

LifeCell – Daily News Update

August 31 , 2009

Key Industry News:

Publication	topnews.in
Headline	New stem cell op may prevent thousands from having hip replacements
Gist of the article	<p>British surgeons at the Spire Hospital in Southampton are using a novel technique that uses stem cells to repair damaged bones.</p> <p>Media reports on this procedure suggest that it may prevent thousands of people from needing to have an artificial hip fitted.</p> <p>Mark Venables, 39, is one patient on whom doctors at the Spire Hospital conducted one of their first operations.</p> <p>He suffers from a condition where bone in his hip died, weakening his joint and causing pain on movement. The surgeons at the hospital used his own stem cells to rejuvenate the affected bone.</p> <p>"I just want to get back to an active life," Sky News quoted Venables as saying before the operation. For the operation, the surgeons first purified stem cells from bone marrow that they had extracted from Venables' pelvis.</p> <p>The doctors then mixed them with cleaned, ground-up bone from another patient, who had had their own hip replaced. After removing the dead tissue from the ball of his hip, the doctors filled the cavity with the mixture of stem cells and donated bone.</p> <p>Surgeon Doug Dunlop said that the bone would have collapsed without the stem cell treatment, and that Venables would have then needed an artificial hip joint. "If this new procedure works, he won't need a hip replacement. It will fix his hip for life," said Dunlop.</p> <p>To date, six patients have been operated using the new procedure, and only one surgery has failed. Professor Richard Oreffo, of Southampton University, is now hoping to improve the technique further by replacing the donated bone with an artificial material containing chemicals that help the stem cells grow. (ANI)</p>

Publication	medindia.net
Headline	Researchers Use Single Gene To Create Embryonic Stem Cells

Gist of the article	<p>Researchers have successfully reprogrammed human nerve cells back to an embryo-like state by using just a single gene. This is an inching closer to curing diseases like Parkinson's using cells generated from a patient's own body.</p> <p>It is known that embryonic stem cells are pluripotent - they can develop into any of the body's cell types. But such cells are not available in large numbers, as they can only be harvested from a donated egg or embryo, and, for ethical reasons, most countries have laws restricting their use.</p> <p>In 2006, Shinya Yamanaka and his colleagues at Kyoto University in Japan successfully made mouse cells pluripotent by reprogramming skin cells into a state like embryo cells.</p> <p>They did so by using retroviruses to insert four genes - known as "factors" - into the cells' DNA. They repeated the trick a year later with human cells.</p> <p>However, using genes and retroviruses in this way increases the risk of the cell becoming cancerous, not just because tinkering with DNA has that effect, but also because two of the four factors are known to cause cancer.</p> <p>In a bid to make these promising cells in a safe way, Hans Scholer's team at the Max Planck Institute for Molecular Biomedicine in Münster, Germany, has been working to achieve pluripotency using fewer factors.</p> <p>Last year, they did this with the two factors that do not cause cancer, and now they have simplified the recipe further, doing it with just one.</p>
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Publication	blogs.tampabay.com
Headline	Cryo-Cell International's Walton: Rising stem cell competition from public cord blood banks
Gist of the article	<p>Haven't heard much in some time about an Oldsmar business that stores stem cells in the form of cryogenically frozen umbilical cord blood. The company is Cryo-Cell International whose stock hit a low of 40 cents earlier this year before crawling over a buck in May. It now trades around \$2.20 a share and the small company's market cap is just under \$26 million. Not a barn burner, but it's holding its own in, as the company's own CEO recently acknowledged, an increasingly competitive industry.</p> <p>Mercedes Walton, Cryo-Cell board chairman, was recently interviewed in a lengthy Q&A by something called BioMedReports. She's served as a director since October 2000, as chairman since June 2002, as interim CEO from April 2003 through August 2005 and as the CEO since September 2005. She has a background in strategic consulting and earlier served as AT&T's vice president-corporate strategy and business development. She graduated</p>

	from Smith College and holds masters degrees from Harvard University and the Massachusetts Institute of Technology. Cryo-Cell paid her \$146,000 last year.
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Publication	timesofindia.indiatimes.com
Headline	Stem cells, Lithium for healing touch
Gist of the article	<p>Stem cell treatment is fast emerging as cure for several chronic diseases, especially chronic spinal injuries. Although experts worldwide are using stem cells from different sources like umbilical cord blood, bone marrow, fetus for trials, doctors say that those extracted from umbilical cord blood are very effective.</p> <p>Scientists at a prominent US university are soon going to start human trials on chronic spinal injury patients using stem cells from umbilical cord blood along with Lithium, a common drug for depression and bipolar disorders.</p> <p>According to Dr Wise Young, research professor at WM Keck centre for collaborative neurosciences at Rutgers University, New Jersey, "Advantages of stem cells from umbilical cord blood are well-known. In the animal trials, we found that Lithium, which is a common drug prescribed by neurologists, helps in stimulating the regeneration of umbilical cord blood stem cells (UCBSC). This will insure faster recovery."</p> <p>In India to present his work on UCBSC along with Lithium and to assist some private hospitals start stem cell trials, Dr Young says that Lithium has very little side effects, as it is widely given to patients suffering from depression. He is soon going to start human trials in 80 chronic spinal injury patients. "We will inject UCBSC on the periphery of the injury site and will put patients on Lithium for six weeks. The dose of Lithium will be closely monitored. As it mixes in the blood stream, it will help stimulate the stem cells to regenerate, thereby, building a bridge of healthy cells over the injury site," said Dr Young.</p> <p>Speaking at a lecture on his research topic at Indian Spinal Injuries Centre (ISIC), Dr Young called UCBSC a "well-behaved child". "Unlike fetus stem cells, which migrate soon after they are injected at the injury site, UCBSC stay where they are injected. They slowly build a bridge of healthy cells over the injury site and Lithium will just expedite the process," said Dr Young.</p> <p>ISIC too is doing stem cell trials on spinal cord injury patients, extracting stem cells from nasal mucosa. "We have been doing stem cell research. It is the only hope for patients with serious spinal injury," said Dr H S Chhabra, medical director, ISIC. Human trials are going to start in US and China in September 2009.</p>