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Eli Lilly China was established in 1996 with the construction of its Suzhou production plant, which was awarded Good Manufacturing Practice (GMP) certification in 1998 by the SDA. Currently, the plant manufactures Ceclor and Prozac, used to treat lung infections and depression respectively. Though generics are available for both drugs, they have been selling well in hospitals due to their high efficacy and quality. Eli Lilly Asia also has marketing approval in China for Vancocin-CP, an antibiotic; Zyprexa, used to treat schizophrenia; Celance, used to treat Parkinson’s Disease, and various diabetic drugs including Humulin R and Humulin NPH.

Eli Lilly Asia’s focus has primarily been on the development of diabetes and psychological disease medication. The company has invested large amounts into public education on diabetes in an effort to increase awareness of the disease and enlarge the diabetes medication and treatment markets. It has also established several diabetes education centers in China in conjunction with US aid group Project Hope.

Statistics show that Eli Lilly was ranked 23rd among pharmaceutical companies in terms of hospital drug sales in the first and second quarters of 2002. The company has plans to launch a new drug for treatment of osteoporosis by the end of 2003 and also aims to release one new patented drug onto the China market each year for five years.

Eli Lilly has had a history of innovation in drug development and production and has numerous collaborations with research institutes, universities and research companies in addition to its own drug research facilities as it seeks to develop new product lines.
Lilly is a leader in the pharmaceutical industry. The company employs more than 43,000 people worldwide and markets its medicines in 146 countries.

**Fast Facts**

- A heritage more than 126 years strong: company founded on 10 May, 1876
- More than 41,000 employees worldwide
- Approximately 7,600 employees engaged in research and development
- A leader in the pharmaceutical industry in R&D investment as a percent of sales: 19 percent in 2001
- Products marketed in 158 countries

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**About Eli Lilly Asia**

Lilly is a leader in the pharmaceutical industry. The company employs more than 43,000 people worldwide and markets its medicines in 146 countries.
Drop in Profits for Shanghai Drug Distribution Companies

As of November 2002, 42 drug distribution companies surveyed in Shanghai saw increases in drug purchasing and sales values of 2.5% and 4.9% respectively while profits dipped by 12.8%. Eighteen companies experienced growth in profits while the other twenty-four sustained losses. Drug retailers saw an increase of 19.2% in local drug sales even while sales to hospitals and outside of Shanghai dropped by 14.8% and 25.2% respectively.

Largest Antibiotics Production Plant in Southwest China Established

Hong Kong based United Laboratories Ltd. and Sichuan Pharmaceutical Co. Ltd. have jointly established what is currently the largest antibiotics production plant in Southwest China at a cost of US$24 million. The newly constructed plant is specialized for the mass production of penicillins, cephalosporins and clavunate potassium.

About United Laboratories

The United Laboratories Ltd. (TUL), established in 1964 in Hong Kong, is principally engaged in the production and sales of pharmaceutical preparations. Just before 2000, TUL set up a new GMP-standard manufacturing facility, which became one of the largest scale pharmaceutical enterprises in Hong Kong. The dosage forms involve tablets, capsules, granules, vials, ampoules, oral liquids etc. In the mid 1990s, TUL invested a total amount of US$51.2 million in the establishment of The United Laboratories Ltd., Zhuhai, which exclusively manufactures pharmaceutical preparations and bulk drug substance. Currently, TUL is one of the leading lactam antibiotics manufacturers in the PRC.
Guangzhou Jiuzhoutong Medicine Logistics Center in Operation

Built with investments of US$12.1 million, the 25,000 square meter facility located in Guangdong Zhongshan Health Sciences Park has been set in operation. The center will serve all the drug retail chain companies and drug wholesalers in the Pearl River Delta, Hong Kong and Macau and is the result of a joint investment by Hubei Jiuzhoutong Pharmaceutical and North China Pharmaceutical Co. It is expected to bring in sales revenues mounting to US$160 million in the next three years and to become the largest drug logistics center in South China.

Beijing Yinjian Enterprise Enters Drug Retail Sector

Beijing Yinjian Enterprise, a leading company in China's transportation industry, has invested US$5.4 million in its Yinjian Grand Pharmacy division to expand into the drug retail sector. To date, Yinjian Enterprise has opened some 20 chain drugstores in Beijing. Led by Jia Shi Tang, Jin Xiang and Yi Bao Quan Xin Grand Pharmacy, drug companies have now opened about 1,300 retail outlets in Beijing, with sales reaching US$120 million in 2002. Compared to Guangzhou, where over 3,000 outlets have been opened, the drug retail market in Beijing is far from saturation. With the elimination of the free healthcare system and the recent introduction of a basic medical insurance scheme for all citizens, opening up tremendous opportunities for private drug retailers, investors from all nations and industries continue to pour into this lucrative new market.

