

Country Scan



Singapore



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Pharmaceutical Industry Insight on Singapore

COUNTRY OVERVIEW

Singapore, one of the world's most prosperous countries with strong international trading links, is located in the Southeastern Asian islands between Malaysia and Indonesia. It was founded as a British trading colony in 1819, later joined the Malaysian Federation in 1963 but after two years separated and became independent. It's strategic location on major sea lanes and industrious population has given an economic importance in Southeast Asia against its small size. In terms of per capita GDP it is equal to that of the leading nations of Western Europe being slightly more than 3.5 times the size of Washington, DC.



It spreads across 692.7 sq km having 193 km of coastline. The weather can be described as tropical; it's hot, humid and rainy. It has got two distinct monsoon seasons Northeastern monsoon from December to March and Southwestern monsoon from June to September. The population is growing at 1.71 per cent with a size of around 4,353,893. The major ethnic groups residing here are Chinese (76.7%), Malay (14%), Indian (7.9%) and others (1.4%). The official languages are Chinese, Tamil and English apart from Malay which is official as well as national language. It is a parliamentary republic with the conventional full name as Republic of Singapore.

ECONOMY-OVERVIEW

VITAL FACTS: SINGAPORE

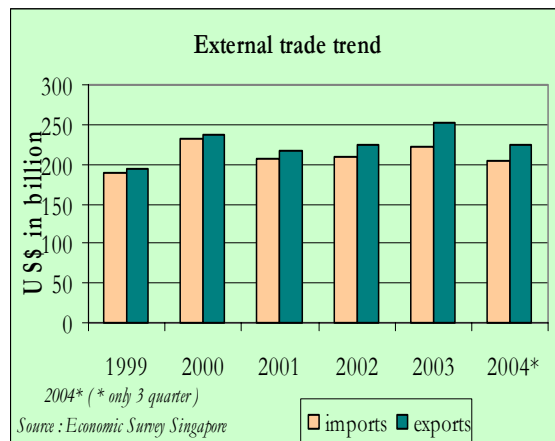
Area	692.7 sq km
Population	4,353,893
Population growth rate	1.71%
Birth Rate	9.63 per 1,000
Death Rate	4.05 per 1000
Net migration rate	11.53 per 1000
Literacy rate	92.5%
Government	Republic
Capital City	Singapore
GDP per capita	US\$23,700 (2004)
Real GDP growth	1.1%
Inflation rate	0.5%
Currency	Singapore dollar (SGD)
Exchange Rate	1.632 per USD
Fiscal year	1 April - 31 March

Source: www.CIA.gov

Singapore has been declared the best managed city by a global property consultancy Jones Lang LaSalle. Singapore has a highly developed and successful free market economy which gives a corruption free environment and stable prices. It is proud to have fifth highest per capita GDP in the world. Services contribute above 67 per cent and industries contribute around 32 per cent to the economy. The economy is highly dependent on exports especially that of electronics and manufacturing goods, though the existing industries are electronics, chemicals, financial services, oil drilling equipment, petroleum refining, rubber processing and rubber products, processed food and beverages, ship repair, offshore platform construction and life sciences. It is learned that manufacturing and financial/business services are two driving engines of the Singapore economy and accounted for 26 per cent and 63 per cent respectively, of GDP in 2003. Singapore is recognized as one of the most competitive economies in the world, where more than 10,000 trading companies use it as their distribution point for markets in the Asia-Pacific. In addition, more than 5,000 foreign companies (including many of the Global 500) also use Singapore as their Asia Pacific Base.

EXPORT & IMPORT

It is a major trading country whose exports and imports each generally exceed its GDP. The items that are primarily exported include machinery and equipment (including electronics), consumer goods, chemicals, mineral fuels with the total export figure touching nearly US\$142.4 billion. The major export partners are Malaysia (15.8%), US (14.3%), Hong Kong (10%), China (7%), Japan (6.7%), Taiwan (4.7%), Thailand (4.3%), South Korea (4.2%) according to 2003 statistics. The items that are imported are machinery and



equipment, mineral fuels, chemicals, foodstuffs with an import size is of around US\$121.6 billion. The import partners in 2003 were Malaysia (16.8%), US (14.1%), Japan (12%), China (8.7%), Taiwan (5.1%), Thailand (4.3%). Malaysia is Singapore's main import source, as well as its largest export market, absorbing 16 per cent of Singapore's exports, closely followed by United States. In 2002 re-exports was accounted for 47 per cent of Singapore's total sales to other countries.

The imports and exports of Singapore are very high. It is one of the world's greatest commercial centers, with a large, modern port. The government promotes high levels of savings and investment through a mandatory savings scheme and spends heavily on education and technology. With economic prosperity and globalization, the country is positioning itself as the region's financial and high-tech hub. The economy weathered in 1997 regional financial crisis but managed a growth rate of 9.4 per cent for 2000. But then economic recession in United States, Japan, and the European Union, as well as the worldwide electronics slump, pulled the GDP down. Again it rebounded in 2002, certainly registering a lower (0%-1%) growth in 2003, given the effect of Severe Acute

Respiratory Syndrome (SARS) in the first half of the year and continued weakness in the export sector. Singapore has signed a free-trade agreement with the United States in 2003. With more than 300 factories and deepwater wharves, the Jurong Industrial Estate of Singapore is the Southeast Asia's largest industrial complex.

The government's efforts to diversify the export base and diminish an excessive reliance on electronics are bearing fruit. Non-electronic domestic exports have grown strongly since 2002 registering a growth of 32 per cent in nominal terms in 2003. Domestic exports of chemicals, including pharmaceuticals and petrochemicals, increased by an impressive 77 per cent year on year (YoY) in nominal terms between 2002 and 2003; between 2001 and 2002, domestic exports of chemicals rose 27 per cent. Disaggregated, the data for domestic exports of pharmaceuticals alone is even more impressive, up 167 per cent in nominal terms in first half of 2003 over first half of 2002. Most of Singapore's pharmaceutical exports are intermediate products.

While the success of financial service sector has catapulted it to a very successful commercial hub, it has made Singapore vulnerable. Despite strict laws and enforcement, it is to be used as a transit point for Golden Triangle heroin and as a venue for money laundering. Apart from that, the increasing importance of China in manufacturing and finance, however, is seen as a threat to Singapore's future economic growth.

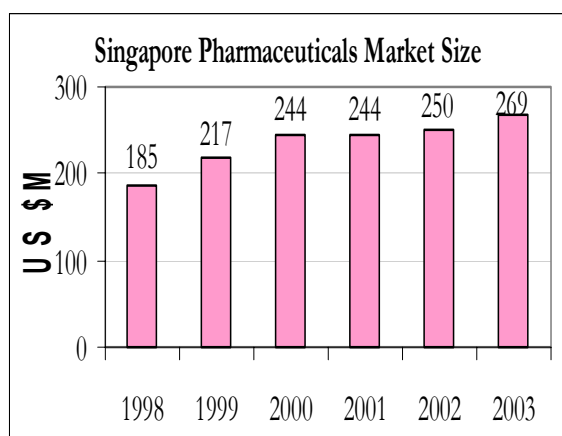
PHARMACEUTICALS INDUSTRY

The pharmaceutical industry in Singapore may have taken the first step way back in 1970s but in the last five years since 1999 it has come into limelight contributing highly to economy and poised to become Biomedical Science hub of Asia. Singapore's total biomedical manufacturing output has recorded above 8 per cent of growth rate in 2003 over 2002's US\$5.61 billion. Biomedical includes basic and clinical research, clinical development, products and process development and manufacturing of pharmaceuticals and biotech apart from healthcare services. The biomedical sciences industry has shown a great potential and has generated revenues of around US\$5.6 billion during 2002, recording 16 per cent growth on the previous year. Within this sector,

pharmaceutical manufacturing contributes around 85 per cent of total sector output.

