Main Highlights

News Article Name	Highlights
◆ **PGI comes up with cure for diabetes type 2**	In a path-breaking research, PGI doctors have reportedly found a very effective solution for diabetes type 2 through stem cell transplantation technique
◆ **New stem cell treatment raises hope for people with cervical damage**	The first human embryonic stem cell treatment for human testing shows promise in helping people with cervical damage after restoring limb function in rats with neck spinal cord injuries.
◆ **Bangalore to have a bio-cluster**	Bangalore can soon boast of having the country's first stem cell research institute - inStem. It will work in coordination with National Centre for Biological Sciences and the Centre for Cellular and Molecular Platforms (C-CAMP), forming the Bangalore bio-cluster.

1. PGI comes up with cure for diabetes type 2

14th November, 2009

Dr Anil Bhansali, head of endocrinology department, hailed the research as the first in the world, with only Brazil doing a similar study on diabetes in children. “The technique involves autologous bone marrow transplantation in which stem cells taken from a patient’s hipbone can be injected peripherally or targeted at the pancreatic artery with the hope that it will lead to improvement in regeneration of pancreas and decrease insulin requirements,” said Bhansali.

For the study, 10 diabetic patients, with an average age of 55, were given the therapy, with follow-ups for six months. It was found that insulin intake in seven had decreased manifold, while three stopped its use completely. These patients had been suffering from type 2 diabetes and taking treatment for at least five years. However, three did not respond to the process at all.

Besides, all seven patients reportedly lost weight and their quality of life improved. Enthusiastic after the first trial, now doctors plan to carry forward the research on 50 patients with funding from DRDO.

With positive results expected, Defence Research and Development Organization (DRDO) has given its nod to fund the study further. Started by PGI's departments of endocrinology, transfusion medicine and radio diagnosis in December 2006, the paper was published in an international journal, Stem Cells Development, in September 2009.

Source: TOI

2. New Cervical Damage Patients May Seek Stem Cell Treatment

13th November, 2009

The first human embryonic stem cell treatment for human testing shows promise in helping people with cervical damage after restoring limb function in rats with neck spinal cord injuries.

Researchers at University of California, Irvine, found that the walking ability of the rats that were treated with the stem cell therapy was restored to 97 percent

Hans Keirstead, a primary author of the study, is keeping fingers crossed that the finding will prompt authorised clinical testing of the treatment in people with both types of spinal cord damage.

Keirstead said: "People with cervical damage often have lost or impaired limb movement and bowel, bladder or sexual function, and currently there's no effective treatment. It's a challenging existence.

"What our therapy did to injured rodents is phenomenal. If we see even a fraction of that benefit in humans, it will be nothing short of a home run."

Lead author and doctoral student Jason Sharp, Keirstead and team discovered that the stem cells further prevented tissue death and triggered nerve fiber regrowth.

"The transplant created a healing environment in the spinal cord," said Keirstead, who is co-director of the Sue and Bill Gross Stem Cell Research Center and on the faculty of the Reeve-Irvine Research Center.

In addition to Keirstead and Sharp, Jennifer Frame, Monica Siegenthaler and Dr. Gabriel Nistor of UCI also contributed to the study.

Results of the cervical study were published in the journal Stem Cells.

Source: Med India

3. Bangalore to have a bio-cluster

15th November, 2009

The city can soon boast of having the country's first stem cell research institute - inStem. It will work in coordination with National Centre Biological Sciences and the Centre for Cellular and Molecular Platforms (C-CAMP), forming the Bangalore bio-cluster.

Union science minister Prithviraj Chavan unveiled the foundation stone for the institute on 15th November, 2009 and stressed on the need of attracting students to science streams. "Good brains are either taking up engineering or moving to the West. Engineering has sucked up over 9,00,000 bright minds. This is due to parental pressure and opportunities associated with engineering. Studies in chemistry, physics and biology are being ignored," he said, adding that US and China have reputed science institutions.

The idea of a bio-cluster is unique to India. The three institutions will interact, share knowledge and resources on a regular basis and enrich research. The new institute, a collaborative effort of the ministries of biotechnology and atomic energy, has initial funding of Rs 200 crore. It will be set up at 20-acre site on the GKVK campus and will conduct basic research in stem cells and applicability in treatment.

Chavan said: "The world is looking at India. There is a scramble because it is felt that if they don't connect with India on research, they will miss the boat."

A number of co-funded research projects are being carried out with Australia, Canada and the EU. "This is happening through collaboration, not competition. It's not about patenting every bit of knowledge, but sharing it."

Focus on climate change

The minister, who met US energy secretary Steven Chu recently, said climate-change negotiations are of the same or more relevance as WTO talks. "In a country where 300 million people are living in abject poverty, we need time and resources to develop. More research is required in the field of energy, especially biofuels. Also, a huge funding will be there for climate change and alternative energy, which needs to be used well," Chavan said.

Source: TOI