

News Article Name	Highlights
<ul style="list-style-type: none"> <li>◆ <b>Apollo signs MoU with StemCyte for cord blood bank facility</b></li> </ul>	<p>"This is envisaged to be the largest for public and private cord blood collection in India," a statement issued by industry body CII said.</p>
<ul style="list-style-type: none"> <li>◆ <b>French Researchers Successful in Creating Human Skin from Stem Cells</b></li> </ul>	<p>The aim of the research was to speed the reconstruction of skin tissue for burn victims.</p>
<ul style="list-style-type: none"> <li>◆ <b>Adult stem cells may treat chronic heart disease: Study</b></li> </ul>	<p>Scientists in the U.S. have found that patients with severe angina--chest pain-- when treated with their own purified and potent stem cells exhibited less pain, fatigue and an improvement in their exercise tolerance</p>

### 1. **Apollo signs MoU with StemCyte for cord blood bank facility**

**25<sup>th</sup> November, 2009**

Private healthcare chain Apollo Hospitals has signed a memorandum of understanding with US-based life sciences company StemCyte Inc for setting up cord blood bank facility in Ahmedabad.

"This is envisaged to be the largest for public and private cord blood collection in India," a statement issued by industry body CII said.

Cord blood is the blood collected from the umbilical cord at the time of childbirth, after the cord has been detached from the newborn. It is used for various types of stem cell therapies.

Their collaboration will also provide stem cell therapies to treat patients with certain disorders and other immune deficiency disease, it added.

Both the companies are also looking at a joint venture for conducting clinical studies to develop cell therapies for disease such as Parkinson's, Alzheimer's, Spinal Cord injuries, CII said.

**Source: PTINews**

## 2. First skin reconstitution using stem cells

**22<sup>nd</sup> November, 2009**

French and Spanish researchers reported the first reconstitution of the complete epidermis from stem cells in The Lancet on November 21, 2009. The aim of the research was to speed the reconstruction of skin tissue for burn victims

Reconstitution of the entire epidermis does not mean the scientist made a whole human skin. What they have accomplished is isolating skin stem cells and making the cells generate all the cell types that occur naturally in the epidermis

The skin was grafted onto mice that had been treated to avoid rejection of the "foreign" tissue. The grafted skin demonstrated all the characteristics of mature human skin cells in twelve weeks.

The skin stem cells (keratinocytes) can be kept indefinitely and made to grow so rapidly that any burn can be covered with new tissue in a matter of days. The best method presently available takes three weeks at minimum.

Human embryonic stem cells from lines H9 and SA01 were used to accomplish this development. The bioethics law of 2004 allows the use of human embryonic stem cells in research with special dispensation from the Biomedecine Agency in exceptional cases after submitting protocols to the Biomedecine Agency for an opinion.

**Source: TopNews**

## 3. Adult stem cells may treat chronic heart disease: Study

**19<sup>th</sup> November, 2009**

Scientists in the U.S. have found that patients with severe angina--chest pain-- when treated with their own purified and potent stem cells exhibited less pain, fatigue and an improvement in their exercise tolerance.

Additionally, the transplant of stem cells into the heart muscles led to fewer deaths as opposed to those who did not get the treatment.

Principal investigator Dr. Douglas Losordo at the Northwestern University Feinberg School of Medicine stated, "This is the first study to show significant benefit in pain reduction and improved exercise capacity in this population with very advanced heart disease."

Details of the 12-month trial

The researchers conducted a 12-month Phase II double blind placebo-controlled trial that included 167 adult patients with chronic severe angina and advanced heart disease.

With the aid of sophisticated electromechanical mapping device, the scientists identified the damaged blood vessels in the heart and injected the CD34+ into 10 locations in the heart muscle.

CD34+ is a cluster of differentiation molecules present on the stem cells within the human body.

The purpose was to stimulate the growth of small blood vessels in the heart. According to scientists lack of circulation in the cells that surround the heart causes blocked arteries leading to angina.

The patients in the placebo group received saline injections.

Outcome of the treatment

The outcome of the treatment was remarkable. The researchers noted that patients were able to double their walking time (60 seconds on average) after stem cell transplant.

In addition, the treatment group experienced less daily chest pain, were able to walk twice as long before the angina, and the pain diminished sooner with rest as compared to the placebo group.

Losordo stated, "The results from this study provide the first evidence that a patient's own stem cells could actually be used as a treatment for their heart disease."

He added, "The study provides potential hope for those patients with currently untreatable angina to be more active with less pain."

However, he cautions that although the findings of the 25-site trial offers great potential for the treatment of serious heart problems further studies are needed for verification.

The findings of the study were presented at the American Heart Association Scientific Sessions 2009.

**Source: Eurostemcell**