain
- LyonBiopole, Lyon, France
- bioPmed, Torino, Italy
- BioM, Munich, Germany
- Biowin, Wallonia, Belgium
- Biolake, Wuhai, Hebei
- Pizhou, Xuzhou, Jiangsu
- CMC, Taizhou, Jiangsu
- HMC, Haimen, Jiangsu
- L-Park, Wuxi, Jiangsu
- Zhangjiang park, Shanghai
- Juke park, Shanghai
- Fanchang, Wuhu, Anhui
- 



Conclusion: Clusters should have a proactive approach in terms of internationalization. They have to learn to work together on a win-win basis in order to support the growth of their respective companies and to assure sustainability and prosperity.

Cluster should be able together to identify strategic paths to offer to their companies the best opportunities. As a consequence, a relation based on trust, transparency and mutual understanding is a key factor. Chinese and European clusters are aware of such factors and are committed to set up long-term relations in order to exploit all the opportunities and to maximize their benefits.

## Bio-Forum 2013

The 15th Shanghai International Forum on Biotechnology & Pharmaceutical Industry (BIO-FORUM 2013) is hosted by Modern Biotechnology & Pharmaceutical Industry Office of Shanghai Municipality and supported by Ministry of Science & Technology of the P.R.C, CFDA, Science & Technology Commission of Shanghai Municipality, Shanghai Food and Drug Administration, etc.

Bio-Forum 2013 had a major focus on “Create Cooperation Opportunities, Serve for Industry Development”. Nearly 100 well-known experts, scholars, entrepreneurs and government officials from China and abroad were invited to give excellent speech and about 600 delegates were expected to attend the forum.

The forum consisted of scientific conferences and a small exhibition area.

On May 31st, Montserrat Vendrell, CEO of Biocat and Chairwoman of the CEBR, gave a lecture on “European Life Sciences Bioregions: strengths and partnership strategies. The bioXclusters Example”.

During the two days, 7 companies of the European delegation had the possibility to present themselves and illustrate the kind of collaboration they were looking for: Metabolys, Morphosys, Adocia, Fab’entech, Archivel, Genovax, CTIbiotech.

Should you want to get more information and contact names, please get in touch with your local partner at:



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