Rapid Growth for India’s Healthcare Industry Predicted

The US$17 billion industry is poised to grow at 13 percent per annum.

India’s healthcare sector has been predicted to grow at the rate of 13 percent per annum for the next six years. This target is achievable if the demand for healthcare services and products far exceed supply. The Confederation of Indian Industry (CII) mentioned this recently. The CII has estimated India’s healthcare sector to be worth about US$17 billion.

The CII feels that there are many opportunities for the corporate sector in this industry because there is a shortage of good healthcare facilities in India. According to a World Health Organization (WHO) report, India needs to add 80,000 hospital beds each year for the next five years to meet the demands of its population. Realizing the vast potential in the sector, major healthcare groups in India including Apollo and Tata have invested significantly to set up state-of-the-art private hospitals in large cities.

However, the CII has pointed out that there is a need to reorient India’s healthcare strategy and strengthen linkages between the government and the private sector. It has also emphasized the need to increase state expenditure on healthcare and boost the quality of healthcare infrastructure in India.

Another sector that is poised to grow is health insurance. The CII has said that India’s health insurance business, estimated at US$761 million, will grow to US$4 billion by 2005. Considering that only a very small percentage of the Indian are insured, there is vast opportunity in this sector.

Besides this the ratio of doctors to patients in India is much lower compared to the US — 43 doctors to every 10,000 Indian patients compared with 2340 doctors to 10,000 patients in the US.
Malaysia Unveils Plan for RM5 billion BioValley

Malaysia’s National Biotechnology Directorate (NBD) has proposed the government to set up a BioValley in the country to house the biotechnology industry. The proposal was made by the Managing Director of NBD, Dr. Abdul Latiff Ibrahim during a seminar recently. He said that BioValley would comprise three biotechnology institutes and a business development directorate. The institutes would be dedicated to studies in genomics, molecular biology, agricultural biotechnology, nutraceuticals and pharmaceuticals. The business development directorate would identify innovations for commercialization. About 50 home-grown companies would also be based there. The cabinet has agreed in principle to the proposed plans for the BioValley.

The BioValley, which will be located within the Multimedia Super Corridor, will be developed under the Eighth Malaysia Plan (2001 — 2005). Dr. Latiff said that the BioValley vision is to synergize biotechnology and IT for economic growth. The BioValley is projected to grow from a RM2 billion (US$526 million) industry to RM5 billion (US$1.32 billion) industry within seven years of establishment.

The Malaysian government is formulating a National Biotechnology Policy for the development of this sector. Malaysia’s Deputy Prime Minister Datuk Seri Abdullah Ahmad Badawi said that the policy was necessary for a holistic approach to growth of the industry. He added that the government has allocated RM100 million (US$26.3 million) for research in agro-biotechnology, medicine, environmental and energy management.

Research Activities at Johns Hopkins, Singapore

The newly-opened Johns Hopkins Singapore Research Center is a hub with activities linked to Johns Hopkins University in the US. At the facility, research laboratories share about one third of 30,000 square feet of laboratory space with the National University of Singapore (NUS) and Singapore Science Park.

Here are some genetic and medical research projects being conducted at Johns Hopkins, Singapore:

- Molecular Biology of Hepatocellular Carcinoma.
  Liver cancer that can be traced to hepatitis B viral infection which is common in Southeast Asia. Johns Hopkins, Singapore is conducting research on which genes are responsible for causing the viral infection.

- Epstein Barr Virus (EBV) and related cancers. The EBV has been linked to nasopharyngeal carcinoma (NPC) or in layman’s term, nose and throat cancer, a major killer among the Chinese population. In its early stages, NPC is curable. Research is focused on possible viral antigens and enzyme to arrest the cancer growth. At the same time, scientists at NUS Department of Microbiology are working in tandem to study genes that can be used as an early detection test and future control for disease.

- Cranio-facial Malformations. Research is underway on how to identify genetic factors responsible for the high incidence of cleft palate and cleft lip in Asians.

Vienna Biocenter Invites Taiwan Companies and Highly Skilled Individuals

A delegation organized by Austrian Business Agency (ABA) recently visited Taiwan and hoped to attract talented investors and scientists to its burgeoning biotechnology sector — Vienna Biocenter.

The delegation has visited a number of biotech companies in the Taiwan Hsinchu Science-based Industrial Park as well as the Industry Technology Research Institute (ITRI). The delegation has also met with Academia Sinica President Lee Yuan-tseh to discuss possible academic exchanges between Austria and Taiwan.

Vienna Biocenter was established in 1985 with an aim to promote biotechnology research cooperation between academia and private companies. It is now one of the Europe’s leading regions for biotechnology. The center currently hosts 25 companies and 700 scientists from around the world.

Wilfried Gunka, International Director of the ABA, said that cooperative relationships and partnerships with large Taiwan companies are a way for them to enter Taiwan marketplace. He also stressed that Taiwan companies can receive assistance from the Austrian government’s program to fund biotech startups as well
as from private sector financiers. He added, Austrian immigration laws are very open to highly skilled individuals from other countries such as Taiwan and the companies in Austria can expect to be able to obtain talented people as needed.

Super Computer “Shuguang” Facilitates China’s Genome Research

Recently, the Shuguang super computer, with a peak floating speed of over 100 billion has been installed in the Hangzhou Huada Genomics Institute, placing Huada on the world’s 6th in terms of capability of gene sequencing. Huada is also the first world-level genome information center in China.