PHARMACEUTICAL MARKET

Singapore's pharmaceutical market was worth an estimated US\$460 million (m) in 2002, according to Espicom Business Intelligence, a UK-based market research firm. It is estimated to be around US\$520 million by end of 2003.



Source: Cygnus Research,
Figures are as per the Ex-manufacturers prices

(The figures that are given in the adjacent chart are of market size as per EX-Manufacturers prices). Also according to Espicom, the US, the UK and Belgium are the main export markets. Other key markets are Malaysia, Thailand, and Taiwan. Switzerland and the US are the main suppliers of pharmaceuticals and related products. According to the Economic Development Board, non-oil domestic exports of medical and pharmaceutical products totaled more than US\$5 billion in 2003. It is considered that pharmaceuticals and semiconductor are among the fastest growing industries.

The Center for Pharmaceutical Administration (CPA) authorizes the production and import of all pharmaceutical products on the basis of quality, safety and effectiveness. No import taxes or duties are imposed on imports of pharmaceutical products. The Ministry of Health purchases all pharmaceutical drugs for public hospitals through the CPA. Local distributors act as the main distribution channels, either on their own behalf or on the behalf of foreign companies.

OTC MARKET

All public hospitals are required to use generic products. As a result, the market for branded drugs is restricted. Total sales of over-the-counter (OTC) drugs amounted to an estimated US\$139 million in 2002, down marginally from US\$141 million in 2001. The decline mainly reflected reduced expenditure on advertising and promotion by manufacturers and reduced expenditure on health products by people owing largely to a weak economy, which removed demand for non-essential products and services. Anecdotal evidence suggests that the market grew in 2003 owing to health fears relating to SARS.

Major Pharmaceutical Products in the Market			
Brand	Active Pharmaceutical Ingredient	Therapeutic Indication	Manufacturer
Lipitor	Atorvastatin	Cholesterol lowering agent	Pfizer
Zocor	Simvastatin	Cholesterol lowering agent	Merck
Norvasc	Amlodipine	AntiHypertensive	Pfizer
Losec	Omeprazole	Proton Pump Inhibitor	Astra Zeneca
Eporex	Erythropoietin	Erythropoietin Stimulant	Janssen
Taxol	Paclitaxel	Anti-Cancer	BMS
Augmentin	Amoxicillin	Antibiotic	GSK
Albutein		Hematology	Green Cross
Rocephin	Ceftriaxone	Antibiotic	Roche
Ciprobay	Ciprofloxacin	Antibiotic	Bayer
Plaviix	Clopidogrel Bisulfate	Platelet Aggregation Inhibitor / Hyper Tension	BMS
Viagra	Sildenafil	Urology	Pfizer
Fosamax	Allendronate sodium	Osteoporosis	Merck
Simvor	Simvastatin	Cholesterol Lowering agent	Ranbaxy
Iressa	Gefitinib	Anti-Cancer	Astra Zeneca
Sandimmun		Immuno-Suppressive agent	
Neoral	Cyclosporin		Novartis

Source: Cygnus Research

But in 2003, OTC healthcare in Singapore registered a moderate growth of close to 6 per cent in terms of value. Singaporeans were more inclined towards preventative healthcare through their eating habits, indulging in health supplements to combat SARS and exercising for long term healthcare cost containment. However, with the exception of vitamins and dietary supplements, manufacturers generally tended to be low-key with few new products and little promotion.

Vitamins and dietary supplements experienced robust growth in 2003 but was somewhat negated, eventually. The catalyst for the stellar growth was largely driven by supplements which promoted well-being and immunity boosting as these products were snapped up by Singaporeans due to SARS. Consequently, vitamins and dietary supplements became the star savior in the otherwise bleak OTC healthcare industry. However, the limelight was short-lived. Vitamins and dietary supplements were placed under scrutiny by the public and the local health authority with the malpractice of contract drug manufacturer, Pan Pharmaceuticals, resulting in the recall of many brands. After this, vitamins and dietary supplements faced an uphill challenge with reversed fortunes amongst the leading players.

The impetus for the growing importance of private labels in Singapore is largely due to the price factor due to adverse economic conditions. In addition, Singaporeans saw no additional incentives in the use of branded products since the quality of private labels is on par with the branded products at a relatively lower price.

Future growth slows with unit price declines and uncertain economy. Growth of OTC healthcare in Singapore is expected to generally remain slow over the forecast period with a compound annual growth rate (CAGR) of about 3 per cent expected in constant value terms. OTC healthcare in Singapore will continue to be highly fragmented with many players; where none of them will be in a position to dominate. Retail competition for OTC healthcare in Singapore is expected to intensify as the major retail chains continue to have higher bargaining power over the manufacturers and distributors leading to a drop in unit prices. Additionally,

manufacturers are likely to stay relatively low-key in terms of advertising and promotion.

Moreover, uncertainties in the economy and the fear of SARS' return will continue to trigger consumers in Singapore to exercise caution in spending money unnecessarily on medical products; on eating healthy and keeping sickness at bay.

The Pharmaceuticals sector holds a prospect on account of higher foreign investments by multinational players coupled with policy and legislative steps by government to encourage pharmaceutical and bio-tech companies. After the 2001 slowdown of the US economy bringing down demand for electronics, from 2002 onwards things improved and in order to widen the Singapore's economic base through new growth areas, the government has taken policy and legislative steps to encourage pharmaceutical and bio-tech companies to settle there. Funds worth US\$1.7 billion have been poured in universities and research centers as growth pills for these sectors. So a favorable environment is expected for these sectors. Hence forth many multinational companies have made their move towards Singapore recently and heavy inflow of investments is observed.

Factors attracting foreign investments in Biomedical Sector

1. Infrastructure which supports advanced technology, manufacturing, and R&D activities
2. Pool of educated and skilled human capital
3. Effective enforcement of intellectual property rights and patent laws
4. Liberal legislation for human stem cell research activity and therapeutic cloning
5. Single regulatory agency as Health Sciences Authority
6. Substantial venture capital and financing sector, including investment funds dedicated to biomedical sector
7. Attractive fiscal and other investment incentives which have included zero corporate income tax for 10-15 years

R&D ENVIRONMENT

The increasing interest of multinationals especially in R&D has given Singapore an upcoming R&D hub status. There are several

factors that have attracted the multinational pharma majors to Singapore, but the most important of them are the government's attempts in providing a suitable environment for investment especially in R&D. The foreign investments have fuelled the growth of these sectors recently. The foreign majors that have started operations here are Pfizer, Merck, Aventis, Eli Lilly, Wyeth, Roche, and Schering-Plough. Among all attempts a major one was taken by Novartis in partnership with the government's Economic Development Board (EDB) in opening a research institute that would focus on tropical diseases.

Singapore's environment for R&D in the biomedical sciences has been recognized by the international pharmaceutical industry and a number of multinational companies have established themselves in the country. The Singapore Economic Development Board (EDB) has encouraged the presence of foreign companies and provides advice and guidance to market entrants.

Biopolis

The much talked about is Biopolis research center that was opened in late 2003 by government. It cost above US\$310 million to build and hold a capacity for 2,000 researchers. It is for providing local companies, start-ups and major companies a vibrant atmosphere for collaboration and innovation apart from attracting foreign companies to Singapore. The EDB is running various funding schemes to encourage researchers to commercialize their ideas.

Biopolis cost \$500 million (local currency – Singapore dollars) to build. It features local companies, start-ups and major companies, which would create a vibrant atmosphere for collaboration and innovation and attract major companies. Singapore is keen to develop local enterprises and the EDB is running various funding schemes to encourage researchers to commercialize their ideas for the market.