Zhejiang Pharmaceutical First in Vitamin E Production

Following relocation of Zhejiang Pharmaceuticals' production base from Xinchang to Shaoxing Paojiang Industry Park of Zhejiang Province at a cost of US$9.6 million, their annual production of vitamin E has reached 10,000MT. Zhejiang Pharmaceutical is now the top producer of vitamin E in China. In addition, the company now plans to invest US$3.5 million into the establishment of a joint venture to produce the chemical intermediate of vitamin E, YWQ, ensuring a steady supply in future.
Luye Pharmaceutical’s Aescinate Granted US Patent

Shandong Luye Pharmaceutical receives a US certificate of invention, by the American Bureau of Intellectual Property Rights, for its sodium aescinate formulation. Sold under the name Aescinate, the drug helps to reduce inflammation and can also be used to treat shock patients. Luye Pharmaceutical claims that their product is superior to other formulations, both in terms of efficacy of treatment and reduction of side effects.

Drug Molecular Design Center Set Up in Beijing

A new drug research and development facility, named Beijing Drug Molecular Design Center, has been established through joint investments by the Beijing Science and Technology Commission, the Chinese Academy of Military Medical Sciences, and Beijing Pharmaceutical Group. All three organizations are state-owned or affiliated and the development center has been listed as a key project by the Beijing Municipal government. It aims to synthesize major new drugs through analyses of their molecular structure and to make breakthroughs in new drug research and development.

About BPCG

Beijing Pharmaceutical Group Corporation (BPCG) is a multiple state-owned medical enterprise and one of the 500 largest enterprises in China. BPCG owns dozens of manufacturing factories producing medicines and medical instruments, commercial companies, research institutes and colleges and employs over 15 thousand staff. Its assets total over US$506 million. BPCG is mainly engaged in the development and manufacture of chemical medicines, natural medicines, diabetic aids and medical instruments.
About Strand Genomics

Strand is a life sciences informatics company developing and marketing products and solutions for drug discovery and development. Strand’s core competencies include data mining and analysis, image recognition and analysis, visualization, biosimulation and software engineering. This coupled with our significant and growing life sciences expertise allows us to provide value-added customized solutions as well as software products to biotechnology and pharmaceutical industries.

Strand has delivered customized solutions and products to leading pharmaceutical and biotech companies as well as some of the major universities in Asia and US. Strand’s tested on-shore/off-shore project delivery model allows it to comprehensively map the client’s requirements and build a solution conforming to the exact specifications at a much lower cost than competitors (due to significant development being done in India).

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About Strand Genomics

Strand Genomics, a Bangalore-based life sciences informatics company, has licensed Soochika to Lilly Systems Biology, Singapore—a division of Eli Lilly. Soochika is a comprehensive microarray data mining and management tool, which employs extensive data cleaning, filtering, transformation and normalization techniques.

The tool also includes an annotation module, which allows the user to pull and organize all relevant information on gene sequences of interest for further analysis. This software is available for both desktop and enterprise wide deployment and runs on Windows, UNIX, Mac and Linux systems.

According to Strand Genomics CEO, Dr. Srinivasan Seshadri, Soochika has in-built biological clustering features and class prediction methods that Lilly was specifically looking for in the data mining product segment. With Lilly Systems Biology’s acceptance, Strand Genomics’ clustering pipeline is validated, which has several proprietary clustering techniques not present in similar products available in the market.

To date, Strand Genomics’ product has three main analysis pipelines — cluster analysis, predictive model building and differential analysis.
Transgene Biotek is actively considering merging with Saket Biotechnologies (P) Ltd, which has patents for futuristic technologies that include new drug delivery systems (NDDS) for oral hepatitis B and insulin doses. Towards this end, the company is approaching global consultants for evaluating Saket Technologies.

Saket Biotechnologies, which has bagged a US patent in November last year, is targeting the US$10 billion market for NDDS in oral hepatitis B and insulin doses. The merger of Saket Biotechnologies is expected to bring in revenues to the ailing Transgene Biotek that is currently saddled with accumulated losses of about Rs10 crore (US$2.2 million).

After the proposed merger, Transgene plans to roll out quadrivalent meningococcal meningitis vaccine, hepatitis C vaccine, erythropoietin, and interferons quickly. Transgene had earlier obtained the license from the Department of Biotechnology for hepatitis B vaccine, but the company had sold its license to Pune-based Serum Institute of India in order to wriggle out of its financial troubles.

“We are collaborating with the US based J N International for bringing out meningitis vaccine. Interestingly, the World Health Organization (WHO) has already expressed its strong desire to purchase this vaccine subject to the satisfactory compliance of certain guidelines,” said Dr. K. Koteswara Rao, CMD, Transgene Biotek.

