

**LifeCell – Daily News Update**

**August 21 , 2009**

**Direct News:**

Publication	Intoday.in
Headline	<a href="#">Stem Cell Banking?</a>
Gist of the article	<p>The article is basically on Cord Blood banking and how important it is to preserve the cord blood stem cells. It's an educative article touching upon various aspects of Stem Cell which includes:</p> <ul style="list-style-type: none"><li><b>The different kind of transplants</b></li><li><b>How exactly it works</b></li><li><b>Choosing the right bank</b></li><li><b>Difference between public and Private Banking</b></li></ul>

**Key Industry News:**

Publication	sciencedaily.com
Headline	<a href="#">Switching On The Power Of Stem Cells</a>
Gist of the article	<p>Researchers from the Wellcome Trust Centre for Stem Cell Research at the University of Cambridge have pinpointed the final step in a complex process that gives embryonic stem cells their unique ability to develop into any of the different types of cells in the body (from liver cells to skin cells). Their findings, published in the journal Cell, have important implications for efforts to harness the power of stem cells for medical applications.</p> <p>In the last few years, huge strides have been made in stem cell research. Scientists are now able to transform adult skin or brain cells into embryonic-like stem cells in the laboratory. Just like natural embryonic stem cells, these reprogrammed cells can make all the body's cell types. This extraordinary ability is known as pluripotency – 'having several potential outcomes'. It is the basis for the hope that stem cells will one day help fight illnesses like diabetes, Parkinson's or Alzheimer's disease.</p> <p>Despite such exciting developments, scientists still have only a very basic understanding of how cells become pluripotent. Dr Jose Silva, who led the Cambridge research with his colleague Dr Jennifer Nichols, says: "Exactly how pluripotency comes about is a mystery. If we want to create efficient, safe and reliable ways of generating these cells for medical applications, we need to understand the process; our research provides additional clues as to how it occurs. "</p>

	<p>The researchers, funded by public and charitable sources, studied how the rather poetically named protein Nanog helps give cells pluripotency. Nanog takes its name from the celtic phrase 'Tir Nan Og', or 'land of the ever young'. It was identified as a key player in pluripotency in 2003, but until now its exact biological role remained unclear.</p> <p>Dr Silva says: "It was clear that Nanog was important, but we wanted to know how it works. Our research shows that this unique protein flips the last switch in a multi-step process that gives cells the very powerful property of pluripotency."</p> <p>Without Nanog, cells remain in a sort of half-way house. As a result, the embryo can't develop and attempts to reprogramme adult cells fail.</p> <p>But Nanog does not work alone. It appears to be the conductor in charge of an orchestra of genes and proteins that must all play at the right time and in perfect harmony to create pluripotency. Dr Silva added: "The next challenge is to find out exactly how Nanog influences all these other molecules."</p> <p>This research was supported by the Wellcome Trust, the Biotechnology and Biological Sciences Research Council, and the EC Framework 7 project EuroSyStem.</p>
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Publication	bernama.com
Headline	<a href="#"><b>Health Ministry Targets 10,000 Units Of Cord Blood Next Year</b></a>
Gist of the article	<p>The Health Ministry is targeting to have 10,000 units of umbilical cord blood by the end of next year as it promises the treatment of many important disease such as leukaemia and lymphoma.</p> <p>Minister Datuk Seri Liow Tiong Lai said that currently Malaysia had only 3,000 units of umbilical cord blood in the National Blood Bank.</p> <p>More cord blood was needed for successful compatibility match-ups between donor and recipient, he told reporters after opening the Stem Cell Research and Therapy Seminar at the Ampang Hospital here Thursday.</p> <p>"About 70 to 80 leukaemia patients have recovered after undergoing haemopoietic stem cell transplant from umbilical cord blood compared with using chemotherapy and other cancer treatments," Liow said.</p> <p>He also said that the National Transplant Registry 2007 reported that 1,312 haemopoietic stem cell transplants had been performed and registered in the country and 37 per cent of them were performed in government hospitals.</p> <p>"Presently we have 12 centres performing haemopoietic stem cell transplants in the country such as the Paediatric Institute of the Kuala</p>

