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**In Focus: Therapeutic Segment – Antipsychotics**

**Introduction**

Antipsychotics are drugs used mainly in the treatment of psychoses. They reduce the agitation, delusions, hallucinations and thought disorders produced by these illnesses. The drugs have less effect on the symptoms of apathy and withdrawal. Treatment response is quite dramatic during the first six weeks, thereafter it starts moderating. Psychotropic drugs play a very vital role in patient therapy. Psychotropic drugs are also called psychoactive, which mainly acts on the central nervous system. These drugs can cause many changes in brain function, further resulting in change in perception, consciousness and mood behaviour. Moreover, psychotic drugs have different use and have been categorised into four groups – depressants, hallucinogens, Antipsychotics, and stimulants. These may often overlap with other categories as they produce more than one type of effect. Other mood affecting drugs may fall in the category of antidepressants, antipsychotics, mood stabilisers and tranquilisers, which are vital to the practice of psychiatry.

**Market size**

Globally, psychotropic drugs have two classes of markets – open and closed markets. Open markets consist of countries with limited or no domestic capabilities. They rely on imported narcotics. Closed markets comprise countries with adequate domestic sources of narcotic drugs and generally do not import. Examples of closed markets are Australia, Argentina, Belgium, Brazil, China, France, Hungary, Iran, Japan, Norway, Portugal, Slovakia, South Africa, Spain, Turkey, the UK and the US. In 2007,

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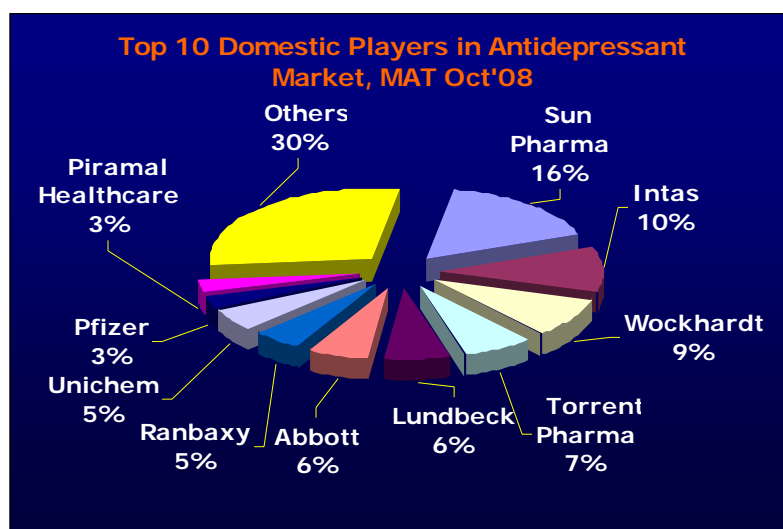
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antipsychotics and antidepressants were in the list of Top 10 therapeutic segments worldwide. According to ORG IMS, antipsychotics segment has sales of US\$20.7 billion with market share of 3.1% and good growth rate of 10.7%; Antidepressant segment has sales of US\$19.7 billion with market share of 3.0% and a growth rate of -6.8%.

## Major Players

In domestic market, the antidepressant market is Rs352.1 crore with growth rate of 3.4%. Seventy per cent of the market is held by top ten players and remaining 30% by other companies. The first position is taken by Sun Pharma, having sales of Rs57.5 crore with market share of 16.33%. Intas takes the second position with sales of Rs36.7 crore, having 10.44% market share. Third position is occupied by Wockhardt, with sales of Rs31.9 crore and having market share 9.05%. Torrent Pharma occupies fourth position with sales of Rs24.4 crore and market share of 6.93%; Lundbeck occupies fifth position with sales of Rs22.2 crore, having market share 6.31%. Abbott, Ranbaxy, Unichem, Pfizer and Primal Healthcare have sales of Rs21.8 crore, Rs18.0 crore, Rs17.0 crore, Rs9.8 crore, and Rs9.7 crore, respectively with market shares of 6.18%, 5.12%, 4.83%, 2.77%, and 2.77% respectively.



Source: Express Pharma; Cygnus Research

## Major Products

### Some of the well-known products in the global market

SNO	BRAND NAME	THERAPEUTIC SEGMENT	COMPANY
1	Cipralext, Lexapro	Antidepressant	Lundbeck /Forest laboratories
2	Cymbalta, Prozac	Antidepressant	Eli Lilly
3	Effexor	Antidepressant	Wyeth

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SNO	BRAND NAME	THERAPEUTIC SEGMENT	COMPANY
4	Paxil, Seroxat, Wellbutrin	Antidepressant	GSK
5	Pristiq	Antidepressant	Wyeth
6	Saredutant	Antidepressant	Sanofi-aventis
7	Valdoxan	Anti depressant	Novartis
8	Zolofot	Antidepressant	Pfizer
9	Zyperxa	Antipsychotic	Eli Lilly

Source: Express Pharma ;company annual reports; Cygnus Research

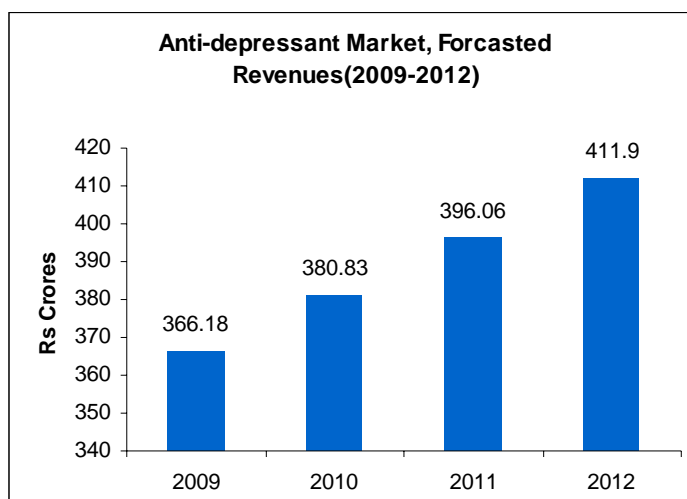
### Growth drivers

The growth drivers of this market include demographic factors, increase in awareness, availability and accessibility of medication, lifestyle changes and new uses or indications for currently available drugs like bi-polar disorders & off label use and increase in consumer population.

### Outlook

According to Cygnus estimates, antidepressant market is estimated to reach Rs 411.9 crore with a CAGR of 4% by 2012.

The use of Ppsychotropic drugs remains a matter of ethical discussion. Many national and international forums have various reasons to believe that although these drugs have relieved most of the distress and pain of patients, they have several loopholes when it comes to regulations, distribution, and most importantly the mistrust that consumers hold towards Pharma companies. Irrespective of the uncontrolled proliferation of drug abuse world wide, governments need to strategise regulations in such a manner that they do not hamper the access to psychotropic drugs by being overly restrictive.



Source: Cygnus Research

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## News Briefs

### MARKETING

#### Americas

##### **USA: Wyeth to boost Pfizer's share in Indian market**

Pfizer's US\$68-billion buyout of Wyeth may help catapult its local subsidiary into the top ten leagues of Indian drugmakers, thanks to the significant product synergy that exists between the Indian units of the two companies. Pfizer will consolidate its position in antibiotics, vaccines, women and animal healthcare with Wyeth products, said an official close to the company's Indian operations. Currently, Pfizer India holds a 2.2% share in India's highly-fragmented domestic drug retail market valued at Rs340 billion. Wyeth India's share is estimated at around 0.8%. Industry watchers say that going by past records, the two companies would be merged through a share swap, and some top and mid-level management staff of Wyeth may have to step down. There will be rationalisation in manufacturing and marketing to cut costs.

#### Europe

##### **Germany: Global health terminology Workbench launched**

The International Health Terminology Standards Development Organisation (IHTSDO) has launched a new IHTSDO Workbench designed to make it easier to use the clinical terminology SNOMED CT. The Workbench provides tools to develop, maintain, and facilitate the use of SNOMED CT in health systems around the world. The workbench includes terminology editing, mapping, and other applications. IHTSDO's 11 Member nations, together with other SNOMED CT users, will use these tools in a shared web-based environment.

#### Asia Pacific

##### **India: Promed Exports to foray into US, Europe with focus on generic ophthalmic market**

The New Delhi-based Promed Exports Pvt Ltd, an export oriented company into sterile manufacturing, is readying to cash in on the fast growing generic sterile market in US and European Union with focus on ophthalmic drugs segment. The company, which claims as the second largest pharma company in the eye care market of Russia, is preparing almost 15 Abbreviated New Drugs Applications (ANDAs) with a target to complete the filings within next two years. Almost 15 ophthalmic drugs are going off patent in US and Europe before 2012 and these products will grossly have a sales value of nearly US\$2.5 billion. Of this, almost US\$1-1.5 billion worth market is opening up in US.

##### **India: Wockhardt to market osteoporosis drug**

Wockhardt said that it will market a patented drug used in treatment of osteoporosis in the country. Switzerland-based DSM Nutritional Products, the patent holder of Bonistein, has licensed the drug to Wockhardt, the Indian biotech company said in a statement. Habil Khorakiwala, chairman, Wockhardt, said: "This will strengthen our orthopaedic portfolio." In India, the market for osteoporosis formulations market is over Rs2.50 billion, as per data from ORG IMS. This market is growing at 19%. The biotech major plans to launch the medicine in mid-2009.

##### **India: Ratan Jalan launches healthcare consultancy**

Mr Ratan Jalan, former CEO of Apollo Health and Lifestyle, has launched consulting firm Medium Healthcare and says he wants to promote innovative, alternative models that spur the healthcare sector and go beyond large, city-based hospitals. The man credited with Apollo's neighbourhood foray as franchised clinics and its luxury birthing concept, The Cradle, said in release, "Almost everyone wants to build large, multi-specialty, world-class hospitals in metros. The industry offers significant scope for

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innovation in alternative business models that are even more profitable and scalable.” Medium Healthcare aims to provide consulting services to healthcare organisations in business strategy, performance enhancement, marketing impact and service quality.

#### **India: New generation wireless ICDs in city hospital**

A city hospital claimed to have introduced, for the first time in Eastern India, a new generation of wireless Implantable Cardiac Devices (ICD) to prevent Sudden Cardiac Death (SCD). This device is suitable for patients with history of ventricular arrhythmias, those having history of resuscitated cardiac arrests and patients with low ejection fraction with high risk of sudden death, doctors at Apollo Gleneagles Hospitals said here. They said that as per reports, among all causes of death, 20% are sudden and majority of them are cardiac." Fifty per cent of Sudden Cardiac Deaths are due to heart attacks and the rest due to disturbances in the rhythm of the heart. But all these are preventable.