For commercializing its technologies, Transgene is setting up a Rs30 crore (US$6.5 million) project in Medak district. The funds are being raised through the preferential route and about 10 lakh (US$21,660) equity shares of Rs10 (US$0.22) each are being issued at a premium of Rs50 (US$1.10) per share. Of the 10 lakh (US$21,660) equity shares, about 4 lakh (US$8,660) equity shares would be issued to US-based Batterymarch Financial Management, Boston.

Transgene Biotek came out with an IPO in 1993 with a project to manufacture diagnostic kits but the project was not completed. At present, despite its accumulated losses, expectations for the company are high, as the company is claims to possess futuristic technologies.
About Transgene Biotek Ltd.

Transgene Biotek Ltd. (TBL) is one of the early Biotech companies starting with a range of medical diagnostics expanding rapidly its focus on to other major Biotech products and services. It has several genetically engineered products in the area of vaccines and therapeutics at various stages of development. It offers various services such as a chain of clinical diagnostic laboratories and providing a collaborative platform in the area of genomics & proteomics leading to the discovery of new molecules and drug targets.

TBL’s platform technologies specialize in the development of patented and innovative oral delivery of proteins and peptides such as Hepatitis B antigen used as a vaccine or Insulin replacing the current injectable routes.

TBL will be taking a major step forward in 2003 in its development of a novel drug based on recombinant fusion protein technologies in the treatment of AIDS.

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In a bid to expand its women healthcare products portfolio, the Baroda-based, Rs 40 crore (US$8.6 million) pharmaceutical company Alembic Ltd. is buying the Indian rights of Yutopar, a formulation brand owned by Solvay Pharma of the Netherlands. The two parties, which have mutually consented to strike the deal, have approached the Foreign Investment Promotion Board (FIPB) for clearance since brand and trademark acquisitions involving remittances to a foreign company must have the FIPB go-ahead.

Confirming the deal, Alembic President (Finance), Mr. R. K. Baheti said that the acquisition is in line with Alembic’s desire to concentrate on women’s healthcare segment, which is perceived to have a good growth potential. Alembic’s objective is to acquire the perennial brand rights of Yutopar in the country by paying a specified amount as royalty to Solvay. Alembic would manufacture the drug under the agreement.

Yutopar, a formulation of Ritodrine used for inhibition of pre-term labour and extreme uterine contractions causing foetal distress, is currently marketed in India by Solvay India Ltd, a subsidiary of the Dutch pharma major which owns the brand. Sales of Yutopar in India exceeded Rs1.5 crore (US$325,000) in 2002–2003. Although the exact price at which the deal has been struck is not known, sources said it is almost double the current turnover of the brand in India. Other Ritodrine formulations in the domestic market include Utodin marketed by Sun Pharma, Ritopar-UR from Mercury and Ritodine marketed by Troikaa.

Alembic has six products specifically targeted at the gynecological products segment, with a total turnover of about Rs18 crore (US$3.9 million). Apart from looking at brand acquisitions, Alembic is also developing a host of products in the segment through research. Other therapeutic areas where the company has a robust presence include anti-diabetics and antibiotics and nutraceuticals.

Solvay India Ltd has already reached a turnover of over Rs120 crore (US$26 million) and has a clutch of other products in women healthcare segment. Solvay of Belgium now holds a 64% stake and full management control in the Indian subsidiary.
About Alembic Limited

Alembic Limited is the flagship company of the Alembic Group. Corporate office & manufacturing unit are located in the heart of Baroda City amidst green ambience, 400km north of Mumbai.

The sprawling Alembic complex is spread over a land area of around 300,000 square meter with built-up area of 90,000 square meter. Having been awarded the prestigious ISO-9002 & ISO-14001 Certification for manufacturing & marketing of active pharmaceutical ingredients & finished dosage forms for domestic and international markets, Alembic Limited is well equipped with WHO-GMP accredited production facility. This speaks of its total commitment to quality and continuous improvement in its product and services.

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Doosan Corp. recently announces that its food business group will build its latest kimchi production factory in Beijing by end of August this year. The Beijing facility, due for operation by February next year, will be equipped with a daily production capacity of 400,000 tons, half of the capacity of the main kimchi plant in Hoengseong, Gangwon.

Kimchi is a traditional fermented cabbage dish, often presented as a basic side dish in Korean meals. According to Doosan, Kimchi has steadily gained popularity in China and Southeast Asian countries. To cater for the new market, Doosan has decided to set up manufacturing plant in Beijing to produce its leading kimchi brand, Jongkajip.

Doosan said that most of the kimchi produced in the Beijing plant will be distributed in China, with a portion targeted for Southeast Asian market.

About Doosan Corp.
Doosan Corp., headquartered in Seoul, Korea, is the oldest corporation in the country. It has three major business sectors: information and distribution, life and culture, and technology based business sectors. Its products and services include liquor, food, publication/multimedia, automobile, electronics and materials, base materials for food, machine, biotech, packaging, etc.

