

## BHU to open center for stem cell research

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Banaras Hindu University (BHU) is all set to establish a first-of-its-kind stemcell Research & Bone Marrow Transplantation Center in Uttar Pradesh, which will facilitate research on both stem cells and bone marrow transplants. The center is expected to open new avenues of treatment for life-threatening ailments such as cancer, cardiovascular and auto-immune disease in the state. To be ready in another one and a half years, the center is coming up at the cost of 20 crore while the equipment will be worth 40 crore approximately.

There are not many centers in the country that carry out such stem cell research. In Uttar Pradesh, though there is sporadic research going on, no such organized state-of-the-art facility is available. After Hyderabad and Mumbai, Varanasi will be the third such city to host a center meant for inter-disciplinary research for development of new technology in stem cells. It will be a centralized facility where researchers from other life sciences departments as well as from Indian Institute of Technology-BHU will be able to carry out research. The center will be a ten-bed facility for patients who undergo stem cell as well as bone marrow transplant.

So far in the state only Sanjay Gandhi Post Graduate Institute of Medical Sciences (SGPGIMS), Lucknow, offers bone marrow transplant.

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## Technology to curb fake drugs

Gurgaon-based PharmaSecure India has developed mobile authentication technology that empowers the end consumer to check and authenticate their own medicine by SMS, voice or web at mobile number 99010 99010.

According to the company, each medicine package that is coded has a unique, randomly generated alphanumeric code printed directly on the package. When a consumer sends this code by SMS, a message comes back verifying the medicine is genuine.

percent from 2009-14. India is one of the world's leading producers of drugs, but it faces a huge threat by the circulation of spurious medicines being produced by the counterfeit mafia.

“Mobile authentication has high relevance in a country such as India, because it has leapfrogged the landline culture and the mobile has become the way of life. The ease of usage is another advantage in popularizing the concept and its benefits,” adds Mr Nathan Sigworth, founder and CEO, PharmaSecure.

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## **Dr. Reddy's, Merck to develop biosimilars**

Dr. Reddy's Laboratories and Merck Serono, a division of Merck KGaA, announced a partnership to co-develop a portfolio of biosimilar compounds in oncology, primarily focused on monoclonal antibodies (mAbs). The partnership covers co-development, manufacturing and commercialization of the compounds around the globe, with some specific country exceptions.

Dr. Reddy's has been a pioneer and leader in the biosimilars space through proven product development capabilities and the launch of four biosimilars molecules to date. The partnership with Merck Serono expands on Dr. Reddy's presence in the biosimilar space in select emerging markets and enables participation globally.

The deal structure calls for Merck Serono and Dr. Reddy's to co-develop the molecules included in the agreement. Dr. Reddy's will lead early product development and complete phase I development. Upon completion of phase I, Merck Serono will take over manufacturing of the compounds and will lead phase III development. The agreement is based on full R&D cost sharing.

Merck Serono will undertake commercialization globally, outside the US and with the exception of select emerging markets which will be co-exclusive or where Dr. Reddy's maintains exclusive rights. Dr. Reddy's will receive royalty payments from Merck Serono upon commercialization. In the US, the parties will co-commercialize the products on a profit-sharing basis.

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## **Abbott, Syngene opens nutrition center**

Dr Sam Pitroda, advisor to the prime minister of India on Public Information Infrastructure and Innovations and Chairman of the National Innovation Council, inaugurated Abbott's first nutrition research and development (R&D) center in the country. This center is in collaboration with Syngene and is located at the Biocon Park in Bangalore.

The new R&D center will focus on the development of nutrition products for maternal and child nutrition and diabetes care. Among the products being developed for the Indian market are meal complements for diabetics and pre-diabetics. In addition, the center will address local taste and texture preferences with new flavors and formulations.

The state-of-the-art R&D center hopes to enable the expansion of Abbott's nutrition product portfolio. The facility will house a range of integrated capabilities including product development and analytical laboratories as well as a dedicated laboratory for analyzing flavor, sensory elements and packaging. The analytical lab will be equipped with technology for a broad spectrum of nutritional analysis ranging from micronutrient to microbiological testing.

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## **Bigtec to launch mini PCR this year**

Bigtec's mini PCR, TrueLab is a point-of-care, hand-held, real time quantitative mini PCR, that is battery operated. This device detects the disease organism by a polymerase chain reaction (PCR) carried out on a chip that is designed using Microelectromechanical systems (MEMS) technology and is specific to each disease.

Simple to operate, its design is such that a primary healthcare worker can easily use it during field visits as well. The patient sample is fed onto the chip that is entered into the device. The results are obtained in the form of a simple readout on the screen and can be connected to a printer as well. The instrument is also bluetooth enabled.

An important differentiating factor with TrueLab, is the fact that unlike conventional PCRs only one sample at a time can be processed. This has been done on purpose, Mr Chandrashekhar Nair, Director, Bigtec Labs insists. He says, “What usually happens in a lab is that on receiving a sample, the technician waits till the required number of samples are collected before carrying out the PCR. Due to this, there is usually a delay in carrying out the test. In this light we focused on developing the product such that each individual would get results in about 30-40 minutes.”