#### **India: Guardian Lifecare to open 50 stores in India**

Guardian Lifecare plans to open 50 stores across the country by March this year. According to reports, it currently has 15-20 stores in the pipeline. Two will open shortly in Mumbai at Phoenix Mills and Inorbit Mall at Vashi two stores in Bangalore, 12 in Delhi, six in Noida, six in Gurgaon in the next two months. Stores will open in Hyderabad and Chennai in addition to Pune post March. Ashutosh Garg, Chairman and Managing Director of Guardian Lifecare, was quoted as saying, "We expect revenue to cross Rs1bn by March 2009. By March 2010 we expect that it will go to Rs3bn. In the next 12 months we plan on opening 400 stores across the country and expect to spend Rs1bn on this."

#### **India: Adyar Cancer Institute introduces RapidArc radiotherapy solutions**

With the installation of RapidArc Linear Accelerator, the Cancer Institute at Adyar in Chennai has become the first institute in India to introduce RapidArc technology, the advanced radiotherapy solutions for treating cancer and other disorders. The doctors in the institute will be able to deliver radiotherapy treatment with the RapidArc technology using Varian Medical Linear accelerator.

#### **India: Wockhardt clinic at RMZ Infinity**

RMZ Corp, a leading real estate developer, has inaugurated a 24-hour clinic at RMZ Infinity in Bangalore which will be managed by Wockhardt Hospitals. Spread over 400sq ft, the clinic will provide round-the-clock healthcare facilities for the employees who work at RMZ Infinity.

#### **India: Biocon's Syngene International to offer fully integrated drug discovery service**

Syngene International, a unit of Indian biotechnology major Biocon Group, has informed that it will offer fully integrated drug discovery services by partnering with Sapient Discovery, a US-based biotechnology company. Sapient Discovery uses integrated, proprietary computational and experimental laboratory technologies, and cellular biology and proprietary data mining to accelerate the drug discovery and optimisation processes.

#### **Singapore: Abbott opens new Pharma research lab**

Abbott announced the opening of a new pharmaceutical analytical research laboratory in Singapore's Biopolis research park. This new facility, Abbott's first pharmaceutical research and development site in Southeast Asia, will conduct stability studies, including studies on active pharmaceutical ingredients and novel formulations, to support global regulatory requirements for new pharmaceutical products. The work done at the laboratory will enable Abbott to accelerate the development of innovative investigational medicines and potentially deliver new treatments to patients faster in areas such as neuroscience and cancer. The Singapore laboratory is Abbott's latest global investment in facilities and resources to advance its pipeline

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## INVESTMENTS

### Americas

#### USA: Businessman donates US\$100m to AIDS research

A Cambridge businessman has donated US\$100m to fund research into the development of an AIDS vaccine, according to Massachusetts General Hospital, which received the gift. The gift, which will flow through MGH, will be shared with Massachusetts Institute of Technology and Harvard University. "By providing flexible funding and by connecting science and engineering at MIT and Harvard with the research and clinical resources of MGH, we intend to empower many of the world's best researchers to focus on what they view as the most promising research," said the donor Phillip T Ragon in a statement.

### Asia Pacific

#### India: Gujarat Pharma sector may attract Rs30bn investment with in 2009-11

More than 90 pharmaceutical and allied sector companies from various countries are set to invest more than Rs30 billion in Gujarat within a period of two years from 2009. Almost 23 Memorandum of Understanding (MoU) between the companies and the state government were signed on 13 January, 2009, on the occasion of Vibrant Gujarat 2009, the latest edition of the biennial investors' summit organised by the government of Gujarat to attract investment in all industry segments. Out of these MoUs, an agreement between the Gujarat Board of Indian Drug Manufacturers Association (IDMA) will cover projects from around 71 of its member companies worth nearly Rs5 billion.

#### India: Intas to pump in Rs1.60bn for Gujarat facility

Biotechnology company Intas Biopharmaceuticals Ltd (IBPL) will invest Rs1.60 billion towards setting up a separate manufacturing facility for monoclonal antibodies (mAbs) at Sanand, Ahmedabad. During the recently-concluded Vibrant Gujarat Global Investors' Summit (VGGIS), 2009, the company signed a memorandum of understanding with the state government for manufacturing 5,000 litres of this recombinant product. Mani Iyer, Executive Director, IBPL, said that the company has acquired 23,000sq metre of land at the Matoda village near Sanand and initiated the engineering design phase for the project. IBPL is indigenously manufacturing and marketing bio-therapeutic drugs.

#### India: Guardian plans Rs1bn investment to expand pharmacy stores to 220

Guardian Pharmacy, India's fastest growing chain of health, wellness and beauty stores, will be investing over Rs1 billion to increase the number of stores from the current 170 to 220 by the end of March 2010. Poised to leverage the Rs22 billion Indian health supplements market, Guardian Pharmacy which is part of GNC, the largest selling health & nutritional products brand in the US, is confident to make a mark. In India, GNC products are available as an implant GNC store within 24 Guardian stores which are distributed at another 50 Guardian Pharmacy stores.

#### India: Narayana Hrudayalaya to establish 5000-bed hospital in Ahmedabad

Narayana Hrudayalaya has signed a Memorandum of Understanding (MoU) with the Gujarat government to set up a 5000-bed Health City in Ahmedabad at an investment of Rs4.80 billion. "The Health City will bring us a step closer to our vision of making world-class healthcare services and cutting-edge medical technologies available at affordable costs to the common man," said Dr Devi Shetty. This project will also generate direct employment for 2,000 people and indirect employment for 5,000 people in the state. Targeted to be commissioned by June 2010, Narayana Hrudayalaya Health City will offer cutting edge surgeries in paediatric and adult cardiac care at the doorstep of the people of Gujarat.

#### India: HealthCare Global invests Rs400m for advanced IGRT and Cyber Knife

HealthCare Global Enterprises Ltd, (HCG) a leading comprehensive cancer care centre in the country, has invested Rs400m for advanced equipment at its facility in Bangalore. To begin with, it has made a Rs300m investment for a Cyber Knife technology which will be commissioned in February. This makes it the first facility in the country to install the advanced radio guided surgery system. The second is a Rs100m investment in 'Artise' which is an advanced Image-Guided Radiation Therapy (IGRT) system.

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HCG's Center for Robotic Radio surgery, Bangalore will be commissioned in October. Currently, the hospital has 180 beds and with the new centre, the total bed strength will be increased to 280.

#### **India: GCS to pump in Rs7.22bn to upgrade Cancer Hospital**

The Cancer Hospital in the city is all set for a makeover into a world-class cancer care and research institute with the Gujarat Cancer Society (GCS) deciding to pump in Rs7.22 billion for its upgradation. The executive board and general board of GCS, which runs the Cancer hospital, approved an ambitious plan to convert the hospital into a super speciality cancer care and research institute that will provide treatment at par with international standards. Also the number of beds in the cancer hospital will be increased from current 650 to 1,000. The GCS board headed by the Governor of Gujarat, Naval Kishore Sharma, also approved Rs200m for development plan for the Community Oncology Centre and Cancer Exhibition, in the Vasna area of the city. The development plan for community centre is expected to be completed by 2010, when Gujarat would celebrate 50 years of its existence as a separate state.

#### **India: MHS to establish 475-bed hospital in Delhi at Rs2bn investment**

To cater to the needs of the north Indian market, Manipal Health Systems (MHS) will establish a 475-bedded Greenfield facility in New Delhi at an estimated investment of Rs2 billion. The project will start by May this year. Besides, Manipal Health Systems plans to invest another Rs15 billion to start construction of hospitals at the existing Manipal hospital located on the old Airport road in Bangalore where it was to add another 300 beds. The existing Hospital is a 600-bed centre. While the economic slowdown has no impact on the healthcare sector which is only witnessing buoyant growth, the only challenge for potential viable projects to take off is that there was difficulty to raise cash in the recessionary times. MHS is set to close the 2008-09 ending March with earnings of Rs4 billion from the healthcare space which covers 13 hospitals including three tertiary care super specialty hospitals and 10 multi-specialty hospitals. The new facilities have also managed to break even in the first year of its operations, stated Basil.

## **MERGERS & ACQUISITIONS**

### **Americas**

#### **USA: Endo Pharma to acquire Indevus Pharma**

Endo Pharmaceuticals and Indevus Pharmaceuticals, Inc have entered into a merger agreement under which Endo will commence a tender offer to acquire 100% of the outstanding shares of Indevus for approximately US\$370m, or US\$4.50 per Indevus share, in cash, and up to an additional approximately US\$267m, or US\$3.00 per Indevus share, in cash payable in the future upon achievement of certain regulatory and sales milestones. The transaction has been approved by the boards of directors of both companies.

#### **USA: BioMarin & La Jolla enter agreement to develop & commercialize Riquent**

BioMarin Pharmaceutical Inc and La Jolla Pharmaceutical Company have entered into an agreement to develop and commercialize Riquent, La Jolla's investigational drug for lupus nephritis, in the United States, Europe and all other territories of the world, excluding the Asia Pacific region. Following a successful phase-3 trial, the parties will share equally in all losses and profits. In the United States, BioMarin and La Jolla will jointly commercialize Riquent. In Europe and other territories outside of Asia, BioMarin will be responsible for all commercialization activities.

#### **USA: Valeant Pharma acquires Dow Pharma Sciences**

Valeant Pharmaceuticals International announced that the company completed its acquisition of Dow Pharmaceutical Sciences, Inc, a privately held dermatology company that specializes in the development of topical products on a proprietary basis, as well as for pharmaceutical and biotechnology companies. Valeant Pharmaceuticals International is a multinational specialty pharmaceutical company that develops,

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manufactures and markets a broad range of pharmaceutical products primarily in the areas of neurology and dermatology.

#### **USA: Pfizer may buy Wyeth for US\$60bn, WSJ**

US pharma giant Pfizer is believed to be in talks to acquire rival American drugmaker Wyeth for about US\$60 billion, according to the Wall Street Journal (WSJ). The paper reported that the two companies have been in a dialogue for months and a deal is not imminent, with the precarious state of the US economy making negotiations especially fragile. Pfizer, the world's largest drug maker by revenue, would likely to use a combination of cash and stock for the acquisition, the WSJ said quoting people familiar with the matter.

#### **USA: Abbott to acquire Advanced Medical Optics for US\$2.8bn**

Abbott and Advanced Medical Optics (AMO) announced a definitive agreement for Abbott to acquire AMO for US\$22 per share in cash, for a total transaction value of approximately US\$2.8 billion, inclusive of estimated net debt at the time of closing. Based in Santa Ana, California, AMO is a global leader in ophthalmic care, comprised of three segments: cataract surgery, laser vision correction (LASIK), and eye care products. Globally, AMO holds the number one position in LASIK surgical devices, the number two position in the cataract surgical device market and the number three position in contact lens care products.

### **Europe**

#### **UK**

##### **London: Govt signs pact with GSK for 0.6m treatment courses of Relenza**

GlaxoSmithKline (GSK) confirmed that it has entered into an agreement with the UK Government to provide 10.6m treatment courses of Relenza (zanamivir) for use in an influenza pandemic. The agreement is part of an additional 18m treatment course of antivirals that the government has purchased. The UK Department of Health has now doubled its stockpile to cover approximately half the British population; enough to treat all of those who fall ill with pandemic influenza should the clinical attack rate reach the UK Government's worst case planning scenario of 50%. Zanamivir constitutes approximately a third of the UK's current antiviral stockpile.