Shuguang super computer is one of the major achievements under China’s State 863 Project. Chinese scientists have realized the importance of cooperation between scientists in the fields of biotechnology and information technology. With the “two-wins” achieved, they have pushed the study on high performance computing and biological information science ahead onto a new high level.

Currently, Huada has completed the construction of platforms of two forward sciences of genome and biological information.

China Becomes World’s Largest Fungi Producer

According to the Chinese Edible Fungi Association, China has now become the largest fungi producing country in the world, with its fungi production accounting for over half of the world’s total.

Currently, China’s annual fungi output exceeds 5.2 million tons, worth RMB20 billion (US$2.4 billion), of which US$650 million is for export.

Liu Caimin, Deputy Director of the Chinese Edible Fungi Association said that the fungi: lentinus edodes, agaric, tuckahoe, white jelly fungus, hedgehog fungus and straw mushroom are produced in greater number in China than other parts of the world.

Chinese healthcare companies have developed a number of health foods using fungi as the main ingredient. Experts indicate that domestic fungi are rich in protein, delicious in taste and contain little salt, sugar and fat.

Some fungi have proved to be of medicinal value. Up to date, 150 varieties of fungi in China have been found to be biologically active in combating cancer cells.

Four New Biotech Centers for Taiwan

The Council for Economic Planning and Development (CEPD) of Taiwan said recently, that the government plans to set up four biotechnology development centers in the country, in order to promote the development of the biotech industry.

According to Chen Po-chih, Chairman of CEPD, the four biotech centers will be set up in the northern, southern, western and central parts of Taiwan. The biomedical research center to be set up in Chupei or central Taiwan will focus on researches of cancerous and rare diseases common in Asia. A general biotech research center will be set up in the Nankang area of Taipei. The locations of the eastern and southern biotech centers have yet to be decided. But it is said that the southern biotech center will focus on research related to agricultural production, while the research focus in the eastern biotech center remains unknown.

In order to encourage private enterprises to invest in the industry, the government plans to provide discount on leases at the designated industrial zones and will help potential investors to acquire manpower, capital, etc.

In Brief

• Medicine Valley to be Built in Beijing

The Beijing government has announced recently that it is planning to develop a Medicine Valley. The Medicine Valley is aimed to be a center for the pharmaceutical industry based on the Silicon Valley of hi-tech industry of the U.S.
Statistics on Ownership of Chinese Pharmaceutical Industry

Table 1: Ownership of China’s Pharmaceutical Industry (1993-1999)

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<tbody>
<tr>
<td>State-owned enterprises No. (%)</td>
<td>1774 (59.46)</td>
<td>1829 (58.19)</td>
<td>1786 (53.61)</td>
<td>1793 (50.82)</td>
<td>1596 (46.50)</td>
<td>1429 (39.18)</td>
<td>1257 (35.62)</td>
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<td>Collective-owned enterprises No. (%)</td>
<td>958 (32.13)</td>
<td>984 (30.21)</td>
<td>944 (29.50)</td>
<td>950 (26.92)</td>
<td>837 (24.54)</td>
<td>737 (20.91)</td>
<td>641 (17.74)</td>
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<tr>
<td>Foreign-investment enterprises No. (%)</td>
<td>61 (2.23)</td>
<td>282 (9.00)</td>
<td>419 (12.46)</td>
<td>498 (15.50)</td>
<td>826 (23.85)</td>
<td>546 (15.19)</td>
<td>566 (16.19)</td>
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<tr>
<td>Stock-ownership enterprises No. (%)</td>
<td>0</td>
<td>0</td>
<td>146 (4.38)</td>
<td>222 (6.28)</td>
<td>342 (10.03)</td>
<td>753 (20.90)</td>
<td>977 (27.04)</td>
</tr>
<tr>
<td>others No. (%)</td>
<td>79 (2.85)</td>
<td>162 (4.97)</td>
<td>0</td>
<td>43 (1.20)</td>
<td>20 (0.59)</td>
<td>129 (3.69)</td>
<td>123 (3.40)</td>
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<td>Total: No (%)</td>
<td>2982 (100)</td>
<td>3257 (100)</td>
<td>3330 (100)</td>
<td>3328 (100)</td>
<td>3411 (100)</td>
<td>3594 (100)</td>
<td>3613 (100)</td>
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Table 2: Percentage of Output Value by Ownership (1993-1999)

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<tr>
<td>State-owned enterprises: %</td>
<td>63.35</td>
<td>60.20</td>
<td>57.04</td>
<td>50.34</td>
<td>40.50</td>
<td>40.75</td>
<td>36.09</td>
</tr>
<tr>
<td>Collective-owned enterprises: %</td>
<td>14.77</td>
<td>15.34</td>
<td>13.75</td>
<td>13.21</td>
<td>13.31</td>
<td>12.13</td>
<td>9.63</td>
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<tr>
<td>Foreign-investment enterprises: %</td>
<td>11.99</td>
<td>12.39</td>
<td>16.92</td>
<td>17.76</td>
<td>23.60</td>
<td>17.31</td>
<td>18.83</td>
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<td>Stock-ownership enterprises: %</td>
<td>0</td>
<td>0</td>
<td>12.69</td>
<td>11.87</td>
<td>15.64</td>
<td>27.11</td>
<td>32.15</td>
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<tr>
<td>Others: %</td>
<td>8.88</td>
<td>12.07</td>
<td>0</td>
<td>9.92</td>
<td>0.96</td>
<td>2.70</td>
<td>2.30</td>
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<tr>
<td>Total: %</td>
<td>100</td>
<td>100</td>
<td>100</td>
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The trend of output value by ownership from 1993 to 1999 is shown in Chart 2.