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CordLife has announced the launch of a new division — PeriLife. The launch of PeriLife allows CordLife to expand its autologous stem cell processing and banking services from umbilical cord blood (which can only be collected from newborn babies) to peripheral blood. This announcement follows approval received earlier this year from Singapore’s Ministry of Health, allowing CordLife to offer peripheral blood stem cell (PBSC) processing and banking services.

"By launching the PeriLife division, CordLife is now able to open its stem cell processing and banking services to a significantly wider range of patients. We look forward to reaching out to and working with oncologists, by providing PBSC services to hospitals in Singapore," said Dr. Toh Keng Kiat, Medical Director of CordLife, and a practising hematologist.

Harvesting and transplanting hematopoietic stem cells (HSCs) from the bone marrow and umbilical cord began in the early 1960s and late 1980s, respectively. Both the bone marrow and umbilical cord contain high concentrations of HSCs. In addition, HSCs can also be isolated from peripheral blood (blood circulating in the body), although in significantly lower concentrations. In order to obtain sufficient quantities of HSCs from the peripheral blood, it is necessary to mobilize the cells out of the bone marrow into the peripheral blood. The stimulation of these HSCs is achieved through the use of drugs administered to the patient.

CordLife will work with oncologists in identifying and collecting PBSCs from patients. After which, the HSCs will be tested, processed and cryogenically stored until required for therapeutic treatment. When stored at cryogenic temperatures, HSCs are believed to have an indefinite lifespan.
Currently, PBSC transplants are being used either actively or in clinical trials for the treatment of both hematological and non-hematological malignancies. This includes acute leukemia, chronic myelogenous leukemia, non-Hodgkin’s lymphoma, breast cancer, ovarian cancer, and childhood neuroblastoma.

An autologous stem cell transplant involves mobilizing and harvesting the PBSCs from a patient. This is followed by the transplantation of PBSCs back into the same patient, with the objective of boosting the immune system. Research on the procedure of PBSC harvesting began in the 1970s, and resulted in 27,000 autologous and more than 4000 allogeneic transplants in the United States in 1998 alone.

While peripheral blood may contain lower concentrations of stem cells than bone marrow and umbilical cord blood, the ease of its collection is advantageous. PBSC harvesting occurs in an outpatient setting. It is less painful and invasive than bone marrow collection, and does not require anesthesia or hospitalization. Furthermore, unlike umbilical cord blood collection, which can only be done at the point of birth of a newborn child, PBSC collection can be done any time during an individual’s life span. Another advantage is that PBSC transplants have faster rates of hematological recovery and show better platelet engraftment than bone marrow transplants. A study done on patients with Hodgkin’s Lymphoma, showed that autologous PBSC transplants had better survival rates than autologous bone marrow transplants.

1 An allogeneic transplant is when the stem cells are harvested from one individual and transplanted into another individual.

2 International Bone Marrow Transplant Registry / Autologous Blood and Marrow Transplant Registry

3 Cancer, 15 May 2003.
About CordLife

CordLife Pte Ltd is a leading stem cell biotechnology company. It operates American Association of Blood Banks (AABB) compliant umbilical cord blood banking facilities in Singapore, Malaysia and China. From its Singapore headquarters, and from its Cytomatrix R&D Division in Boston USA, the company engages in cutting-edge adult stem cell research in conjunction with leading institutions.

One of the company’s core technologies is a unique cell growth platform called, “The Cytomatrix®,” a platform that enables cells to grow in three dimensions. Utilizing this platform, the company is working on stem cell expansion, and provides R&D products to researchers around the world.

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Hematopoietic stem cells (HSCs) are stem cells with the unique ability to replicate and differentiate into blood cells. They are necessary for replenishing the body’s blood, which consists of:

• white blood cells for defending the body,
• red blood cells for carrying oxygen, and
• platelets for clotting of blood.

Sources of HSCs include the bone marrow, umbilical cord and peripheral blood. For decades, doctors have been using HSC transplants as a life-saving therapy. HSC transplants can be used to treat more than 72 diseases, including certain blood disorders, immuno-deficiencies, metabolic disorders and malignancies. Upon transplant, the infused HSCs migrate to the patients’ bone marrow, thereby regenerating the blood and immune system.

With rapid technology advancements, new applications for stem cells are expected to become available, positioning stem cells as one of the most promising therapies of the future.

Further reading on PBSC:

• Alternative to Marrow Transplant Eases Donation, Recovery Time — the National Marrow Donor Programs view on PBSC transplants
• Transfusion Medicine Update – Peripheral Blood Stem Cell Transplantation
  http://www.itxm.org/Archive/trmu9-93.htm