#### **Asia Pacific**

##### **India: Piramal Healthcare Limited to acquire Minrad International**

Piramal Healthcare Limited, one of India's largest pharmaceutical and healthcare companies, and Minrad International, Inc, a provider of generic inhalation anesthetics, jointly announced that they have signed a definitive merger agreement for Piramal to acquire Minrad. Under the terms of the agreement, Minrad will merge with a newly incorporated wholly-owned subsidiary of Piramal. If the merger is completed, stockholders of Minrad will receive US\$0.12 per share in cash. In connection with the merger agreement, Piramal has also agreed to acquire Minrad's eight per cent Senior Secured Convertible Notes from the note holders. Total consideration for the merger and acquisition of the notes, in cash plus the assumption of debt, will be approximately US\$40m.

##### **India: Plethico Pharma ties up with Molekelue**

Plethico Pharmaceuticals Ltd has entered into a tie up with Pharma MNC Molekule (India) Pvt Ltd, Mumbai a leading pharmaceutical company having aggressive marketing and distribution network across the country, for marketing some of Natrol's brands in India. The company is looking to do more tie up's with other pharma majors in India for promoting its wellness brands in India.

##### **India: Celestial inks pact with GE Healthcare to set up Plasma Fractionation facility**

Celestial Biologicals Limited (CBL), an associated company of Intas Biopharmaceuticals Limited, and GE Healthcare, the US\$17 billion healthcare business of General Electric Company has announced a collaboration to set up India's first Good Manufacturing Practice (GMP) compliant Plasma Fractionation facility in Ahmedabad. The facility will be first of its kind in India. The collaboration will include

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appropriate technology, products, processes and project development for establishing the Plasma Fractionation facility. The facility will be fully functional by early 2010. Human plasma, a liquid component of blood, is the source of many life-saving proteins. A large number of these proteins can be isolated and used in medicine.

#### **India: IDMA to join hands with foreign SME pharma associations**

The Small and Medium Enterprises (SME) sub-committee of the Indian Drug Manufacturers Association (IDMA) is mooting a project to join hands with the small and medium pharma manufacturers associations in foreign countries to share information for improved performance in local market. The association will discuss the matter in detail in the next special meeting of the executive committee to coordinate with the foreign associations. The attempt is to bring the group of small and medium scale companies to a single platform to identify the growth opportunities and challenges where the associations can work together, said S V Veeramani, chairman, SME sub- committee, IDMA.

#### **Indian investor offers to acquire Egyptian firm**

Alexandria Medical Services Company, an Egyptian firm engaged in providing medical diagnostic and treatment services, has received an acquisition offer from an Indian investor for Rs100.8m Egyptian pounds. According to a disclosure on the Egypt Stock Exchange, the Indian investor has offered to buy the entire shares (1.4 mn) of Alexandria Medical Services at a price of 72 Egyptian pounds a share. Reportedly, the Indian investor, Bavaguthu Raghuram Shetty, runs a healthcare business in the United Arab Emirates and this is a counter offer for the acquisition of the Egyptian firm. Earlier, British Virgin Island-based Short Hills Development had offered to takeover its 100% shares at a price of 65 Egyptian pounds a share. Alexandria Medical Services provides medical diagnostic and treatment services in various medical fields, including operation rooms and intensive care units.

## **RESEARCH & DEVELOPMENT**

### **Africa**

#### **Kenya: Kenyan cloud over India's Pharma exports to Africa**

Even as India is working hard to allay the doubts of African countries on the quality and safety of medicines supplied by its domestic companies, Kenya, the third-biggest African market for Indian medicines, is planning a new legislation against "counterfeiting" that could seriously jeopardise India's medicine exports to that country. Kenya imported Rs34.24m worth of medicines in 2007-08. Africa accounts for 14% of India's US\$8 billion medicine exports. "Kenya's Anti-Counterfeit Bill, if enacted, will ring the death knell of India's pharmaceutical exports to African countries as others may follow suit", said DG Shah, secretary general, Indian Pharmaceutical Alliance (IPA). While India opposes all attempts to link intellectual property issues with "counterfeiting", African nations have a different view.

### **Asia Pacific**

#### **India: Ranbaxy starts study on new respiratory inflammation medicine**

India's largest drugmaker Ranbaxy Laboratories has started initial clinical studies (Phase I) on the lead compound to develop a new respiratory inflammation medicine. Ranbaxy could potentially earn over US\$100m in milestone payments on successful development and the launch of the product by GlaxoSmithKline (GSK). Ranbaxy new drug discovery & development research (NDDR) team is collaborating with UK drug company GSK to develop drugs for several treatments. After the successful completion of Phase-I studies of the molecule, which will be conducted in India and Europe, Ranbaxy will be responsible for developing to the molecule to the end of proof of concept (Phase IIa clinical trials) stage.

#### **India: Kandhamal has highest infant mortality rate**

Tribal-dominated Kandhamal district of Orissa that continues to grab media attention for attacks on Christians and missionary institutions carries another dubious record. It is having the country's highest infant mortality rate (IMR). The New Delhi-based Population Foundation of India (PFI), in its

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publication "Infant and Child Mortality in India: District Level Estimates", has maintained that IMR in Kandhamal was 121 per 1000 live births. More than 50% of Kandhamal's population constitutes scheduled tribes, and about two-third of people of the district live below the poverty line. Agriculture is main occupation of the people of Kandhamal. But 70% of the land is unproductive, according to official data. Though this backward zone has over 50 government-run hospitals and health care centres, health services mostly remain out of bounds for poor tribal in remote hilly tracts as doctors skip official duty assigned to them.

## CORPORATE

### Americas

#### USA: Taro receives USFDA nod for Lamotrigine tablets

Taro Pharmaceutical Industries Ltd has received final approval from the US Food and Drug Administration (FDA) for its Abbreviated New Drug Application (ANDA) for lamotrigine tablets 25mg, 100mg, 150mg, and 200mg. Taro had received tentative approval for this ANDA in March 2008. Lamotrigine is a prescription product used for the treatment of seizures and is bioequivalent to GlaxoSmithKline's Lamictal tablets. According to industry sources, lamotrigine tablets had annual US sales of more than US\$2 billion.

### Asia Pacific

#### India: Global Pharma looks to India for pain relief

With the global pharma companies cutting back on costs, letting go of people and shutting down plants in large markets, the crisis is palpable. Now, a lot of these players are actively looking to convince Indian companies to set up units in their countries. The tax on royalties for products which have their intellectual property registered in India is 30%, while it is just 7% in Belgium. UCB is Belgium's largest pharma company. Apart from Belgium, officials from Australia and Denmark have also been here.

#### India: Fortis Healthcare to acquire Mauritius-based Clinique Darne

Fortis along with a local partner has acquired 51% stake in a Mauritius-based hospital chain Clinique Darne for an undisclosed amount. Fortis Healthcare Limited which is one of the leading healthcare groups in India with more than 20 hospitals provides tertiary level care to its patients and is coming as a Strategic Investor. This alliance between Fortis Group and Clinique Darne would not only provide the Clinique with much required funding but would also ensure that quality healthcare in terms of tertiary care in all the specialties is provided to the people of Mauritius. Clinique Darne is thus partnering with an important strategic investor which will enable it to position itself in order to offer better services and pursue its growth strategy. The other investor, Novelife, is an investment entity part of the CIEL Group

#### India: Novartis gets US\$486m contract to build flu vaccine manufacturing facility in US

Novartis announced that the US Department of Health and Human Services, Biomedical Advanced Research and Development Authority (HHS, BARDA) has awarded Novartis Vaccines a contract for up to US\$486m over eight years to support the design, construction, validation, and licensing of US cell-based influenza vaccine manufacturing facilities in Holly Springs, North Carolina, to provide a pre-pandemic supply of influenza vaccine and to provide the capacity to manufacture 150m doses of pandemic vaccine within six months of declaration of an influenza pandemic.

#### India: Geneombio gets TREAT Asia certificate for HIV drug resistance assay

The Pune-based Geneombio Technologies Pvt Ltd, a contract research organization providing customized DNA-based service in human and livestock health segments, has received certification from the TREAT Asia Quality Assessment Scheme for its indigenously developed HIV Drug resistance assay.

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The company has registered the products for tests in the Australia-based National Reference Lab and is pursuing approval for bringing in the test on par with the WHO standards.

#### **India: Wockhardt signs in-licensing pact with a Swiss firm for Bonistein**

Pharmaceutical and biotechnology major Wockhardt, has signed an in-licensing agreement with a Swiss firm, DSM Nutritional Products AG, to market Bonistein, a patented product, specially designed in the management of osteoporosis. As per ORG IMS, the anti-osteoporosis formulations market is worth over Rs2.50 billion in India, growing at 19%. Wockhardt will launch Bonistein towards the mid of 2009. Earlier in 2007-08, Wockhardt signed in-licensing agreements for niche products that had proved their effectiveness in Europe and the US for treatment of vitiligo, scar treatment, osteo-arthritis, anti ageing, dental & musculo-skeletal pain. DSM has annual sales of almost €8.8 billion and employs around 23,000 people worldwide with sales and marketing presence in more than 100 countries.

#### **India: Wockhardt gets nod to raise Rs5bn**

Shareholders of drug-maker, Wockhardt have approved the company board's resolution to raise upto Rs 5 billion, largely to redeem its foreign currency convertible bond of about US\$110m that matures in October 2009. An extraordinary general meeting of shareholders on Monday approved to raise the amount through redeemable preference shares. The meeting also approved to increase the existing authorised share capital of the company from Rs1.25 billion to Rs1.75 billion by creating 100,000,000 preference shares of Rs5 each.

#### **India: Orchid, Glenmark, Lupin & Aurobindo Pharma get US nod for Levetiracetam**

Orchid Pharmaceuticals, Glenmark Pharmaceuticals, Lupin and Aurobindo Pharmaceuticals have all received US FDA approval for their abbreviated new drug applications for Levetiracetam tablets, according to individual statements filed with the Bombay Stock Exchange. Aurobindo Pharma in addition has also received approval for an oral solution of Levetiracetam. Levetiracetam is used in the treatment of partial onset seizures in adults and children. The drug had recorded sales of US\$1.1 billion for the year ending September 2008, according to IMS, a US-based research and consultancy body that periodically comes out with sales figures of various drugs. Sales of Levetiracetam grew 36% from the previous year, the IMS said, adding that it also ranked within the top five anti-epileptic tablets.