A high profile investment in Biopolis was the Novartis Institute for Tropical Diseases (NITD), which opened in July 2004. Research at the NITD will focus on neglected diseases with initial work being concentrated on dengue fever and drug resistant tuberculosis (TB). The center is a welcome step forward into research for these diseases as the pharmaceutical industry has

often been criticized in the past for having paid little attention to innovative R&D in these fields. The NITD is a public-private partnership. In this case it has been set up between Novartis and the Singapore EDB. NITD has set itself the ambitious target of advancing at least two compounds to clinical trials by 2008 and making subsequent treatments available to patients by 2013. Novartis has committed itself to making these treatments available on a non-profit basis to countries where these neglected diseases are endemic.

Apart from discovery R&D, a number of companies are carrying out clinical development in Singapore and using it as a base for overseeing studies being carried out in neighboring areas. AstraZeneca, Aventis, GlaxoSmithKline, Merck & Co, Novartis and Schering-Plough have all followed this approach. In 2003, Bristol-Myers Squibb designated Singapore as a hub for coordinating and managing its clinical studies in the entire Asia Pacific region and Novo Nordisk is also using a similar strategy for the clinical development of its new diabetes care products in the region.

Eli Lilly recognized the potential of Singapore for clinical development in 1996 when it set up the Lilly-NUS Center for Clinical Pharmacology, which became operational the following year. It is a joint venture between Eli Lilly, the National University of Singapore (NUS), and the Agency for Science, Technology and Research and represents the company's only clinical pharmacology unit outside the USA with specialized facilities for conducting clinical trials with new pharmaceutical agents. A particular interest of the unit is exploring interesting issues in human beings.

The government has also nurtured the growth of domestic companies in the sector which initially benefited from the strong economic and regulatory environment and are now benefiting from the influx of foreign investment.

THERAPEUTIC SEGMENTS

Singapore has very high standard of public health. It is one of the two South-East Asian countries who are recognized by the World Health Organization as having eradicated malaria, the other country being Brunei Darussalam. Due to higher living standards and

better health management incidences of food-related illnesses, such as cholera and typhoid fever, are very less. According to Ministry of Environment and Water Resources of Singapore in 2003, there was only 1 local case of cholera and 3 local cases of typhoid. As Singapore is an open city and is situated in a region that is endemic for various tropical diseases such as dengue fever, malaria and other environment-related illnesses, it is highly prone to these diseases. Again high traffic through ports mutable diseases are expected to increase. Singapore faces the threat posed by Nipah virus encephalitis and SARS apart from the old infectious diseases.

A very high rate of myopia in children is observed in Singapore. According to The Ministry of Health's State of Health Report 2001 myopia is the leading eye disease in Singapore and among the highest in the World. As such HIV, Oncology, Tuberculosis, CVS are considered to be major therapeutic segments in Singapore. There is an increase in number of HIV infected. An epidemiological transition in Singapore from infectious to chronic, non-communicable diseases is observed on account of rapid socio economic development. No communicable diseases are emerging particularly with changing conditions with rapid industrialization in Singapore

Today cancers and cardiovascular diseases are accounting for more than 60 per cent of all deaths where as in 1950s and 1960s an infectious disease like tuberculosis and gastroenteritis were the major causes of death in Singapore. In 2000, cancer accounts for 27 per cent of total death compared to 20 per cent in eighties and 7 per cent in 1960s. (Cancer is the main cause of death, accounting for 26% of all deaths in 2003. Heart diseases, pneumonia and cerebrovascular diseases are also common problems.) Pneumonia used to be highest death cause with 9 per cent in 1960s but now has been superceded by cancer (27%) and Ischaemic and other heart diseases (25%). Among all the cancers breast cancer is the leading cause of cancer deaths among Singapore women. Study says Singapore women are not well-informed about the disease.

In 2000, Singapore registered a death rate of 76 per 100,000 from cardiovascular problem whilst the average death rate of other developed countries was 58 per 100,000. The higher

mortality from ischaemic heart disease found in Singaporean can be explained by lower high density lipoprotein cholesterol and higher rates of diabetes.

With higher standards of living more and more life style diseases are expected to be registered. Problems like obesity have shown an increasing trend on account of physical inactivity and excessive diet. According to a survey by The Ministry of Health, only 14 per cent of the adult population exercised regularly in 1992 and 5 per cent were obese with Body Mass Index (BMI). The prevalence of hypertension and high total cholesterol has increased despite the national effort to promote a healthy lifestyle. Life style diseases like cardio and Diabetes have gone up but with the efforts by government in conducting healthier lifestyle programs have controlled the rate up to a certain extent.

Government has taken initiatives for a healthier Singapore where there are attempts taken to spread awareness for better and healthier life style and preventive measures for certain diseases. Among the attempts by government Singapore signed the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) on December 29, 2003. The Ministry of the Environment in Singapore operates a well established program of epidemiological surveillance to monitor continuously any outbreaks of infectious disease.

HEALTHCARE SERVICES MARKET

Among these sectors healthcare is very advanced in Singapore which is comparable to that of other industrialized nations. According to the World Health Organization (WHO), Singapore is ranked among top ten countries based on the overall health survey of countries. Japan and Singapore are only two Asian countries comparable to the healthcare systems and facilities of most developed countries. Singapore's medical savings plan, subsidies for low-income patients and greater autonomy in the management of public hospitals contribute for this. State owned hospitals account for 70 per cent of the total number of hospital beds in Singapore.

Singapore is renowned for its role as the healthcare hub for the region, attracting patients from Malaysia, Brunei, Indonesia, Thailand and the Philippines. Singapore is able to provide a

very high level of medical services at a relatively low cost compared to other developed countries. The new statutory board set up, under the Health Ministry from 2001, called The Health Promotion Board (HPB). It provides framework for greater focus on major health problems and spearhead health education, promotion and preventive programs. The Singapore healthcare service division targets 1 million foreign patients annually and US\$2.6 billion of value-add and 1 per cent of GDP contribution by 2012. (*Refer Health care Statistics in Annexure; Page 24)

That Singapore has one of the most mature healthcare industries in South-east Asia is evident from its efficient and well-developed infrastructure, a highly educated population and local technological expertise. Healthcare standards are high in the country. The life expectancy at birth was an estimated 81.4 years in 2003, compared with 81.3 years in 2002. For males, it was an estimated 78.9 years in 2003, and 84.2 years for females. The rate of infant mortality stood at an estimated 3.4 per 1,000 live births in 2003 from 3.5 per 1,000 live births in 2001.

Total expenditure on healthcare as a percentage of GDP was an estimated 3.9 per cent in 2003. Singapore ranked 25th in UN Development Programme's Human Development Index in 2002. This is well above Malaysia and Indonesia, which ranked 59th and 111th, respectively. According to the Ministry of Health, government expenditure on healthcare per head was an estimated S\$584 (US\$346) in 2003, which is high when compared with other Asian countries (excluding Japan).

Hospitals in the Public Sector	
Hospital	No. of Beds
Woodbridge Hospital	2425
National University Hospital	957
Singapore General Hospital	1394
Total inclusive of others	8831

Source: Hospital websites Ministry of Health.

The health sector comprised 29 hospitals in 2003, with 13 in the public sector and 16 in the private sector, according to the Ministry of Health. Total capacity of these hospitals in 2003 was 11,855 beds. The public sector is more important than the data suggest—although there are fewer public hospitals, their average size is

greater than that of hospitals in the private sector. The number of doctors per 1,000 people was an estimated 1.6 in 2003.

Woodbridge Hospital is the largest hospital in the public sector, with a capacity of 2,425 beds in 2003. Singapore General Hospital is the second largest public hospital, with a capacity of 1,394 beds. Other hospitals include the Kandang Kerbau Hospital, which specializes in caring for women and infants.

Hospitals in the Private Sector	
Hospital	No. of Beds
Mt Elizabeth Hospital	505
Gleneagles Hospital	328
Ren Ci Hospital	303
St. Luke's Hospital for the Elderly	224
Total	2242

Source: Hospital websites Ministry of Health.