TrueLab differentiates itself by being a product developed indigenously in India and hence offers a major cost advantage. The price of the device will be roughly 1/5th of the cost of a PCR machine which costs upwards of ~~₹10 lakhs~~ ₹10 lakhs. The subsequent cost of carrying out the test is also reduced accordingly.

## **XCyton to tackle monsoon diseases**

XCyton Diagnostics' Syndrome Evaluation System offers to make diagnosis simpler for the treatment of monsoon-related diseases such as leptospirosis, dengue, and malaria.

The idea behind the SES is to simultaneously detect multiple pathogens. This is facilitated by performing a multiplex amplification followed by detection of the amplified product using reverse dot-blot assay. Primers used for the amplification are designed using virulent specific genes of each pathogen. The amplified products (amplicons) thus obtained are hybridized on an SES platform embedded with signature specific probes for each of the pathogen. The hybridized amplicon probe mixture is detected by an enzymatic reaction that will yield a visible colored spot.

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## **Venus' drug gets US patent**

Venus Remedies, has received a patent from the US Patent Office for a new drug CSE1034, an antibiotic adjuvant entity (AAE). It is effective against a wide range of drug resistant infections including the 'superbugs' such as carbapenemase resistant Metallobetalactamses (MBL) strains.

Dr Mufti Suhail Sayeed, vice president, Venus Medical Research Centre, says, "The US patent of CSE 1034 for Venus Remedies is a landmark development for initiating the process of commercialization of this novel drug, designed specifically to target growing bacterial resistance mechanisms." It is planning to launch this drug in India under the brand name ELORES.

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## **Bharat Biotech, CVD receive \$4mn award**

Bharat Biotech and University of Maryland Center for Vaccine Development (CVD) have received a \$4 million Strategic Translation Award from The Wellcome Trust for clinical development of a new conjugate vaccine. This grant will cover the initial clinical trials beginning in three years to prevent the potentially lethal infectious disease caused by invasive non-typhoidal Salmonella (NTS).

NTS have emerged as an important cause of invasive bloodstream infection in sub-Saharan Africa, among young children with malaria and malnutrition, and among adults with HIV; approximately 20-30 percent of children with such invasive NTS infections die.

Experts from Bharat Biotech and University of Maryland are upbeat on the prospects of developing NTS Conjugate Vaccine. They stated that this project represents a true translational public-private partnership that not only enables potentially lifesaving vaccine technology to move towards the marketplace and to the public health arena, but also demonstrates international multi-party technology transfer collaborations to help advance its science.

The University of Maryland CVD has brought in significant grant funding over the past few decades to support its extensive programs, but this recent achievement of Wellcome Trust funding for its collaborative NTS Vaccine Development project with Bharat Biotech holds special significance.

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## **Boehringer, Lilly launch Linagliptin**

Boehringer Ingelheim India and Eli Lilly and Company India, which represent the *Boehringer Ingelheim - Lilly* global alliance in the country, launched Linagliptin (brand name Trajenta) 5 mg film-coated tablets.

Trajenta (Linagliptin 5 mg tablets) is the alliance's first new product introduction, globally. In India, the *Boehringer Ingelheim-Lilly* alliance already co-promotes Humalog (Injection Lispro).

Linagliptin (Trajenta) is an original research product of *Boehringer Ingelheim*. It is approved in the United States, the European Union and Japan, among other countries, including India. The approval of Linagliptin 5 mg (Trajenta) was based on a clinical trial program which involved approximately 6,000 adults with type 2 diabetes, including patients from India.

The *Boehringer Ingelheim-Lilly* alliance in India now offers oral anti-diabetics as well as contemporary injectable insulins. These offer a choice to the doctor in deciding the optimum therapy, depending on the patient's needs.

The product will leverage the alliance's distribution network and will be available on prescription in pharmacy outlets across the country from June 20, 2012.

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## “Patented products still have relevance in generic era”

At the Drug Information Associates (DIA) workshop held in New Delhi, the experts deliberated on the IP innovation and collaborations. The workshop familiarized the participants with the basic theory and practice of IP regimes in an organization and the responsibilities of industries involved in intellectual property trade. Through this workshop, DIA brought to the forefront various dimensions of licensing associated with IP protection.

On the occasion, K S Kardam, deputy controller of patents and designs, Intellectual Property Office said, “Our Indian companies are just beginning to realize that they also need an R&D department as merely quality control would not help. Unless spending on R&D is scaled up, it will be difficult to create new molecules.” The event was attended by the policy makers, scientists, academicians, IPR professionals and entrepreneurs.

As a part of the deliberations, DIA also put forth the key aspects about claim writing along with practices in different jurisdictions from the EU, US and Indian perspective. The participants were also given training on know-how on licensing and the scope of India as an investment destination. Apart from educative sessions, speakers also provided interesting insights about issues such as patent scenario, research collaboration between industry and academia, recent CL decision in India and underlying patent related issues in specific cases. Policy issues relevant to Indian scenario like patent pooling, open source innovation and India as International Search Agency were also discussed during the sessions.