#### **India: Generic sales help Dr Reddy's rebound with robust numbers**

As expected, the third quarter for Dr Reddy's Laboratories reflected a strong recovery in revenues and profits — primarily boosted by exclusivity enjoyed by the company's authorised generic version of GlaxoSmithKline's drug Imitrex. Excluding this, the company's revenues increased 21% y-o-y compared with 49% growth in total revenues. While the company witnessed a remarkable jump in volumes in North American markets due to the exclusive generic drug launch, the same has not been the case in other markets like Europe, Russia & other ex-Soviet republics and India. The company is undertaking a shift in its various business models. In German market, which is changing from branded generic market to a tender based generic market, the company intends to emerge as a high-volume low-margin player. The company expects a margin of 30-35% from this business.

#### **India: Glenmark gets US nod for Keppra generic**

Glenmark Generics Ltd has received final U.S. Food and Drug Administration approval to sell generic levetiracetam tablets in multiple strengths. The drug is prescribed for the treatment of partial seizures for adults and children with epilepsy and had sales of about US\$1.1billion for the 12 months to September 2008, the company said in a statement. Aurobindo Pharma and Orchid Chemicals also said that they secured FDA approval to launch the generic version of UCB's Keppra in the U.S

#### **India: Ranbaxy to get milestone payment from GSK Pharma**

Ranbaxy had announced that it would receive a milestone payment from GSK Pharma and it said that it has initiated phase I studies for GSK Pharma respiratory drug. Phase I studies will be conducted in India and Europe. After the completion of Phase-I studies, Ranbaxy will progress the candidate to end of Proof of Concept (Phase II clinical trials). Dr Sudershan Arora, President, Drug Development and Clinical Research, Ranbaxy said, "Ranbaxy's development team has the capability to conduct clinical studies on

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NCE's and is looking forward to advancing this lead compound through to Proof of Concept basis. Ranbaxy could receive over US\$100m in potential milestone payments for a product developed by Ranbaxy and subsequently launched by GSK in multiple indications and up to double digit royalties on worldwide net sales. The Ranbaxy-GSK collaboration was initiated in 2003, and further expanded in February 2007. Several research programs are being pursued within the Ranbaxy-GSK alliance against anti-infective, respiratory and oncology indications.

#### **India: Dr Reddy's drug consignment seized in Netherlands**

Dr Reddy's Labs US\$500,000 drug consignment heading to Brazil has been seized in transit by Dutch customs officials in the Netherlands for investigating patent infringement, according to reports. Such a seizure of an Indian company's generic drug has occurred for the second time in the Netherlands in three months, added reports. The Commerce Secretary GK Pillai said that it has raised this issue to with the European Commission. He also added saying that this is an act of piracy and it is a dangerous thing happening, stated reports.

#### **India: Nippon may end partnership with Ranbaxy**

Nippon Chemiphar Co is in talks with Ranbaxy Laboratories Ltd about possibly ending a partnership over making generic drugs. Nothing about the ties has been decided yet, Nippon Chemiphar said.

#### **India: Ranbaxy plans to buy FDA-approved facilities**

Ranbaxy Laboratories CEO Malvinder Singh said his firm was considering acquiring manufacturing facilities that have the approval from the USFDA. "We will transfer (production of) some products from India to America. Also, we are looking at making some acquisitions of manufacturing assets," Mr Singh said at a media reception held by Japanese drugmaker Daiichi Sankyo, which took a 63.9% stake in the Indian generic drugmaker last year.

#### **India: Ranbaxy's investments in Indian drug cos yet to pay off**

Ranbaxy Laboratories' strategic investments in Indian drug companies have so far not delivered desired results. Its investments in two companies with 14% stake-Krebs Biochemicals and Orchid Chemicals-have made little progress. In addition, Ranbaxy's new owner, Daiichi Sankyo, is now engaged in a tiff with the former owners of Zenotech Laboratories over the price at which the open offer for an additional 20% stake should be made. Meanwhile, the market meltdown has resulted in a considerable erosion of the value of the company's investment. An industry official familiar with the development said, in the case of Krebs Biochemicals, the value of investment has diminished.

#### **India: Orchid Chem up nearly 4% on new drug nod**

Shares of Orchid Chemicals and Pharmaceuticals soared 3.94% to Rs83.05 after the company received approval for a new drug. The company has received approval from the USFDA for Levetiracetam tablets in multiple strengths. The generic version of the drug is equivalent to UCB Inc's Koppra tablet and is indicated for treating myclonic seizures in adults and adolescents. A total of 67,365 shares changed hands at the Bombay Stock Exchange. Shares touched a high of Rs84.9 a share and a low of Rs81 a share. The company is engaged in manufacturing and selling pharmaceutical ingredients and finished dosage forms. The company also exports to Asia Pacific, West Asia, Europe, South and Central America, North America and Commonwealth of independent states (CIS).

#### **Japan: USFDA nod for Takeda's Dexlansoprazole capsules for GERD**

Takeda Pharmaceutical Company Limited and its wholly-owned subsidiary, Takeda Pharmaceuticals North America, Inc, announced that the USFDA approved Kapidex (dexlansoprazole) delayed release capsules for the once-daily, oral treatment of heartburn associated with symptomatic non-erosive Gastroesophageal Reflux Disease (GERD), the healing of erosive esophagitis (EE) and the maintenance of healed EE. Kapidex (30mg and 60mg) is the first proton pump inhibitor (PPI) with a Dual Delayed Release (DDR) formulation designed to provide two separate releases of medication.

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## GOVERNMENT INITIATIVES

### India: Tax benefit brings Gujarat back in favour with drug cos

Gujarat, the traditional centre of gravity of the pharma business in India that had lost out to states such as Himachal Pradesh, Goa, and Uttarakhand in the past few years, is regaining lost ground on the strength of tax cuts announced in last year's budget. Pharma firms, including around 100 small- and medium-sized ones, are planning manufacturing facilities in two pharma parks in the state at a total investment of Rs10 billion. At the new Gujarat Techno Pharma Park in Changodar near Ahmedabad, at least 35 units are nearing completion. Under the new excise duty structure, the units at the so-called duty-free regions are paying 4% more duty compared with the units outside as they cannot use the 4% Modvat claim on raw material, said Deepak Padia, former president of Idma (Gujarat) and chairman and managing director of Osho Pharma.

### India: Centre initiates consultations with UP, Bihar to extend telemedicine programme

The Centre is planning to expand the telemedicine programme to include specially the disease prone areas in Uttar Pradesh and Bihar. Discussions have been launched with these two states for introduction of telemedicine systems by connecting maximum hospitals especially in the rural areas. Expansion of telemedicine program is progressing well and telemedicine facilities have been established in over 300 hospitals so far. Telemedicine facilities in North East (28 nos.) and Orissa (9) cover the disease-prone areas also. Treatment of cancer will be one of the focused areas under the programme, sources said.

### India: NPPA revision of 174 drug prices may lead to costlier medicines

Insulin brands, steroids and painkillers may become more expensive once the drug price regulator, National Pharmaceutical Pricing Authority (NPPA), revises prices of more than 170 medicines, in some cases by as much as 33%. Prices are revised on the basis of applications received from companies. "We have also fixed prices of several drugs where it is found that the prices of medicines sold in the market are not being approved by NPPA," said an official with NPPA. The medicines on NPPA's list include antibiotics, asthma drugs, medicines to treat pneumonia, malaria and painkillers such as ibuprofen and aspirin.

### India: Centre to set up govt-industry panel to look into concerns over Spurious Drugs Bill

The health ministry will soon constitute a high-powered committee consisting of representatives from the government and the industry to look into the concerns of the industry arising out of the Drugs and Cosmetics (Amendment) Bill which has received the assent of the President recently. The committee's recommendations will have legal teeth as these will be notified by the ministry. A decision to this effect was taken at a meeting between the senior health ministry officials and the industry held on January 12. The nitty gritty of the panel will be worked out by the ministry soon. Major concern of the industry in the Bill is the lack of provisions to safeguard the interests of the genuine drug manufacturers.

### India: Haryana raises turnover criterion for participating in drug purchase tenders

Close on the heels of Indian Railways and some other government departments, the Haryana government has also revised the drug purchase policy, raising the annual turnover criterion for participating in drug purchase tenders from the existing Rs30-350m. The new policy will virtually deny the small scale drug units the opportunity to participate in the government tenders. The government's new policy comes immediately after the government's decision to provide free medicines to all patients visiting government hospitals - right from district hospitals down to rural dispensaries all through the state. The SSIs in Haryana had volunteered to provide all the commonly used medicines at much cheaper rates than the popular brands to the Haryana government for this project if the government will source all the medicines from the SSIs. But, the revised drug purchase policy has left the SSIs in the lurch in the state.

### Ministry takes steps for more beneficial deal with Japan to boost Indian generic sales

Against the backdrop of increasing opportunities for Indian pharma exporters to boost their sales of generic medicines in Japan, the commerce ministry has started measures to negotiate more conducive

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bilateral deal for the benefit of domestic players. The Commerce Ministry has already launched consultations with the industry and agencies like Pharmexcil in this regard amidst indications that Japan is trying to push one sided trade agreement with little concessions for Indian medicines, sources said. A meeting has already been held at the senior level to get the feedback from the industry. Indian manufacturers are worried about the attempt by Japan, a major emerging market for Indian generic players, to reserve the right to modify or withdraw its proposals with regard to the term of 'generic medicines' in the article for cooperation on generic medicines under the proposed bilateral treaty.

#### **India: IMA seeks subsidised loans for doctors**

The Indian Medical Association (IMA) has said that the government must provide support to doctors in the form of subsidised loan rates for purchasing equipment in order to be able to provide healthcare to all across the country. Government can render services to the poor and the rural population only when we are able to procure the necessary equipment at affordable prices, IMA President said. The state government could extend loans to all doctors under several of its schemes, he said. Besides following a proper diet, those above 35 years of age must go for regular health checkups, he added. The IMA would focus on enrolling more members, Samaran said adding, of the six lakh doctors registered with the Medical Council of India only 0.18m doctors are members of the IMA. The IMA would also make efforts to being about the government to consult it before making crucial decisions pertaining to medical health, he said.

#### **India: Gujarat govt. to increase retirement age of doctors**

Gujarat Government has decided to increase the retirement age of doctors and teaching faculties in medicine from 58 to 62 years. The doctors and teachers of the dental colleges are also included in this decision. This is in view of the perennial shortage of doctors in hospitals and teaching faculties in medical colleges. With increase in the retirement age by four years, the staff will be available for four more years.

#### **India: ESIC hospital facilities elude BPL families**

The government's much-hyped plan to extend health care facilities by Employees State Insurance Corporation hospitals to BPL families covered under the Rashtriya Swasthya Bima Yojana has gone sour. An ordinance by the labour ministry amending the Employees State Insurance Act to extending the health care facilities to BPL families has lapsed and is no longer in effect. The government can make changes to law through ordinance when the Parliament is not in session. The Employees' State Insurance Act, 1948 is a social security legislation that provides medical care in case of sickness, maternity, disablement and death due to employment injury to employees drawing wages up to Rs10,000 per month. RSBY is a scheme that provides health insurance cover up to Rs30,000, tapped in a smart card given to the Below Poverty Line (BPL) families. The labour ministry had amended the ESI Act after it realised that facilities at the hospitals under ESIC were under-utilised.