The private sector accounts for nearly 80 per cent of all primary healthcare services, with government primary health clinics accounting for the remaining share. The government subsidizes 50 per cent of the treatment cost at public-sector clinics. Mt Elizabeth Hospital is the largest hospital in the private sector, accounting for 23.1 per cent of the total capacity of private-sector hospitals in 2000 (latest available figures). Gleneagles is the second-largest private-sector hospital, accounting for 15 per cent of the capacity of private-sector hospitals in that year.

Expensive medical treatments, including non-essential cosmetic treatments, are not available in public hospitals. The Ministry of Health determines the charges for any kind of medical treatment. The government introduced the Casemix system of funding in public hospitals in 2000, under which funds are distributed according to the difficulty and type of medical condition treated, and the frequency of occurrence of medical condition.

There was a total of 3.57 lakh hospital admissions in 2003, of which 2.71 lakh were in the public sector, according to the Ministry of Health. Cancer is the main cause of death, accounting for 26 per cent of all deaths in 2003. Heart diseases, pneumonia and cerebrovascular diseases are also common problems.

Medical Insurance Schemes: The government's three main insurance schemes are Medisave, Medishield and Medifund. These

ensure that patients are able to bear part of the cost of treatment. The three government schemes have 2 mn members, whereas the Private Medical Insurance Scheme, which allows private insurers to offer medical insurance to Central Provident Fund members and is similar to that offered under MediShield, has around 5 lakh members.

The spread of the SARS virus in 2003 was effectively dealt with by the healthcare system. In March and April 2003 about 200 people were infected by SARS in Singapore, of which 23 died. In response to the SARS outbreak, the government quickly introduced strict quarantine regulations and close monitoring of international travelers at Singapore's border points. The system that was put in place will, it is hoped, contain the virus should it reappear.

Distributors: Leading distributors of pharmaceutical products include two local companies, Apotheca Marketing and Inchcape Healthcare. Apotheca is a distributor of finished pharmaceutical products, both generic as well as branded pharmaceutical raw materials and medical equipment. Besides Singapore, it has offices in China, Malaysia and Papua New Guinea. It also has associates in Vietnam, Indonesia, Myanmar, the Philippines and Thailand. Inchcape Healthcare distributes pharmaceutical products and medical equipment in the Asia region.

Medical devices market is another segment which moves in tandem with the increasing healthcare services and promotion of research. In 2000, Singapore's total market size for medical devices was estimated to be US\$297 million. The new regulation for medical devices has given an impetus to this sector.

(N.B: #Major Pharmaceutical Manufacturers & Wholesalers list is in Annexure; Page: 25)

MAJOR PLAYERS

There were around 20 domestic manufacturers of pharmaceutical products in 2003. Singapore is increasingly becoming a base for foreign companies that are setting up production plants—six of the world's biggest pharmaceutical firms have large operations in the country. The development of the pharmaceutical industry has been encouraged by the government in recent years in order to

Multi-National companies

1. Schering – Plough
2. Glaxo Smith Kline
3. Sanofi -Aventis
4. Wyeth Pharmaceuticals
5. Merck
6. Pfizer
7. Baxter Healthcare
8. Roche

reduce the country's reliance on electronics products as the main source of growth for exports and manufacturing. The success of this strategy has been evident since 2001 as headline manufacturing and export figures have been boosted by exports of pharmaceutical products. Output has, however, been volatile, reflecting the fact that domestic production is driven by large one-off orders overseas and as plants sit idle during maintenance or when the product mix is changed (rather than a continuous or smooth demand cycle, which is more common in the electronics industry).

The government aims to have at least ten foreign pharmaceutical companies with investments in manufacturing facilities in the country by 2010. To encourage inward investment in the industry, the government has developed lucrative tax breaks, grants and strong administrative support. The government also launched the Asia-Pacific Economic Co-operation (APEC) Co-ordinating Centre for Good Clinical Practice in April 1996, which was given the task of constructing a common framework for assessing medicines sold throughout South-east Asia.

A number of foreign companies have a presence in the industry. These include three US-based companies, Schering-Plough, Merck Sharp & Dohme and Pfizer, as well as Aventis of France and GlaxoSmithKline of the UK. The local manufacturing facilities of such foreign companies reflect the government's attempts to build an export-based pharmaceutical products industry. The prominent role this industry has played in supporting manufacturing and exports over the last few years suggests that the government's efforts have so far been fruitful.

Drug Houses of Australia is one of the key domestic manufacturers of pharmaceutical products. It is a subsidiary of Haw Par Brothers Healthcare Limited, a Singapore-based diversified conglomerate. The company

produces generic drugs and supplies to the domestic market as well as Malaysia, Hong

Kong and the Philippines. It exported almost 40 per cent of its pharmaceutical products in 2003.

Pharmaceutical Companies			
S.No	Pharmaceutical Products	S.No	Pharmaceutical Products
1	Capmar Machinery Pte Ltd	81	Lundbeck Export A/S
2	Abbott Laboratories (Singapore) Private Limited	82	MDS Pharma Services Central Lab Pte Ltd
3	Akzo Nobel Surface Chemistry Pte Ltd	83	Medi Link Pte Ltd
4	Albemarle Asia Pacific Co	84	Medimex Singapore Pte Ltd
5	Alpha Therapeutic Asia Pte Ltd	85	MediPearl Pte Ltd
6	Americhlor Technologies	86	MediPharm Pte Ltd
7	Apotheca Marketing Pte Ltd	87	Memiontec Pte Ltd
8	Asiagate Holdings Pte Ltd	88	Merck Sharp & Dohme (I A) Corp.
9	Asian International	89	Merck Sharp & Dohme (Singapore) Ltd.
10	AstraZeneca Singapore Pte Ltd	90	Merck Sharp & Dohme Asia Pacific Services Pte Ltd
11	Aventis Pharma International SA Representative Office	91	MerLion Pharmaceuticals Pte. Ltd.
12	Aventis Pharma Manufacturing Pte Ltd	92	Ming Chemical Pte Ltd
13	Aventis Pharma Pte Ltd	93	Nagase Singapore (Pte) Ltd.
14	Beacons Pharmaceuticals Pte. Ltd.	94	Nardev Chemie Pte Ltd
15	Biomed Pte Ltd	95	Novartis (Singapore) Pte Ltd
16	Boehringer Ingelheim International	96	Novartis Institute For Tropical Diseases Pte Ltd
17	Borregaard S.E.A. Pte Ltd	97	Novartis Nutrition Singapore Pte Ltd
18	Bright Chemicals (Singapore) Pte Ltd	98	Novo Nordisk (Asia Pacific) Pte Ltd
19	Bright Evergreen Pte Ltd	99	Novo Nordisk Pharma (Singapore) Pte Ltd
20	Bristol-Myers Squibb (Singapore) Pte. Ltd.	100	Okeanos Trading Co
21	Chemapol Asia Pte Ltd	101	Orient Europharma Pte Ltd
22	Chemical Industries (Far East) Limited	102	Paradigm Therapeutics Singapore Pte Ltd
23	Chemigran Industrial (S) Pte Ltd	103	Peer Chemical & Metallurgy Pte Ltd
24	CK Witco Asia Pacific Pte Ltd	104	Pfizer Asia Pacific Pte Ltd
25	Colorcon Asia Pacific Pte Ltd	105	Pfizer Private Limited
26	Commercial Supplies (Far East) Pte Ltd	106	Pharmacia Inter-American Corporation
27	Connell Brothers Co (Singapore) Pte Ltd	107	Pharmacia Singapore Pte Ltd
28	Croda Singapore Pte Ltd	108	Pharmaforte Singapore Pte Ltd
29	Cutter-Teng Consultancy Pte Ltd	109	Pharmatic Trading
30	DAC Pharmedlab Pte Ltd	110	Pierre Fabre Medicament
31	Dade Behring Asia Pte Ltd	111	Polymedic Trading Enterprise Pte Ltd
32	Derek Marketing Pte Ltd	112	Premier Petmchemic
33	Diethelm Keller Property & Investment Pte. Ltd.	113	Prime Products Pte Ltd
34	Drug Houses Of Australia (Asia) Pte Ltd	114	Protek Chemicals & Engineering Pte Ltd
35	Du Pont Company (Singapore) Pte. Ltd.	115	Reckitt Benckiser (Singapore) Pte Ltd
36	DuPont Dow Elastomers Pte Limited	116	Redox Chemical Pte Ltd
37	Easy Screen Pte Ltd	117	Retimos Systems Pte Ltd
38	Ecogreen Oleochemicals (Singapore) Pte Ltd	118	Rimir Enterprise
39	Eli Lilly (Singapore) Pte Ltd	119	RMC Ueberseehandel (S) Pte Ltd