	<p>Lumpur Hospital, Ampang Hospital and Universiti Kebangsaan Malaysia Medical Centre," Liow added.</p> <p>He encouraged parents to store umbilical cord blood of their babies either in government or private hospitals but it would be used for difference purposes.</p> <p>"The government hospital will use umbilical cord blood depending on patients' needs, no matter whether the donors and patients are related or not, while the private hospital will use it only among donors' families or for the donors themselves," he said.</p> <p>Since last year, the government has restricted the licensing of private stem cell companies in the country to only four and these companies collect and store umbilical cord blood and peripheral blood stems cell for newborns and their parents.</p> <p>"They charge an initial fee of up to RM2,800 per client and an annual maintenance fee of RM250. Some also charge a deposit of up to RM800," Liow said.</p> <p>Earlier he launched the national guidelines for conducting stem cell research and therapy which were produced in collaboration with the ministry, academicians and various expertise from both government and private hospitals.</p> <p>The books published are Guidelines for Stem Cell Research and Therapy, National Guidelines for Haemopoietic Stem Cell Therapy, National Standards for Stem Cell Transplantation: Collection, Processing, Storage and Infusion of Haemopoietic Stem Cell and Therapeutic Cells and National Standards for Cord Blood Banking and Transplantation</p>
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<b>Publication</b>	Timesofindiaindiatimes.com
<b>Headline</b>	<a href="#"><u>Hope for Parkinson's cure stems from cell transplant</u></a>
<b>Gist of the article</b>	<p>A 55-year-old Mulund resident may be the first to be cured of Parkinson's disease if an experiment by a team of doctors from Jaslok Hospital is successful. The doctors claim the disease can be cured by transplanting stem cells into the patient's brain. And they are waiting to see how Bhawarlal Jain, the first human to receive such a transplant, responds to the treatment. If Jain's operation, conducted on August 8, is a success -- which will be known after he spends 18 months in observation--it will be the first known cure in the world for the debilitating disease of the central nervous system.</p> <p>Already, doctors claim that Jain is showing signs of improvement. Jain had been suffering from advanced symptoms of Parkinson's Disease for six years. The spondylitis and joints pain began in 2004 and as the disease</p>

progressed, his movements became slow, and he had trouble walking and talking. "I managed my business until my speech became so impaired that I had to repeat everything at least four times to be understood," said Jain.

He came to Jaslok Hospital in February, when he was told about a new clinical study to evaluate the effect of stem cells on Parkinson's. Ten patients were to be enrolled and Jain chose to be the first volunteer. "When I heard I was going to be the first human to be treated using stem cell transplant, I was excited and scared. I had told my family that I may never return," said Jain.

But 10 days after the operation, both he and his family --wife, two sons, their wives and a grand-daughter--are happier. "I was scared initially but now I am happy that we opted for this operation," said his wife Sukhi (54). The doctors at Jaslok said they did not have to convince Jain for the transplant at all. "All we did was tell him about the procedure and he volunteered himself," said neurologist Pettarusp Wadia, from Jaslok Hospital.

"We chose the stem cells from the marrow of the patient's hip bone as these cells are readily isolated. They can expand in culture and the body can accept them easily. Small quantities of these cells were injected at an interval of every 1mm in his brain," said Dr Paresh Doshi, head of the team who performed the eight-hour-long operation.

However other neurosurgeons are sceptical. Dr Milind Sankhe from Hinduja Hospital in Mahim said, "There is no material or evidence present anywhere which suggests a stem cell transplant can cure Parkinson's. Moreover, it will be tough to prove it is the stem cells which are responsible for the improvement in the patient." Added Atul Goel, neurosurgeon at KEM hospital, "Stem cell transplantation is a complex procedure. The cells have to be taken from the body, cultured in a lab, inserted in some other part of the body and then they can enter the normal functioning of the body. It can't be done in 10 days. Moreover, there is no scientific proof or literature explaining that Parkinson's can be cured this way."