#### **India: 0.15m nurses are needed abroad**

The Government School of Nursing held a 'Lamp Lighting Ceremony' at Rangamandir. T. Dileepkumar, president of the Indian Nursing Council (Government of India), was felicitated on the occasion. Retired director of the Health and Family Welfare Services Dr. M.T. Hemareddy said on the occasion that there were nearly 0.15m jobs for English-speaking nurses in western countries. About 1m nurses will be required in India and abroad in the next few years. To meet the demand, the Government has increased the budgetary allocation for nursing education considerably over the years, he added. The present colleges are not able to produce excellent students in the absence of adequate staff and infrastructure. Both, the Union and the State Governments should strive to provide better facilities to these colleges, he said.

#### **Indian doctors abroad may get nod to practise back home**

With India facing a shortage of about 600,000 doctors, the Central Government is now considering granting permission to Indian physicians "The government would soon initiate talks with Medical Council of India (MCI) and Indian Medical Association (IMA) to work out modalities to help Indian specialists and experts in various disciplines practise medicine in their homeland," Minister for Overseas Indian

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Affairs Vayalar Ravi said Saturday. Ravi was addressing the second Indo-US Healthcare Summit organised by American Association of Physicians of Indian Origin (AAPI) in the capital. According to the Planning Commission, India faces a shortage of about 600,000 doctors, one million nurses, 200,000 dental surgeons and large numbers of paramedical staff.

#### **India: WB govt to attract investments in healthcare sectors**

The West Bengal government is going to intensify its efforts to attract investment in pharma and medical equipment manufacturing sectors. The government feels these are the two sectors not affected by the slowdown and would spur the state's economy. The state is also going to double its investment in healthcare as per the IMF guidelines.

#### **India: Govt plans Rs1bn cancer fund**

The government is all set to launch a National Cancer Fund – the first such financial pool or a single disease – that will cover all costs incurred by below poverty line (BPL) patients affected by cancer. The Rs1 billion fund was cleared by the finance ministry. Since cancer requires prolonged treatment, the Union health ministry had proposed the setting up of a special fund that will benefit BPL patients suffering from cancer. This is how the fund will work: the ministry has identified 10 BPL states -- Bihar, Orissa, Andhra Pradesh, Madhya Pradesh, Rajasthan, Uttar Pradesh, West Bengal, Tamil Nadu, Karnataka and Maharashtra -- which will be given Rs crore each for the first year from the fund while the other states will receive Rs75 lakh each during the same period. From 2010, the states will contribute to the fund which will then be matched by the Union health ministry.

#### **India gets US\$260m grant from Gavi for Hib immunisation programme**

The Global Alliance for Vaccines and Immunization (Gavi Alliance), an organisation that aligns public and private resources in a global effort to create greater access to the benefits of immunisation, will provide a grant of around US\$260m to India for introducing Hib vaccines in its Universal Immunization Programme. The Indian government will introduce Hib vaccination across the country under the Universal Immunization Programme in April this year. This will be followed by the pneumococcus vaccination in 2010 across the country. The decision by the Union government to take the programme forward comes after recommendations from Indian Academy of Paediatrics (IAP) in April 2008 which insisted on Hib, hep B and MMR vaccines to be included in the national immunization programme with immediate effect.

#### **India: Domestic medical devices industry seeks guidelines**

The Rs100 billion domestic medical devices industry has approached the ministry of health and family welfare for a globally harmonised regulatory guidelines and audit through internationally notified quality certification organisations to enable exports. According to medical device manufacturers, the domestic industry is facing problems in the absence of clear regulations and necessary licences. Even as Middle East, Africa and South America are prime export markets for Indian medical device manufacturers, these companies claim that they are bearing losses as they are unable to export for last six months.

## **FDA APPROVALS**

#### **USA: IMPAX receives final FDA approval for Omeprazole 40mg Capsules**

IMPAX Laboratories, Inc through its generic drug division Global Pharmaceuticals announced that the USFDA granted final approval of the company's Abbreviated New Drug Application (ANDA) for a generic version of Prilosec 40mg delayed-release capsules. AstraZeneca markets Prilosec for the treatment of duodenal/gastric ulcers and GERD (gastro-esophageal reflux disease). The company's versions of generic Prilosec (including previously approved and marketed 10mg and 20mg Capsules) are one of 12 products covered under its strategic alliance entered into in June 2001 with a subsidiary of Teva Pharmaceutical Industries Ltd. Teva began marketing the 40mg product immediately.

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**USA: Mylan receives final FDA approvals of Lamictal and Lamictal CD tablets**

Mylan Inc had announced that its subsidiaries Mylan Pharmaceuticals Inc and Genpharm ULC received final approvals from the USFDA for their Abbreviated New Drug Applications (ANDAs) for Lamotrigine Tablets. Genpharm also received final FDA approval for its ANDA for a separate Lamotrigine product, Lamotrigine Tablets Chewable Dispersible (CD). Mylan Pharmaceuticals' and Genpharm's ANDAs were approved for the 25mg, 100mg, 150mg and 200mg strengths of the generic version of GlaxoSmithKline's Lamictal(R) Tablets. This product had annual US sales of approximately US\$2.5 billion for the 12 months ending September 30, 2008, for the same strengths according to IMS Health.

**USA: Mylan receives final FDA approval for generic version of Prilosec delayed-release capsules**

Mylan Inc announced that its subsidiary Mylan Pharmaceuticals Inc received final approval from the USFDA for its supplemental ANDA for Omeprazole Delayed-release (DR) Capsules USP, 40mg, the generic version of AstraZeneca's Prilosec(R) DR Capsules. Omeprazole DR Capsules are indicated for the treatment of peptic ulcers and gastroesophageal reflux disease (GERD). This product had annual US sales of approximately US\$211m for the 12 months ending September 30, 2008, for the 40mg strength according to IMS Health.

**USA: Mylan gets USFDA final approval for generic Depakote ER**

Mylan Inc announced that its subsidiary Mylan Pharmaceuticals Inc has received final approval from the USFDA for its ANDA for Divalproex sodium Extended-release (Divalproex ER) tablets, 250mg and 500mg. Mylan has been awarded 180 days of marketing exclusivity for the 500mg strength, which it will begin to ship February 2. Mylan was the first company to file a substantially complete ANDA containing a Paragraph IV certification for the 500mg strength. Mylan is shipping the 250mg strength immediately.

**USA: APP Pharmaceuticals launches Rocuronium Bromide Injection**

APP Pharmaceuticals, Inc, a leading manufacturer of multi-source and branded injectable pharmaceutical products, announced that it has launched Rocuronium Bromide Injection, the generic equivalent of Organon's Zemuron. In addition to safety measures such as barcoding and latex-free stoppers, APP has incorporated a peel off syringe label on all of its rocuronium vials, said Thomas H Silberg, president and chief executive officer of APP Pharmaceuticals. "Adding this feature to the vials enables healthcare facilities to comply with National Patient Safety Goal 3D, which requires labelling on all medications, syringes for perioperative and other procedural settings. APP's rocuronium is AP-rated and preservative-free, and is marketed in two dosage forms, 50mg/5ml and 100mg/10ml. One of the most widely used muscle relaxants in the United States, Canada and many European countries, according to IMS data, 2007 sales of rocuronium in the United States were approximately US\$127m or 10m units.

**USA: USFDA to review Sirion's ophthalmic gel Ganciclovir NDA**

Sirion Therapeutics, Inc, a privately held ophthalmic-focused biopharmaceutical company, announced that its New Drug Application (NDA) for ganciclovir ophthalmic gel, 0.15%, has been accepted for review by the USFDA. Sirion Therapeutics is seeking approval for ganciclovir as a treatment for herpetic keratitis, an ocular disease caused by the herpes simplex virus. The FDA has issued an action date in late fall of 2009, under the Prescription Drug User Fee Act. If approved by the FDA, ganciclovir ophthalmic gel would become the first topical ophthalmic antiviral treatment launched in the US in almost three decades. This product would provide a significant new option for physicians in the treatment of patients with herpetic keratitis.

**USA: US nod for Watson's oxybutynin gel 10% for overactive bladder**

Watson Pharmaceuticals, Inc, a leader in generic and specialty branded pharmaceuticals, announced that the USFDA has approved Gelnique (oxybutynin chloride) gel 10%, the first and only topical gel for the treatment of overactive bladder (OAB) with symptoms of urge urinary incontinence, urgency, and frequency. The US OAB market currently exceeds US\$1.8 billion annually and continues to grow each year. Gelnique is a quick-drying, clear and colourless, fragrance-free hydroalcoholic gel containing

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oxybutynin chloride, an antispasmodic agent. Applied once daily to the thigh, abdomen, upper arm or shoulder, a one-gram (approx. 1ml) dose of 100mg/g Gelnique delivers a consistent dose of oxybutynin through the skin over a 24-hour period, providing strong efficacy without sacrificing tolerability.

#### **USA: Acura submits NDA for Acurox tabs**

Acura Pharmaceuticals, Inc and King Pharmaceuticals, Inc announced that Acura has submitted a NDA for Acurox (oxycodone HCl/niacin) tablets to the USFDA including a request for priority review. The FDA is expected to determine whether to accept the NDA for filing and consider the priority review request within 60 days. If approved, Acura and King believe Acurox will be the first FDA approved immediate release opioid analgesic designed to deter swallowing excess quantities of tablets and other common methods of misuse and abuse. According to the National Survey on Drug Use and Health published by the Substance Abuse and Mental Health Services Administration in 2006, immediate-release opioids are abused 10 times more frequently than extended-release opioids.

#### **USA: Prism Pharma receives USFDA nod for Nexterone injection**

Prism Pharmaceuticals announced that the USFDA has approved the NDA for Nexterone (amiodarone HCl) injection, a novel, patent-protected, cosolvent-free formulation of the antiarrhythmic agent Amiodarone IV, originally marketed in the US by Wyeth as Cordarone Intravenous. Nexterone is indicated for the treatment and prophylaxis of frequently recurring ventricular fibrillation and hemodynamically unstable ventricular tachycardia in patients refractory to other therapy.

#### **USA: Cubist Pharma submits 2 INDs with US FDA**

Cubist Pharmaceuticals, Inc submitted two Investigational New Drug Applications (INDs) with the USFDA. The INDs signify the company's intentions to begin clinical investigation (human trials) for CB 182,804, a Cubist-discovered, potent, cidal, IV lipopeptide in development as therapy for the treatment of multi-drug resistant (MDR) Gram-negative infections, and CB-183,315, a Cubist-discovered, potent, oral, cidal lipopeptide in development for the treatment of Clostridium difficile associated diarrhoea (CDAD).