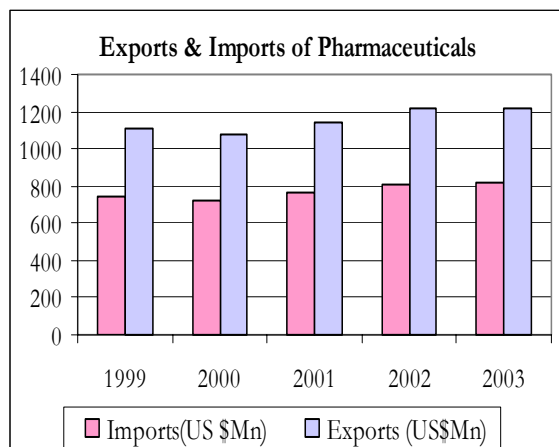
Pharmaceutical Companies			
S.No	Pharmaceutical Products	S.No	Pharmaceutical Products
40	Eli Lilly Asia Pacific Pte Ltd	120	S.C. Johnson & Son Private Limited
41	Emerging Pharma (S) Pte Ltd	121	S.G.S. Singapore (Pte) Ltd
42	Excelsia Pharma-Tech Pte Ltd	122	Satim Pharmacare Pte Ltd
43	Faulding Pharmaceuticals (SEA) Pte Ltd	123	Schering-Plough Ltd
44	Fournier Pharma	124	Schweizerhall Pte Ltd
45	FP Marketing (S) Pte Ltd	125	Seaward Chemicals Pte Ltd
46	Fresenius Pharma Asia Pacific	126	Sematec Pte Ltd
47	FRP Services Asia Pte Ltd	127	Servier (S) Pte Ltd
48	G-Chem Singapore Pte Ltd	128	Shell Singapore Chemicals (Pte) Ltd
49	Genencor International Asia Pacific Pte Ltd	129	Sineximco Pte Ltd
50	Glaxo Far East Pte Ltd	130	Sino Chemical Company (Pte) Limited
51	Glaxo Wellcome Manufacturing Pte Ltd	131	Smith Kline & French Overseas Co
52	GlaxoSmithKline Pte Ltd	132	SmithKline Beecham Pharmaceuticals
53	Glosel Singapore Pte Ltd	133	Star Asia Far East (Singapore) Pte Ltd
54	Grafton Pharmasia Pte Ltd	134	Steril Medical Supplies Pte Ltd
55	Great Pacific Import Export	135	Summit Chemicals Asia Pte Ltd
56	Grifols International S.A.	136	Summit Company (Singapore) Private Limited
57	Hawk Petroleum Pte Ltd	137	Sunward Pharmaceutical Private Limited
58	Hyphens Marketing & Technical Services Pte Ltd	138	Tai Thong Hung Industrial Chemicals Private Limited
59	Inabata Singapore (Pte.) Ltd.	139	Teva Pharmaceutical Pte Ltd
60	Innovative Biotech Pte Ltd	140	The Sandpipers (Sales & Marketing) Singapore
61	Integrated Contract Manufacturing Pte. Ltd.	141	Thiam Joo Private Limited
62	Inventa Technologies (S) Pte Ltd	142	Three Rifles Medical (S) Manufactory
63	ISP (S) Pte Ltd	143	UCB Singapore Pte Ltd
64	ISP Asia Pacific Pte Ltd	144	Uni Drug House
65	Jacobs Engineering Singapore Pte Ltd	145	Union Chemical & Pharmaceutical (Pte) Ltd
66	JDH Pharmaceutical Division	146	Value Healthcare Pte Ltd
67	Jelen Supplies & Services	147	Vanda Pharmaceuticals
68	Johnson & Johnson Pte Ltd	148	Victory Chemical Pte Ltd
69	Jungbunzlauer Singapore Pte Ltd	149	Viro Chemicals
70	K C Pte Ltd	150	Wah Joo Seng International Trading Pte Ltd
71	Kaneka Singapore Co (Pte) Ltd	151	West Pharmaceutical Services Singapore Pte. Ltd.
72	Kanto Kagaku Singapore Pte Ltd	152	Win-Kon (Singapore) Pte Ltd
73	Kao (Southeast Asia) Pte Ltd	153	Wyeth (Singapore) Pte. Limited
74	Karellech Pte Ltd	154	Wyeth Pharmaceuticals (Singapore) Pte. Ltd.
75	Kaybee Exim Pte Ltd	155	Yeap Medical Supplies Pte. Ltd.
76	Kemimac (S) Pte Ltd	156	Yukin Pte Ltd
77	Kirsch Pharma Asia Pacific Pte Ltd	157	Yung Shin Pharmaceutical (Singapore) Pte Ltd
78	Kvaerner E&C Singapore Pte Ltd	158	Zeneca Pharma (S) Pte Ltd
79	Loyal Maintenance Services	159	Zuellig Pharma Pte. Ltd.
80	Luen Wah Medical Co (S) Pte Ltd	160	Zyfas Medical Co

Companies of Pharmaceutical Intermediates

S.No	Pharmaceutical Intermediates
1	Abbott Laboratories (Singapore) Private Limited
2	Assiagate Holdings Pte Ltd
3	Boehringer Ingelheim International
4	Bright Evergreen Pte Ltd
5	Great Pacific Import Export
6	Grifols International S.A.
7	Hawk Petroleum Pte Ltd
8	Kareliech Pte Ltd
9	Kemimac (S) Pte Ltd
10	MediPharm Pte Ltd
11	Orient Europharma Pte Ltd
12	Pharmaforte Singapore Pte Ltd
13	Satim Pharmacare Pte Ltd
14	Schering-Plough Ltd
15	Summit Company (Singapore) Private Limited

EXPORTS & IMPORTS

Domestic exports of chemicals, including pharmaceuticals and petrochemicals, increased by an impressive 77 per cent YoY in nominal terms between 2002 and 2003; between 2001



Source: www.intracen.org

and 2002, domestic exports of chemicals rose 27 per cent. The pharmaceuticals exports, as shown in the adjacent chart, are captured from international trade center with the classifications of Pharmaceutical excluding Medicaments (542) and Medicaments including Veterinary (541).

In 2003 the domestic imports has increased marginally by US\$10 million while the exports is almost constant at US\$1,213 million in the same period.

REGULATIONS

In the 1960s, the Singapore pharmaceutical market had only few generic manufacturers and the regulations were not in existence. In fact with the development of the industry different steps are taken by the authorities in developing regulations. Later with the entry of Multinational pharma majors into the country, the regulations have been raised to international levels. In 1973, Beecham pharmaceuticals, a UK based company was the first MNC to set up a bulk drug manufacturing plant.

