

LifeCell – Daily News Update

August 18 , 2009

Key Industry News:

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| Publication | pharmabiz.com |
| Headline | <u>Cryo-Save India to launch human adipose tissue stem cells storage services</u> |
| Gist of the article | <p>Cryo-Save India Pvt Ltd, the wholly-owned subsidiary of the Belgium-based adult stem cell storage bank major Cryo-Save Group, is exploring options to launch services to collect and store stem cells from human adipose tissues after liposuction as a potential aid to treating diseases.</p> <p>The Indian launch will be in line with the parent company's global launch of the new service by the end of 2009, according to V R Chandramouli, managing director, Cryo-Save India. The Cryo-Save, Europe's largest adult stem cell storage bank, is developing a technique called Cryo-Lip to retrieve, process and store mesenchymal stem cells (MSC) from fatty tissue, which is now considered as a waste after liposuction.</p> <p>"Once the global launch takes place, we will approach the Drug Controller General of India for approval to collect, process and store the stem cells from fat. The launch in India will be held only after considering and getting approval based on all the existing norms and rules in the country," said Chandramouli.</p> <p>"We expect that the new source of collecting adult stem cells will give us a tremendous opportunity for stem cell therapy in future," he added. However, the company is yet to reach the stage of deciding the technology package for the service. Cryo-Lip would be the first commercially available method for adults to store their stem cells.</p> <p>Cryo-Save India, poised to be the Asia-Pacific Headquarters of the Dutch firm and the R&D hub handling advanced level of research, clinical trials and therapy development, is currently focusing on establishing its stem cell banking services in the country. The company expects to become self-sustainable in revenues through banking services through its collection centres in eight cities within nine to 12 months. After this, the company will initiate the R&D services, said Chandramouli.</p> <p>In addition to the facility built up in Bangalore with an investment of Euros two million (around Rs 13 crore) at the time of launching Indian operations, the company will infuse additional fund of nearly Rs 2.5 crore in near future</p> |

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| | <p>to prepare the facility fully equipped for R&D and therapy services. At present, the Bangalore facility in an area of 10000 sq ft has the capacity to store 300000 cases. The company has arrangement with 150 hospitals for collection of cord blood and tie up with six hospitals for research across the country.</p> <p>The company is also planning to impose charges for storage of cord lining cells from the customers from September 2009. The collection, processing and storage of the cord lining cells for preservation of MSC are currently provided as a free of charge service to the customers. Cryo-Save India, which occupies almost 10 per cent of the Indian market share is expected to reach 20 to 25 per cent market share in next six months and to be the leader in stem cell banking services industry by next year, said Chandramouli.</p> |
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| Publication | english.cctv.com |
| Headline | Italian researchers identify key gene in development of stem cells |
| Gist of the article | <p>Two Italian researchers announced Monday that they have identified a gene which plays a key role in the development of stem cells and is also involved in the most aggressive forms of brain tumors.</p> <p>Antonio Iavarone and Anna Lasorella, researchers at New York's Columbia University Medical Center, said the finding could help find new treatment for brain tumors.</p> <p>They said their work followed major research by other scientists who had produced induced pluripotent stem cells, commonly abbreviated as IPS cells or iPSCs, according to the ANSA news agency.</p> <p>IPS cells are a type of pluripotent stem cell artificially derived from a non-pluripotent cell, by inducing a "forced" expression of certain genes.</p> <p>The researchers, whose study will be published by the prestigious journal <i>Developmental Cell</i>, confirmed that they had identified a gene -- Huwe1-- which produces a protein with the same name.</p> <p>"This protein is capable of destroying some of the key proteins used to produce iPS and restart the transformation of stem cells in adult cells," said Iavarone.</p> <p>Huwe1 could be used to help other researchers find new therapies for brain tumors, according the researchers.</p> <p>"It appears to be indispensable for the proper programming of brain stem cells. We saw that it helps develop the neurons in mice embryos and noticed as well that it is eliminated when the most malignant type of brain tumor -- Glioblastoma multiforme (GBM) -- begins to develop in humans," said</p> |

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| Publication | dailymail.co.uk |
| Headline | <u>The stem cell stitches that aid recovery after surgery</u> |
| Gist of the article | <p>Stitches embedded with patients' own stem cells could dramatically speed up healing after surgery.</p> <p>The revolutionary stitches, developed by scientists in the U.S., release millions of stem cells into surrounding tissues.</p> <p>Stem cells taken from the patient's own bone marrow have the ability to turn into almost any other kind of cell, including bone and blood.</p> <p>Initial tests with the new treatment suggest the cells grow into replacement tissue, such as cartilage, tendon or muscle, replacing that damaged by injury or the surgeon's scalpel.</p> <p>The stem cells also speed up healing by reducing inflammation and releasing proteins to accelerate the repair process.</p> <p>Developed at the Johns Hopkins University in Baltimore, the 'smart stitches' have been designed to treat severe sports-related injuries, involving damage to tendons, ligaments and muscles, which can take up to a year to heal.</p> <p>Experts behind the new stem cell stitches hope they will slash the surgical failure rate.</p> <p>The stem cells are woven into the tiny strands of thread used to make surgical stitches.</p> <p>Using the patient's own cells means there is no problem with the body rejecting them.</p> <p>Early results show the cells survive inside the thread and show signs of turning into new tissue inside the body.</p> <p>So far, testing has been confined to animal studies, but human trials could begin within the next few years</p> |

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| Publication | medindia.net |
| Headline | <u>Light Therapy Can Enhance Stem Cells' Power</u> |
| Gist of the article | <p>In a novel study, University of Central Florida researchers have shown that light energy can be used to harness the healing power of stem cells and guide them to areas of the body that need help.</p> <p>Lead researcher Aristide Dogariu, an optical scientist at the College of Optics and Photonics, and Kiminobu Sugaya, a stem cell researcher at the College of Medicine's Burnett School of Biomedical Sciences have revealed that their work could have longterm implications such as stimulating and</p> |

controlling tissue regeneration for cleaner wound healing.

There is also a possibility of altering the shapes of cells and preventing malignant tumours from spreading throughout the body.

The research team explored the use of a gentler light energy. It showed for the first time that optically induced torques can affect components within cells that drive their motility - their ability to move spontaneously -- and change the orientation of cells within cultures.

Dogariu and Sugaya began exploring the idea of moving an entire cell by focusing on its inner mechanisms. Inside the cells there are slender rods made up of a protein called actin.

"Actin rods are constantly vibrating, causing the cells to move sporadically" Sugaya said.

The researchers demonstrated that low-intensity polarized light can guide the rods' Brownian motion to ever-so-slowly line up and move in the desired direction.

"Stronger light would simply kill them. We wanted to gently help the cells do their job the way they know how to do it," Dogariu added.