### **Europe**

#### **Israel: Teva announces approval of generic risperdal oral solution**

Teva Pharmaceutical Industries Ltd (Nasdaq: TEVA) announced that the USFDA has granted final approval for the company's ANDA to market its generic version of Janssen's antipsychotic agent Risperdal (Risperidone) Oral Solution, 1mg/ml. Shipment of this product has commenced. As the first company to file an ANDA containing a paragraph IV certification for this product, Teva has been awarded a 180-day period of marketing exclusivity. The brand product had annual sales of approximately US\$78m in the United States for the twelve months that ended September 30, 2008, based on IMS sales data.

### **OTHERS**

#### **Americas**

#### **USA: Outsourcing from US to Indian pharma cos likely to be affected**

With Barack Obama's election as the President of the United States, outsourcing of activities from the US to the Indian pharma industry might get adversely affected, a top industry official said. President Obama has a conservative stance on outsourcing of services since he wants to create jobs and protect existing ones (in the US). As the Indian pharma industry is sustaining mainly on outsourcing, especially from the US, the future does not appear very smooth, pharma major, Promed Group's President, Deepak Bahri said. There will be increased competition in the US generics market since the US Food and Drug Administration (FDA) - approved plants will enable many players to enter into the US market, earlier ruled exclusively by a few big companies, he added.

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**USA: Myriad Pharma acquires HIV drug bevirimat from Panacos Pharma**

Myriad Pharmaceuticals, Inc has acquired all rights to bevirimat from Panacos Pharmaceuticals, Inc for an upfront payment of US\$7m. The upfront payment represents the total payment for bevirimat and will be expensed by Myriad Genetics, Inc, the parent company of Myriad Pharmaceuticals, during its third fiscal quarter ending March 31, 2009. Myriad Pharmaceuticals has no future milestone or royalty obligations to Panacos. The assets include all patents and patent applications related to the compound, all product inventories, ownership of all clinical data and all rights to regulatory filings.

**USA: Champions Bio, Concordia Pharma enter royalty agreement for oncology drug**

Champions Biotechnology, Inc has entered into a royalty agreement with Concordia Pharmaceuticals for the use of Salirasib, Concordia's novel compound for the treatment of cancer, in combination with another targeted drug. Under the terms of the agreement, Champions will use its Biomerk Tumorgraft Preclinical Platform to evaluate a combination therapy indication for Salirasib, a RAS antagonist. This agreement modifies an earlier preclinical services agreement between the companies and now provides royalty rights for Champions Biotechnology for a specific combination therapy indication for Salirasib in the event that required milestones are achieved.

**USA: Medarex files IND for antibody-drug conjugate, MDX-1203**

Medarex, Inc. announced the allowance of an investigational new drug (IND) application filed with the US Food & Drug Administration (FDA) for MDX-1203, the company's first Antibody-Drug Conjugate (ADC) candidate generated from its proprietary technology. MDX-1203 is comprised of a potent cytotoxic prodrug chemically linked with a fully human anti-CD70 antibody. CD70 is expressed in renal cell carcinoma (RCC), leukaemias, lymphomas, and other cancers. The phase 1 study will evaluate MDX-1203 for the treatment of advanced/recurrent RCC and relapsed/refractory B-cell non-Hodgkin's lymphoma (NHL).

**Americas****USA: Hospital woes pose biggest risk to medtech sector**

A deteriorating outlook for hospital capital spending will squeeze medical device makers and keep pressure on the shares in 2009, though cardiology and diagnostics could offer few bright spots for investors. Medical technology stocks outperformed the overall market in 2008 but were not immune to the broader market's pain. The Standard and Poor's Health Care Equipment Index (GSPMED) fell 31%, as the S&P 500. SPX sank 41%. The weakening economy is causing cash-strapped patients to postpone procedures such as knee replacements, atrial fibrillation ablation and bariatric surgery, and analysts expect significant declines in hospital spending on capital equipment -- everything from CT scanners to beds and endoscopes.

**Europe****UK****London: GSK, Genmab seek US FDA approval for ofatumumab to treat blood cancer**

GlaxoSmithKline (GSK) and Genmab A/S announced the submission of a Biologics License Application (BLA) to the US Food and Drug Administration (FDA) for Arzerra (ofatumumab) to treat patients whose chronic lymphocytic leukaemia (CLL) is resistant (refractory) to previous therapies. If approved, ofatumumab would be the first monoclonal antibody targeted to CD20 available for this patient population. CLL is the most common form of adult leukaemia in the Western world, affecting more than 90,000 Americans. Patients with refractory CLL need new therapies since less than 25% respond to most current treatments while still having to cope with adverse effects.

## Asia Pacific

### Malaysia: Healthcare industry to expand by 8% in 2009

Despite the uncertain global economic environment, the Malaysian healthcare industry is anticipated to grow by at least 8% in 2009, according to global market research firm Frost & Sullivan. The firm's senior consultant for healthcare practice in Asia Pacific, Pawel Suwinski, said the growth will include medical devices and insurance on healthcare and supported by demand from the population and government budget. The outlook for the healthcare industry in Malaysia remains cautiously optimistic provided oil prices do not escalate. Another senior consultant on healthcare from the firm, Tham Lin Hui, said the current global economic crisis also presented opportunities for the local pharmaceutical industry to expand. Frost & Sullivan is of the view that there will be more corporate mergers and acquisitions activities and the adoption of new technologies for vaccines and therapeutic drugs.

### Indian medical tourism to touch Rs95bn by 2015: Assocham

India's medical tourism sector is expected to grow at an annual rate of 30% to become a Rs95 billion industry by 2015 as foreign arrivals will increase to avail treatment at lower costs, industry body Assocham said. The cost of surgery in India is one-tenth of what it is in the US and Western Europe and sometimes even lesser, the chamber said. About 0.18m foreigners visited India for treatment in the first eight and half months of the current fiscal and their number would increase by 22% to 25% in the coming years, it said. While a heart-valve replacement costs about US\$0.2m in the US, in India it can be done in US\$10,000, which also includes round-trip airfare and a vacation package, the industry body said. India provides world-class medical facilities with hospitals and specialised multi-specialty health centres providing their expertise in areas such as cosmetic surgery, dental care, heart surgeries and coronary bypass.

### India will account for 60% of world's heart diseases by 2010

Muscle protein mutation in heart disease, carried by one in a 100 people, is the world's leading killer. By 2010, India alone will account for 60% of the world's share of such cases. A team of 25 scientists from four countries explained that one percent of the world's population carries this mutation almost guaranteed to cause heart problems. And most of them come from India. The mutation, a deletion of 25 letters of genetic code from the heart protein gene MYBPC3, is virtually restricted to people from the Indian subcontinent, afflicting people across all caste, faiths or religious calling. And perhaps eventually new drugs could be developed to enhance the degradation of the abnormal protein and postpone the onset of symptoms. There is a market of 60m people waiting.

### Walden University offers 3 new courses; MS in leadership, BS in instructional design & tech and BS nursing

Walden University, one of the leading providers of online degrees, is offering three new degree programmes designed to meet increasing demands for qualified professionals in the fields of nursing, instructional design and technology, and management leadership with the addition of its Bachelor of Science in Nursing, B.S. in Instructional Design and Technology, and M.S. in Leadership programmes.

### CREMA to set up campus in Hyderabad

Clinical Research Education & Management Academy (CREMA), a premier institute offering state-of-the-art education in the field of clinical research, plans to set up its fourth campus in the prime location of Banjara Hills in Hyderabad. The campus, which will start functioning from March 2009, will be accommodated in 7,000 sq ft area with modern facilities like Wi-Fi, a computer lab, library. The institute will offer one year Post Graduate Diploma in Clinical Research, Pharmacovigilance and Clinical Data Management. CREMA has campuses operating successfully in Mumbai, Bangalore and Delhi.

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**AP private pharmacy colleges urge AICTE to hike student intake for M Pharm, B Pharm courses**

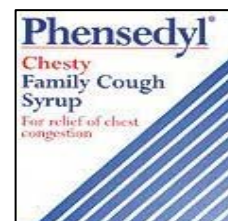
The Andhra Pradesh Private Pharmacy Colleges Management Association (APPPCMA) has once again urged the All India Council for Technical Education (AICTE) to increase the number of student intake in the pharmacy colleges from the existing 10 to 25 students for M Pharm course and from 60 students to 120 students for B Pharm course. The number of intake for the M Pharm course should be raised from 10 to 25. At present, only 10 students are given admission in the first year followed by 15 to 18 students intake in the third year. In order to make these colleges financially viable to maintain Ph D qualified faculty and also to give best scientific education to the students, the AICTE should consider allowing 18 students in the first year and 25 students by third year. The private pharmacy colleges have also demanded to the AICTE to increase the number of intake for the B Pharm course from the existing 60 students to 120 students for the effective utilisation of physical infrastructure available with these colleges. They have asked the AICTE to raise the faculty-students ratio from the existing 1:15 to 1:20 for the pharmacy education to make it more practicable

## Product Focus – Phensedyl Cough Linctus

### PHENSEDYL COUGH LINCTUS

#### Introduction

Phensedyl Cough Linctus contains codeine phosphate, promethazine hydrochloride and ephedrine hydrochloride. It is an orange-brown coloured liquid, with a characteristic odour, mainly of chloroform and banana.



Composition	Drug Information	
	Each 5ml contains the following: Promethazine Hydrochloride - 36mg Codeine Phosphate - 90mg Ephedrine Hydrochloride - 72mg	Brand Name
	Major Manufacturer	Piramal Health Sciences
	Indications	Alleviation of cough
	Therapeutic segment	Antitussive and Expectorants

**Storage:** It can be stored below 25°C. Protect from light. Keep out of reach of children.

#### Dosage

**Adults:** 5 to 10ml three times a day.

**Children:** 2 - 5 years: 2,5ml (a half medicine measureful) two to three times a day.

**5 - 10 years:** 2,5ml (a half medicine measureful) to 5ml (one medicine measureful) two to three times a day.

**Over 10 years:** 5ml (one medicine measureful) to 10ml (two medicine measurefuls) two to three times a day.

#### Promethazine hydrochloride:

Paradoxical CNS stimulation may occur especially in children, with insomnia, nervousness, euphoria, irritability, tremors, nightmares, hallucinations, and convulsions. In high doses, CNS stimulation may be attributed to antimuscarinic activity. Extra pyramidal symptoms may develop.

Other adverse effects include dry mouth, thickened respiratory tract secretions and tightness of the chest, blurred vision, urinary difficulty and retention, a reduction in tone and motility of the gastro-intestinal tract resulting in constipation and increased gastric reflux; at high doses, transient bradycardia followed by tachycardia with palpitations and arrhythmias; also at high doses, CNS stimulation.

#### Codeine Phosphate:

Dry mouth sweating, facial flushing, vertigo, bradycardia, palpitations, orthostatic hypotension, hypothermia, restlessness, changes of mood, hallucinations, and miosis may also occur. These effects tend to occur more commonly in ambulant patients than in those at rest in bed and in those without severe pain. Raised intracranial pressure occurs in some patients. Muscle rigidity has been reported following high doses. The euphoric activity of codeine and similar compounds has led to their abuse.