In 1986, the licensing of pharmaceutical manufacturers and the registration of pharmaceutical products came in picture under the framework of the Medicines Act. Even in the process of adhering to the international standards and practices a GMP unit was established with in Ministry of Health (MOH) in 1997. Followed by this, in 1999 the licensing of Chinese Proprietary Medicines (CPM) also began. Later in 2001, the Health Science Authority (HSA) was established as a statutory board to MOH. The scope of body is very wide with 8 professional centers under it. The professional centers are

1. CPA (Center for Pharmaceuticals Administration)
2. CAS (Center for Analytical Science)
3. CDE (Center for Drug Evaluations)
4. CFM (Center for Forensic Medicines)
5. CFS (Center for Forensic Science)
6. CMDR (Center for Medical Devices Regulations)
7. CRP (Center for Radiation Protections)
8. CTM (Center for Transfusion Medicines)

CPA administers the regulation of drugs and health related products. It has four arms namely, (a) Manufacturing and Quality Audit (b) Product Evaluation and Registration (c) Compliance and Complementary Medicines (d) Pharmacovigilance, communications and Research Division

(a) Manufacturing and Quality Audit, has got three units. The GMP unit ensures the GMP practices by audit, licensing of manufacturers products. The GDP unit audits and does the licensing of importers, wholesale dealers and retail and hospital pharmacies. Its Certification unit processes and grants certificates of product, export certificates and GMP certificates.

The GMP inspection system of Singapore follows international practice of Pharmaceutical Inspections Co-operation Scheme (PIC/S). The system has followed the PIC/s guide for finished medical products as its GMP standards. For API it has followed the guide for PIC/s guide GMP guide for API as standard.

PHARMACEUTICAL LICENSING

According to the Medicines Act, a manufacturer's license is a must for any body to manufacture or assemble any registered medicinal product. Again for the grant of manufacturer's license following documents should be submitted by the applicant.

- Proposed manufacturing operations
- Details of the premises
- Equipment details
- Qualifications of the key personnel
- Maintenance of written procedures and records

Apart from that the holder of a manufacturer's license must comply with specified provisions including PIC/S guide for GMP.

HSA has gone step by step in internalizing the global practices in Singapore pharmaceuticals manufacturing standards in particular the generic manufacturing and supply. It is also looking at other product categories to bring in the international practices in these areas.

With the maturing industry many complexities are coming in, and HSA is committed to provide comprehensive regulatory services.

IMPORT & EXPORT

Singapore is virtually a free port with short tariff. The major items that attract duty are petroleum products, liquors, tobacco and motors. Where goods are dutiable, ad valorem or specific rates or a combination of the two valuation methods may be applied. In Singapore, valuation for customs purposes is based on the Brussels Definition of Value (BDV). The basic principle of the BDV is that dutiable value is the normal price or import price of goods at the port or place of importation.

More than 99 per cent of all imports into Singapore enter the country duty-free. The only exceptions are heavy tariffs/taxes on the import

of motor vehicles, liquor, petrol and cigarettes. Import and export could be done freely for most of the items provided you have the permits from Customs and or Singapore Trade development Board. The GST is a multi-stage tax and is collected at every stage of the production and distribution chain. The rate is charged at 3.0 per cent.

For items like pharmaceuticals that are under import or export control, one needs to obtain endorsement or license to import or export.

HEALTH ITEMS REGULATIONS

Vitamins with very high dosages of certain nutrients must be licensed or registered. However, most over-the-counter vitamins and food supplements need not be licensed.

There is also labeling and advertising legislation which applies to the sale of vitamins and supplements. Labeling laws require that:

- 1) The composition of the products be disclosed in English
- 2) Labels/packaging materials must not contain any reference to diseases/conditions as specified in the schedule to the Medicines (Advertisement & Sale) Act; and
- 3) The advertising/sales promotion of the product in the public media be approved by the Centre for Pharmaceutical Administration of the Health Sciences Authority, Ministry of Health.

The Regulations which govern the sale of vitamins and food supplements in Singapore include:

- The Medicines Act 1975
- The Medicines (Advertisement & Sales) Act
- The Medicines (Medical Advertisements) Regulations 1977
- The Sale of Drugs Act and Regulations The Medicines (Labeling) Regulations 1986, and
- The Medicines (Non-medicinal Products) Order 1988
- The Poisons Act
- Misuse of Drugs Regulations
- Sale of Food Act and Regulations

The sale of Vitamin B15 (Pangamic Acid) and Vitamin B17 (Amygdalin) is prohibited under

the Sale of Drugs (Prohibited Drugs) Regulations 1985.

PHARMACEUTICALS IMPORTS REGULATIONS

Prescription drugs and over-the-counter drugs must be registered and approved by the Centre for Pharmaceutical Administration, Health Sciences Authority (Ministry of Health). The Center's Product Evaluation & Registration Division (PERD) is responsible for the registration and licensing of Western medicines, and controls the import of medicinal products into Singapore through the administration of Tradenet.

Labeling Requirements

Labels are required on imported food, drugs, liquors, paints and solvents and must specify the country of origin. Repackaged foods must be labeled to show (in English) the appropriate designation of the food content printed in capital letters at least 1/16 inch high; whether foods are compounded, mixed or blended; the minimum quantity stated in metric net weight or measure; the name and address of the manufacturer or seller; and the country of origin.

A description (in English) of the contents of the package may be added to the face of the label, providing the additional language is not contrary to, or a modification of, any statement on the label. Pictorial illustrations must not mislead about the true nature or origin of the food. Foods having defined standards must be labeled to conform to those standards and be free from added foreign substances.

Special labels are required for certain foods, medicines and goods such as edible and non-edible animal fats as well as paints and solvents. Processed foods and pharmaceuticals must be inspected and approved by the Ministry of Environment's Food Control Department and the Health Sciences Authority. Electrical goods must be checked by Singapore Power before they can be installed, while paints and solvents are the responsibility of the Chief Inspector of Factories, Ministry of Manpower.

Prohibited Imports

Singapore prohibits the import of chewing gum, firecrackers, silencers and other items.

Intellectual Property Rights (IPR)

Singapore adheres to IPR regime which came into effect on February 23, 1995. It met the international compliances with WTO's TRIPS terms before one year of the deadline on 2000. The norms are on par with the international IPR regime. Patent is highly respected and the term of patent is 20 years from the filing date. The authority regulating IPR in Singapore is Intellectual Property Office of Singapore. The Health Science Authority of Singapore provides a comprehensive regulatory framework for the evaluation and marketing approval for all therapeutic products.

Clinical trails

With adoption of IPR agreement Singapore has moved further in clinical trails also in line with the international norms. The Clinical Trials and Epidemiology Research Unit (CTERU) of Singapore is a pivotal research organization that works closely with Singapore's Ministry of Health and clinical groups in Singapore and the Southeast Asian region to encourage pharmaceutical collaborations and support the planning, launch and administration of multi-center studies meeting Good Clinical Practices (GCP).

Medical devices

In Singapore, very few medical devices are subject to mandatory product registration. Among those products that do require registration are radiation-emitting equipment, contact lenses and contact lens care products, HIV test kits, and condoms. For those devices that are not subject to registration, generally all that is required is evidence of approval in the United States, Europe, or Japan – for example, a "Certificate to Foreign Government" from the U.S. FDA or a Certificate of Free Sale.

The Center for Medical Device Regulation (CMDR) is the regulatory center established under HAS to spearhead the administration and development for the regulatory control of medical devices in Singapore. The Center also administers the Contact Lens Practitioners Act through the registration and licensing of contact lens practitioners and the enforcement of the Act and regulations. The medical device regulation, control measures and procedures are implemented in early 2003. CMDR has introduced the voluntary product registration

scheme for higher-risk medical devices. It will serve as an interim measure while transiting to the regulated environment.

HEALTHCARE FINANCING

Singapore has a hybrid healthcare financing framework which is driven by two key principles: individual responsibility and community and government support for those in need. The health care financing framework upholds the principle that individuals must first look at themselves and their immediate family members for the financial resources to pay for the healthcare services they consume. Government subsidies and community support help keep basic healthcare affordable even to those with insufficient means. To help Singaporeans pay for hospitalization expenses, the government introduced the following healthcare financing plans:

1. Medisave: a compulsory savings plan to help individuals save and pay for their healthcare expenditure.
2. MediShield: a catastrophic insurance plan (premiums paid for through Medisave) to help meet the cost of large medical bills.
3. Medifund: a health endowment fund which provides a safety net for the poor and needy.
4. Severe Disability Insurance Scheme: an insurance plan (premiums paid for through Medisave) for disabled elderly people cared for at home using community-based services or home-care services. Medisave is used for hospitalization expenses including surgery fees and out-patient expenses listed under an "approved list" as well as for hospice care, day and convalescent hospitals. Standard out-patient expenses and expenses for cosmetic surgery are not payable under Medisave.

IMPORT AND EXPORT PROCEDURES

Trader Registration

To engage in import, export and transshipment activities in Singapore:

- First register with the Accounting & Corporate Regulatory Authority (ACRA).
- Upon successful registration with ACRA, apply to Singapore Customs for a Central Registration (CR) Number. This CR

Number enables you to submit Import, Export and Transshipment Permit applications through TradeNet. CR Number is processed free of charge.

Permit Requirement

Imports

For imports of all goods (including controlled and non-controlled items) into Singapore,

- Obtain an Import Permit through TradeNet before goods are imported into Singapore
- Subject to the payment of Goods and Services Tax (GST) which is levied at 5 per cent of the CIF (cost, insurance and freight) value at the time of importation.

Import of High-Technology Products

- Certain high-technology products are subject to export control by the exporting country. In this case, the exporter in the exporting country may ask the Singapore importer for an Import Certificate and Delivery Verification (ICDV) from Singapore.
- The Singapore Customs will issue the ICDV if application is in order. The purpose of the ICDV is to ensure that the items are in fact imported into Singapore and are not diverted or re-export to a proscribed destination.

Exports

For exports of goods out of Singapore:

- Obtain an Export Permit through TradeNet within 3 days of export if goods are non-controlled and are exported by sea or air.
- Obtain an Export Permit through TradeNet before goods are exported out of Singapore if goods are controlled or are exported by road and rail.

Products Requiring Export Approvals

Some products are subject to quota restriction or special documentation requirement. Details are explained below:

Textiles & Textile Products

Before exporting textiles and textile products including samples, gifts and souvenir items made from textiles to Canada, EU and the USA, check with the Documentation Specialists Branch of Singapore Customs whether the product is under quota restriction. If it is, ensure

that the registered manufacturer has the required quotas before applying for the relevant Certificate or document for the consignment.

For exports of textiles and textile products of Singapore origin subject to quota restrictions in the EU, one needs to obtain the Export License and the CO for the importers in those markets. For textiles and textile products of Singapore origin exported to the US, a Textile Visa is required by the US Customs Service for each consignment except for ramie, silk and linen products.

Aquarium Fish & Fresh-Cut Orchids

Germany requires an Export Certificate for every consignment of cut flowers imported into the country.

Singapore Customs (Aircargo) processes Certificates of Origin for the export of aquarium fish and fresh-cut orchids.

Transshipment

For all transshipment of goods from one Free Trade Zone to another and for transshipment of controlled items within the same Free Trade Zone,

- Obtain a Transshipment Permit through TradeNet before goods are imported into Singapore

Using TradeNet

To apply for a TradeNet Permit, one may either:

- Subscribe as a TradeNet User to submit permit applications for processing and approval. Please contact the TradeNet System Administrator, CrimsonLogic at Tel No. (65) 6887 7888 for more information; or
- Appoint an agent, freight forwarder or TradeNet Service Centre to submit the permit applications on one's behalf.

Permit Exemption

1. The requirement for permits shall not apply if such goods are not controlled imports, controlled exports or controlled transshipments and are:

- i. Personal or household effects, other than motor vehicles, which:
 - a. accompany passengers, crew or employees of transport undertakings by land, sea or air;
 - b. are not being transported for sale but are intended for the personal or household use

of such passengers, crew or employees of transport undertakings; and

- ii. Being imported, exported or transhipped by parcel post and such importation, exportation and transshipment is not prohibited under regulation 6 of the Regulation of Imports and Exports Regulations;
- iii. Diplomatic correspondence;
- iv. Being imported, exported or transhipped by:
 - a. the joint defense force, including the Singapore Armed Forces, the Singapore Police Force and the Singapore Joint Civil Defense Force, including personal and household effects of its officers but excluding civilian motor vehicles; or
 - b. the Ministry of Foreign Affairs, including personal and household effects of its officers but excluding motor vehicles

v. Used motor vehicles covered by Carnet de Passage which are endorsed by the Automobile Association of Singapore

vi. Trade samples, specimens for analysis or test, and gifts, the value of which does not exceed S\$400.00 in total value, including the following controlled items:

1. Food items including tableware and kitchenware made of porcelain or china controlled by the Food Control Division.
2. Fish and fishery products (excluding species controlled under CITES); fruits and vegetables (excluding those from the American Tropics); and flowers (excluding species controlled under CITES and those from the American Tropics) controlled by Agri-Food and Veterinary Authority (AVA);
3. Rice of all descriptions controlled by the IE Singapore

vii. Commercial, shipping or airline documents, press photographs or negatives, news write-ups, news clippings, news films or news transcription tapes

viii. Human corpses, human remains, human bones or cremated ashes; or

ix. Human transplant materials.

2. The requirement of a permit to export any goods shall not apply if such goods:

- i. are not controlled exports
- ii. Have a total value which does not exceed US\$400 and

iii. Are being exported unaccompanied by air by a tourist.

3. The requirement of a permit to transship any goods shall not apply if such goods:

- i. Are not controlled import, controlled exports or controlled transshipments; and
- ii. Are not transshipped from one free trade zone to another.

Third Country Trading through Singapore

A Singapore company may arrange for the shipment of their goods from a second country to a third country. If it is shown as the shipper in both the incoming and outgoing bills of lading/air waybills/manifests, and

Where the goods are not discharged in Singapore

- No import and export permits are required.

Where the goods are discharged in Singapore

- No import and export permits are required
- The carrier's agents must indicate against the consignment in the inward and outward manifests the following remarks:

Temporary Import/Export under ATA Carnet

Import

- Import permits are not required for goods imported under ATA Carnet. However, where some or all of the goods are not re-exported, you must obtain the necessary import permit(s) for the goods.
- If the goods to be imported are under import control, you must obtain the endorsement/approval from the relevant controlling agency before the arrival of the controlled goods in Singapore.
- One must present the ATA Carnet (endorsed by Customs) to the carrier's agent to effect shipment of the goods. The B/L or AWB number should be indicated on the top right hand corner of the ATA Carnet. The carrier's agent will:
 - Retain a copy of the ATA Carnet
 - Indicate in the manifest, the ATA Carnet No. against the item which was exported under the ATA Carnet.

Export

In Singapore, ATA Carnets are issued only by the Singapore International Chamber of Commerce (SICC). One should apply to the SICC for an ATA Carnet for goods temporarily exported from Singapore.