#### Side-effects of Promethazine

Sedation
Varying from slight drowsiness to deep sleep
Lassitude
Dizziness
Inco-ordination

#### Side-effects of codeine phosphate

nausea
vomiting
constipation
drowsiness
confusion
tolerance generally develops with long-term use
but not to constipation

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Larger doses produce respiratory depression and hypotension, with circulatory failure and deepening coma. Convulsions may occur, especially in infants and children. Excitement may also occur.

### Ephedrine Hydrochloride:

Central effects of ephedrine include fear, anxiety, restlessness, tremor, insomnia, confusion, irritability, and psychotic states. Appetite may be reduced and nausea and vomiting may occur.

Effects on the cardiovascular system are complex. Stimulation of alpha-adrenergic receptors produces vasoconstriction with resultant hypertension. The rise in blood pressure may produce cerebral haemorrhage and pulmonary oedema. There may also be a reflex bradycardia, but stimulation of beta1-adrenergic receptors of the heart may produce tachycardia and cardiac arrhythmias, anginal pain, palpitations, and cardiac arrest; hypotension with dizziness and fainting, and flushing, may occur.

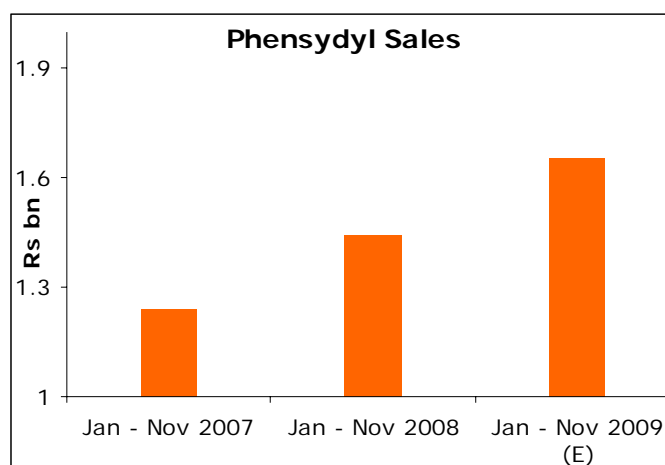
Other effects that may occur with ephedrine include difficulty in micturition and urinary retention, dyspnoea, weakness, altered metabolism, sweating, and hypersalivation. Headache is also common.

### Precautions

- False negative and positive results have been reported with some pregnancy tests.
- Elderly patients are also more susceptible to many adverse effects of promethazine, including antimuscarinic effects, sedation, and hypotension.
- Promethazine may suppress positive skin test results and should be stopped several days before the test.
- Codeine phosphate should be given with caution or in reduced doses to patients with hypothyroidism, adrenocortical insufficiency, impaired kidney or liver function, prostatic hypertrophy, shock, or inflammatory or obstructive bowel disorders. It should be used with caution in patients with myasthenia gravis.
- The depressant effects of codeine are enhanced by depressants of the central nervous system such as alcohol, anaesthetics, hypnotics and sedatives, tricyclic antidepressants, and phenothiazines.
- Ephedrine should be used with caution in patients who may be particularly susceptible to its effects, particularly those with hyperthyroidism. Great care is also needed in patients with cardiovascular disease such as ischaemic heart disease, arrhythmia or tachycardia, occlusive vascular disorders including arteriosclerosis, hypertension, or aneurysms. Anginal pain may be precipitated in patients with angina pectoris.
- Care is also required when ephedrine is given to patients with diabetes mellitus or closed angle glaucoma.
- An increased risk of arrhythmias may occur if ephedrine is given to patients receiving cardiac glycosides, quinidine or tricyclic antidepressants.

### Market Scenario

Cough and cold formulations sold the maximum among the 10 top selling brands in the domestic market, with total sales touching Rs2.70 billion, compared to sales of only one anti-diabetes (insulin) drug reaching Rs900m in 2006. The cough and cold segment led by Phensedyl Cough Linctus and Corex cough syrup was the largest selling category in 2006, followed by pain-killer drug, Voveran. Antibiotic drug Taxim and Vitamin-B complex capsules Becosule are fourth and fifth largest brands in terms of volumes.



Source: economic times; Cygnus Research

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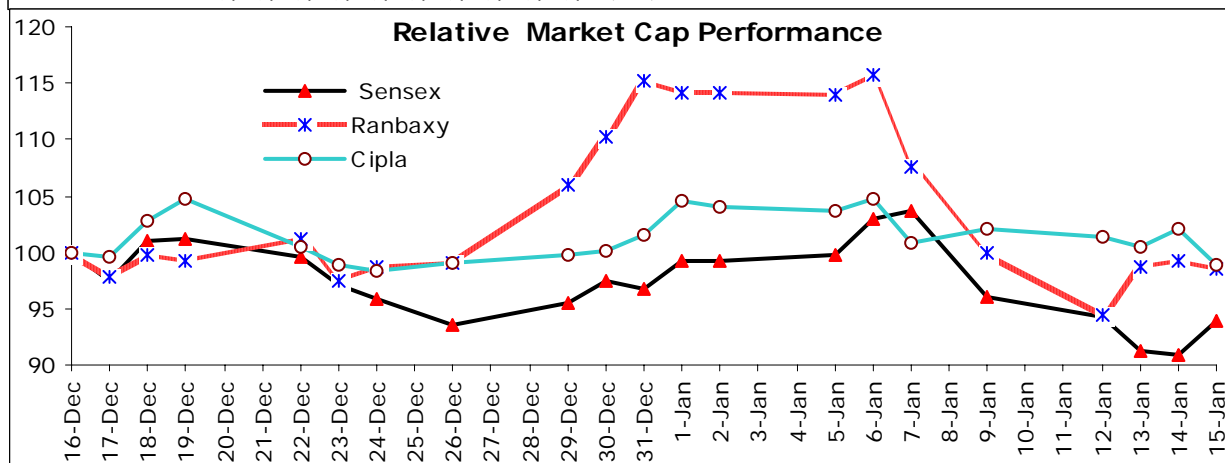
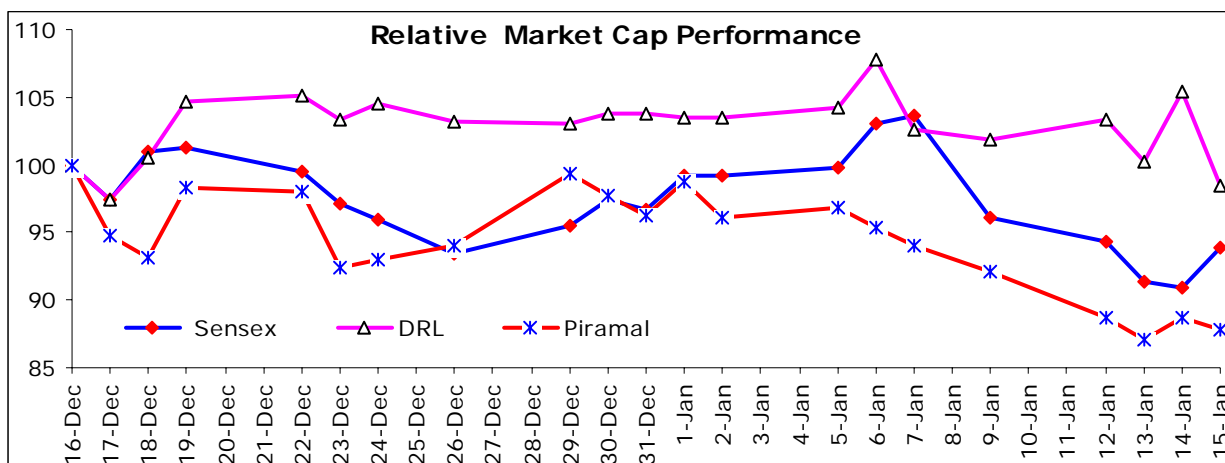
Phensedyl which was the no 1 brand, grew nearly 50% during January to October 2006 with volumes notching Rs1.35 billion. The brand also reported the highest growth among the top 10 brands. Piramal Healthcare's Phensedyl maintains its number two position with sales of around Rs1.44 billion in Jan – Nov 2008 from Rs1.24 billion in Jan – Nov 2007, with a hike of 16%.

The drug's market share in the age group of 3-5 years was soaring, but it plummeted in the older children segment. Reason: the drug induced sleepiness. While this suited parents of toddlers, it bothered the older children. The company deactivated the drowsy sensation and changed the product combinations.

### Outlook

Phensedyl, the second largest selling drug in the Piramal Healthcare Limited, is estimated to grow by 15% to reach Rs1.65 billion by 2009. The firm's cough syrup has been growing 15% on an annualised basis. The data notes that doctors' prescriptions have increased 11% the last quarter, over the previous year, which is estimated to witness hike of 14% by 2010.

## Stock Scan



Source: BSE India; Cygnus Research

	16 Dec - 20 Dec	21 Dec - 27 Dec	28 Dec - 3 Jan	4 Jan - 15 Jan
<b>Sensex</b>	During the week, Sensex rose marginally by 1.23% as	The market ended the week on a weak note with a fall of 6.03%, led by the	It was a good week for the markets; short covering (as the	During the week, markets plunged by 11.95% despite some positive news on
<b>RANBAXY</b>	No major movement has seen in the share price during this period under consideration.	Stock price remained almost flat.	Positive sentiments in the market made its share price post a growth of 15.20%.	The Sensex has slipped into the negative zone and negative sentiments in the market made its share price fall.

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<b>CIPLA</b>	Moved in tandem with Sensex and gained around 4.75%.	Weak global cues made the share price fall by 5.73%.	Moved in tandem with Sensex and gained around 5.00%.	During this period share price lost around 5.16% due to negative sentiments prevailing in the market.
<b>DRL</b>	Stock price gained around 4.73% due to positive sentiments prevailing in the market.	Moved in tandem with Sensex and lost around 1.48%.	During the period under consideration the stock price remained almost flat.	Negative sentiments in the market made its share price fall.
<b>PIRAMAL</b>	During this period share price lost around 1.70%.	Negative sentiments in the market made its share price fall.	Moved in tandem with Sensex and gained around 2.08%.	The Sensex has slipped into the negative zone and negative sentiments in the market made its share price fall by 8.23%.

## Regulatory Issues

### Global: Regulatory hurdles in US, UK hamper diagnostics outsourcing

The outsourcing of diagnostics and lab-testing services to India has proved to be a non-starter as regulatory hurdles in the US and UK make it mandatory for the companies to establish labs in the country and even employ local doctors. High-end tests such as genetics and molecular biology, which are labour-intensive, are sent to India as they can be serviced at nearly one-eighth the costs of developed markets. Several Indian diagnostic chains have vied for outsourced tests, which account for 1-2% of the estimated US\$50 billion US diagnostic market. However, accreditation of labs, pathologists and technicians to international standards has ensured that only 3-4 big companies are able to address this opportunity. "The need to have direct lab presence in the target country to service medical reimbursements and insurance claims is a roadblock," CEO of Dr Lal Pathlabs, Dr OP Manchanda said. In addition, companies are expected to employ international doctors, which push up costs further. Dr Lal Pathlabs, however, plans to address this market by entering into a revenue-sharing alliance with US-based Ssure Pathlabs.