* Healthcare Statistics						
	1998(a)	1999(a)	2000(a)	2001(a)	2002(b)	2003(b)
Life expectancy, average (years)	79.2	79.9	80.4	81.2	81.3(a)	81.4
Life expectancy, male (years)	76.5	77.2	77.7	78.7	78.8(a)	78.9
Life expectancy, female (years)	82.1	82.8	83.3	84.0	84.1(a)	84.2
Infant Mortality (per 1,000 live births)	4.0	3.5	3.5(b)	3.5(b)	3.4	3.4
Healthcare spending (S\$ bn)	6	6	6	6	6	6
Healthcare spending(%of GDP)	4.1	4.0	3.6	3.9	3.6	3.9
Healthcare spending(US\$ bn)	3.4	3.3	3.3	3.4	3.2	3.5
Healthcare spending(US\$ per head)	902	851	826	816	763	839
Physicians(per 1,000 population)	1.6	1.6	1.6	1.6	1.6(a)	1.6
Pharmaceutical sales (US\$ m)	193	179	202	225	220	228
<i>Sources: US Census Bureau; Economist Intelligence Unit. a – actual; b- estimate</i>						

# Major Pharmaceutical Manufacturers & Wholesalers				
S.No	Company's Name	Address	Telephone No.	Fax No.
1	Abbott Laboratories (S) Pte Ltd	1 Maritime Sq #11-12	(65) 2786220	(65) 2786793
2	Alcon Pte Ltd	159 Sin Ming Rd #06-05	(65) 5527786	(65) 5530816
3	Beechan Pharmaceuticals Pte Ltd	38 Quality Rd	(65) 2653711	(65) 2684947
4	Boots Co (F E) Pte Ltd The	1123 Serangoon Rd #02-02	(65) 2994122	(65) 2981562
5	Centeon Asia-Pacific Pte Ltd	9 Temasek Blvd #07-04	(65) 3386369	(65) 3382773
6	Cyanamid (S) Pte Ltd	22 Martin Rd #02-01	(65) 7348550	(65) 7348731
7	DAC Pharmed Pte Ltd	136 Joo Seng Rd #02-00	(65) 8586866	(65) 2864823
8	Easy Screen Pte Ltd	196 Pandan Loop #06-13	(65) 7778269	(65) 7778279
9	Eltean Agencies Pte Ltd	1 Marine Parade Central #08-06	(65) 3459423	(65) 3450842
10	Far East Drug Co Pte Ltd	#08-01 Peace Centre	(65) 3378349	(65) 3378641
11	Fresenius Pharma Asia Pacific	12A Sago St	(65) 3240717	(65) 3240718
12	G C Pharmaceutical (S) Pte Ltd	1 Maritime Sq #10-33A	(65) 2731033	(65) 2734723
13	Glaxo Wellcome S'pore Pte Ltd	#21-00 Gateway West	(65) 2916070	(65) 2919737
14	Hoechst Marion Roussel South Asia Pte Ltd	200 Cantonment Rd # 02-02	(65) 2272275	(65) 2271585
15	Indrugco Pte Ltd	221 Henderson Rd #07-20	(65) 2756789	(65) 2756788
16	Kyowa Hakko Industry (S) Pte Ltd	300 Orchard Rd #06-02	(65) 7334948	(65) 7330819
17	Laboratories Fournier S A	360 Orchard Rd #09-03	(65) 7380244	(65) 7337870
18	Medic Marketing Pte Ltd	#10-05/06 Alexandra Distripark- Blk 1	(65) 2718122	(65) 2719967
19	Quantanoba Asia Pacific Pte Ltd	15 Scotts Rd #05-06	(65) 7357335	(65) 7347077
20	Reddy Pharmaceuticals (S) Pte Ltd	400 Orchard Rd #11-11	(65) 7342010	(65) 7340376
21	Scigen Pte Ltd	14 Science Pk Dr #04-01A	(65) 7796638	(65) 7793784
22	UCB (S) Pte Ltd	30 Prinsep St #03-02	(65) 3362880	(65) 3371029
23	Grafton Pharmasia	66 Tannery Lane #01-05A Sindo Building Singapore 347805	(65)741-5400 (10 lines) / 841 3606	(065)841-7526
24	Hyphens Marketing and Technical Services Pte Ltd	117 Jalan Sultan, Singapore 199007	(65) 6338-8551	Fax: +65 6338-8825

Industry Associations

Singapore Association Of Pharmaceutical Industries	151 Chin Swee Road, #02-13a/14 Manhattan House, Singapore 169876, Tel : 6738 0966 Fax: 6738 0977 , E-Mail: Foktaihung@Sapi.Org.Sg
Healthcare Industry, Governmental And Related Organisations In Singapore Singapore Medical Association	2 College Road, Level 2, Alumni Medical Center Singapore 169850, Tel: +65 2231264 Fax: +65 2247827, Email: Sma_Org@Pacific.Net.Sg Url: Www.Sma.Org.Sg
Singapore Manufacturers' Federation	The Enterprise #02-02 No 1 Science Centre Road Singapore 609077 Telephone : 6826 3000 Fax : 6822 8828 E-Mail : Hq@Smafederation.Org.Sg
Singapore Business Federation (Sbf)	C/O. Singapore National Employers Federation 19 Tanglin Road # 10-01/07, Tanglin Shopping Centre, Singapore 247909 Tel: 65-62358911, Fax: 65-62353904 Email: Sfcci@Singnet.Com.Sg
Health Supplements Industry Association (Singapore)	Address: 18 Cross Street, #12-01/08 China Square Central, Singapore 048423 Tel: +65-6212 0100, Fax: +65-6226 2126 Contact Email : Hsias@Cerebos.Com.Sg Url : Www.Hsias.Org
Singapore Chinese Chamber Of Commerce & Industry	47 Hill Street , Singapore 179365 Tel: 65-3378381, Fax: 65-3391609 Http://Wcbn.Com.Sg/
The Singapore Indian Chamber Of Commerce And Industry (Sicci)	101 Cecil Street , #23 - 01/04, Tong Eng Building, Singapore 069533 Telephone :6222-2855 / 6222-2505 Fax : 6223-1707, Email : Sicci@Sicci.Co
The Disabled People's Association Of Singapore.	150a, Pandan Gardens, #02-00, Day Care Centre, (Ayer Rajah Community Center) Singapore 609342 , Tel.: (65) 6899-1220 Fax: (65) 6899-1232, E-Mail Dpa@Dpa.Org.Sg.
Singapore Anti-Narcotics Association	2 Sengkang Square, #05-01, Sengkang Community Hub, Singapore 545025, Tel : 6732 1122 Fax : 6732 4564
Singapore Anti-Tuberculosis Association (Sata) - Singapore (Sg)	Blk 135, Jurong East Street 13, #04-349 Tel: 66659283
Singapore Medical Association	2 College Road Level 2, Alumni Medical Centre Singapore 169850 Telephone: +65 6223 1264 Fascimile: +65 6224 7827
Singapore Veterinary Association	5 Maxwell Rd, #18-00 Tower Block Mnd Complex, Singapore 069110 Fax: 65 - 62 20 6068, Email: Sva@Sva.Org.Sg
Health Promotion Board	3 Second Hospital Avenue, Singapore 168937 Tel 6435 3500, Fax 6438 3848
Singapore Red Cross Directory	Red Cross House 15 Penang Lane Singapore 238486 Tel : 6 336 0269, Fax : 6 337 4360
The Singapore Pharmacy Board	14 College Road, Harrower Hall, Singapore 169853, Contact Numbers: (65) 6325 1611, (65) 6325 1615, Fax Number: (65) 6325 1618

	Email: Moh_Spb@Moh.Gov.Sg
Singapore Heart Foundation	Level 1, Hpb Building, 3 Second Hospital Avenue, Singapore 168937, Tel : (65) 6236 0630, Fax : (65) 6438 8312 Email: Info@Heart.Org.Sg
Singapore National Stroke Association	No.26 Dunearn Road, Singapore - 309423 Tel: (065) 6358-4138 Fax: (065) 6358-4139 E-Mail To Sporensa@Singnet.Com.Sg
Bioprocessing Technology Institute	20 Biopolis Way #06-01 Centros Singapore 138668 , Phone: (65) 6478 8888, (65) 6478, 8873, (65) 6478 8878 Fax: (65) 6478 9561, E Mail: Admin@Bti.A-Star.Edu.Sg
Bioinformatics Centre	National University Of Singapore, No. 4 Kent Ridge Road Singapore 119223, Tel : (65) 6874 8848, Fax : (65) 6779 0724