### FDA Advises Public of Serious Adverse Event with Psoriasis Drug Raptiva

The U.S. Food and Drug Administration today issued a public health advisory concerning three confirmed, and one possible report of progressive multifocal leukoencephalopathy (PML), a rare brain infection, in patients using the psoriasis drug Raptiva (efalizumab). Three of those patients have died. All four patients were treated with the drug for more than three years. None of the patients were receiving other treatments that suppress the immune system.

### Asia Pacific

#### India: Govt may not give in to MNC pressure on data exclusivity

Multinational drugmakers pressurising the government not to approve me-too versions (generics) of their medicines by Indian companies without repeating the research, have received a setback. If the pharmaceutical substance that the local company wants to sell is chemically the same as an already approved MNC drug elsewhere, then the government assumes that the local version is as safe and effective as the MNC drug, even if the Indian company does not produce supporting clinical data. The report suggested that 'data exclusivity' (for MNCs) may prevent domestic companies from getting marketing approvals for generic medicines at lower prices. In India, the drug regulator approves cheaper local drugs, if the second applicant can show it is chemically equivalent. Data exclusivity is required apart from patent (as these are different rights). Earlier a report on data exclusivity was submitted by the Satwant Reddy Panel in May 2007.

#### India: Govt, industry hammer out consensus on definition of counterfeit drugs

The recent meeting by the DCGI with the industry associations has hammered out a consensus on the controversial definition of counterfeit drugs and worked out India's viewpoints to be placed before the WHO executive board later this month. The meeting, attended by all major pharmaceutical associations, has discussed the concerns in the new definition being forwarded by the IMPACT and went through the suggestions made by the industry, sources said. The final definition would be worked out in line with the decisions taken in the meeting. A medical product (medicine, vaccine, diagnostics and medical implants/devices) is counterfeit when it is deliberately and fraudulently mislabelled with respect to its identity and/or source.

#### India: USFDA opens offices in New Delhi and Mumbai

The US Food and Drug Administration (USFDA) opened its offices in New Delhi and Mumbai in a bid to provide greater protection to consumers. The office would facilitate to expedite USFDA's process of giving approvals to medicines from Indian drug makers sold in the US. These officials would conduct inspections of facilities that export medicines to the US and work with the Indian government and the

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pharmaceutical industry to develop certification programmes to further enhance trading relationships between the two countries. India is the fourth largest supplier (by volumes) of drugs and biologics, especially low priced generic medicines to the US.

**India: No antidote to stop copies of patented drugs: Health min**

The health ministry has said it is not equipped with technical expertise to stop domestic pharmaceutical companies from copying patented drugs. The Delhi High Court (HC), in its interim order on December 19, 2008, told the Drug Controller General of India (DCGI) not to allow companies to market generic versions of medicines patented in India. Multinational drug manufacturers Bayer AG and Bristol-Myers Squibb had approached the court against violations of their patent rights. The office of the drug quality regulator DCGI is not equipped to assess patentability of drugs. It can only caution generic drugmakers.

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## Upcoming Events

<b>1</b>	<b>Event</b>	<b>Medical Design &amp; Manufacturing West (MD&amp;M West)</b>
	<b>Date</b>	Feb 10-12, 2009
	<b>Venue</b>	Anaheim Convention Center, Anaheim, California, USA
	<b>Highlights</b>	Medical Design & Manufacturing (MD&M) West, the largest event in the world of its kind brings 1500 leading suppliers to the medical device manufacturing industry together with tens of thousands of attendees representing the world's most innovative medical device companies.
	<b>Contact Details</b>	Organiser: Canon Communications 11444 W. Olympic Blvd., Ste. 900, Los Angeles, USA Tel: +(310)-(4)-454200; Fax: +(310)-(4)-454299
<b>2</b>	<b>Event</b>	<b>Pharmabio World Expo</b>
	<b>Date</b>	Feb 12-16, 2009
	<b>Venue</b>	Bombay Exhibition Centre - Mumbai, Maharashtra, India
	<b>Highlights</b>	The international exhibition will spread over five days at the NSE Exhibition Complex, Goregaon (East), Mumbai. The four-day international conference will take place at the Renaissance Hotel, Powai, where 150 eminent speakers from 20 countries around the world will speak on matters of topical interest to the industry.
	<b>Contact Details</b>	Chemtech Foundation; 26, Maker Chambers VI, Mumbai, India Tel: +(91)-(22)-22874758; Fax: +(91)-(22)-22870502
<b>3</b>	<b>Event</b>	<b>Meditec Clinika 2009</b>
	<b>Date</b>	Feb 21-23, 2009
	<b>Venue</b>	HITEX Exhibition Center, Hyderabad, Andhra Pradesh
	<b>Highlights</b>	Meditec Clinika 2009 presents an opportunity in South Asia as the largest platform for the Medical Equipment and technology industry. We envision Meditec Clinika 2009 to act as a catalyst to bring together a varied genre of medical professionals under one roof to interact, promote and transact business in this industry which will eventually lead to better healthcare for the common man in this densely populated region.
	<b>Contact Details</b>	Orbitz Exhibitions Private Limited; 201/202, Navyug Industrial Estate, T. J. Road, Sewri, Mumbai - 400 015., India Tel: +(91)-(22)-24102801; Fax: +(91)-(22)-24102805
<b>4</b>	<b>Event</b>	<b>Medtec Stuttgart</b>
	<b>Date</b>	Mar 03-05, 2009
	<b>Venue</b>	Messe Stuttgart, Stuttgart, Baden-Wurttemberg, Germany
	<b>Highlights</b>	Medtec Stuttgart is Europe's premier exhibition and conference for medical device development and manufacturing. MEDTEC enables thousands of senior medical manufacturing professionals, representing Europe's most innovative medical device producing companies to meet with over 400 new suppliers of the medical grade raw materials manufacturing technology and outsourcers.
	<b>Contact Details</b>	Organizer: Canon Communications 11444 W. Olympic Blvd., Ste. 900, Los Angeles, USA. Tel: +(310)-(4)-454200; Fax: +(310)-(4)-454299

<b>5</b>	<b>Event</b>	<b>Medical Equipment &amp; Technology Exhibition</b>
	<b>Date</b>	Mar 10-12, 2009
	<b>Venue</b>	Shanghai Exhibition Center, Shanghai, China
	<b>Highlights</b>	Medical Equipment & Technology Exhibition showcases the rapidly progressing scenario of the pharmaceutical industry of China. Alongside Chinese companies a large number of International companies will provide the global overview of this sector with new innovations and research techniques that are already on or in the anvil.
	<b>Contact Details</b>	Organiser: Top Repute Co. Limited, Fu Fai Commercial Center, 27 Hillier Street, Hong Kong, China Tel: +(852)-(852)-28518603; Fax: +(852)-(0)-28518637
<b>6</b>	<b>Event</b>	<b>UAE Dental Exhibition</b>
	<b>Date</b>	Mar 10-12, 2009
	<b>Venue</b>	Dubai International Convention & Exhibition Centre, Dubai, UAE
	<b>Highlights</b>	There will be an International conference presented by well-known speakers from around the globe, which will offer the most up-to-date knowledge to all dental professionals in the region and make use of the scientific resources that will benefit the dental community.
	<b>Contact Details</b>	Organiser: Index Conferences & Exhibitions Org. Dubai Health Care City Block B, Dubai, United Arab Emirates Tel: +(971)-(4)-3624717; Fax: +(971)-(4)-3624718
<b>7</b>	<b>Event</b>	<b>Healthcare Ireland</b>
	<b>Date</b>	Apr 01-02, 2009
	<b>Venue</b>	Main Hall & Serpentine Hall
	<b>Highlights</b>	Healthcare Ireland's international Exhibition contains all the latest products and services that will enhance efficiency, and improve care now and in the future. And by sharing experiences and information with colleagues from different departments, and across the country, we'll develop as individuals, and improve healthcare delivery
	<b>Contact details</b>	Healthcare Ireland Organizing Office, Step House, North Farm Road Tunbridge Wells, Kent UK TN2 3DR, Tel: +44 (0)1892 518877; Fax: +44 (0)1892 518811; E-mail: healthcare-ireland@stepex.com; Web: www.healthcare-ireland.com
<b>8</b>	<b>Event</b>	<b>Womens Healthcare</b>
	<b>Date</b>	Apr 08-11, 2009
	<b>Venue</b>	Dubai International Convention & Exhibition Centre
	<b>Highlights</b>	Womens Healthcare is an event taking place alongside the very well established Bride Show in Dubai. Of the visitors of The Bride Show, more than 60% stated they are the decision maker regarding healthcare treatment in their family. It is vitally important that these women are educated on various health risks and most recent healthcare solutions.
	<b>Contact Details</b>	IIR Middle East P. O. Box, Dubai, United Arab Emirates Tel: +(971)-(0)-43365161; ax: +(971)-(0)-43365886

<b>9</b>	<b>Event</b>	<b>Bangalore Bio</b>
	<b>Date</b>	Apr 15-17, 2009
	<b>Venue</b>	Bangalore International Exhibition Centre, Bangalore, Karnataka, India
	<b>Highlights</b>	Bangalore Bio will offer an unrivalled opportunity in Asia Pacific region to meet with the who's who of the Biotech world in one place at one time. Bangalore Bio will be held at Bangalore International Exhibition Centre from 15 to 17 Apr 2009. In 2008, nearly over 600 delegates, 72 speakers, 150 exhibitors participated in this event.
	<b>Contact details</b>	M. M. Activ, Bangalore UNI Building, Thimmaiah Road, Millers Tank Bund, Bangalore, India Tel: +(91)-(80)-41131912; Fax: +(91)-(80)-41131914

<b>10</b>	<b>Event</b>	<b>Pharmaceutical &amp; Biotechnology Middle East (PABME)</b>
	<b>Date</b>	Apr 20-22, 2009
	<b>Venue</b>	Dubai International Convention & Exhibition Centre, Dubai, Dubai, United Arab Emirates
	<b>Highlights</b>	Pharmaceutical & Biotechnology Middle East (PABME) is an exciting new networking platform for international industry players to converge, network and discuss new business alliances and joint ventures. The event will be a preferred destination for the international Pharma and Biotech Industries and an opportunity not to be missed!
	<b>Contact details</b>	IIR Middle East P. O. Box, Dubai, United Arab Emirates Tel: +(971)-(0)-43365161; Fax: +(971)-(0)-43365886

A joint Initiative by **IPA** and **Cygnus** to enable Pharma Professionals to be more successful

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