

LifeCell – Daily News Update

September 30, 2009

Key Industry News:

Publication	ibnlive.in.com
Headline	Stem cells technology comes to heart patient's
Gist of the article	<p>In a week that the world has marked World Heart Day, in Greece, one man is making a remarkable recovery after a unique surgical procedure. A cardiac patient, Loannis Manolopoulos has been in hospital for four months, gradually becoming weaker. All that changed after his operation at Ahepa University Hospital in Greece.</p> <p>Manolopoulos said, "If things go well, I have to go to the church to pray for what has happened to me because I believe I have been very lucky to get this device in, and live a normal life"</p> <p>In a ground breaking operation, surgeons placed a pump into his heart, and then injected six million of his own stem cells into the cardiac muscles so that the damage could be repaired.</p> <p>Surgeon Dr Kyriakos Anastasiadis said, "Our main goal is to give him the opportunity to have a completely normal life. That means that the device itself will give him quality of life but on the top, the stem cells will give an extra strength to the result of this pump."</p> <p>The heart pump itself costs 60,000 pounds but the Greek health service paid for the entire operation. British surgeon Professor Stephen Westaby, who headed the surgical team, wants Britain to follow suit.</p> <p>Dr Stephen Westaby said, "We should start in a few hospitals with ten to twelve patients a year, but I think eventually all hospitals that do heart surgery should be able to use this technology with or without stem cells. I think that there are about 12,000 patients a year in the UK that would benefit from it"</p> <p>The National Health Service in the UK wants to study the benefits of the procedure but here in Greece, the surgical team feel Loannis is an example of the success of this operation. In fact, he'll be going home soon.</p>

Publication	medindia.net
Headline	British Surgeon Uses Artificial Heart And Stem Cell Combo To Save Life
Gist of the article	Reports say that a British surgeon has for the first time used a combination of an artificial heart and stem cells to save the life of a dying man.

	<p>Professor Stephen Westaby, based at the John Radcliffe Hospital in Oxford, led the team that operated on Ioannis Manolopoulos in Thessaloniki, Greece, to fit him with the mechanical pump because his heart was too weak to push blood around his body.</p> <p>Surgeons then injected his failing heart muscle with six million of his own stem cells in the hope that they would repair the damage, reports The Times.</p> <p>Manolopoulos, who is recovering after the operation two weeks ago, told Sky News: "If things go well, I must go to church and pray because I feel very lucky to get this device and have the chance of a normal life."</p> <p>He had been in hospital for four months after at least two heart attacks and other treatment had failed to improve his condition.</p>
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Publication	bworldonline.com
Headline	St. Luke's, Korean university ink deal on stem cell research
Gist of the article	<p>PRIVATE HOSPITAL St. Luke's Medical Center has agreed with South Korea's Hanyang University, the Hanyang University Hospital, as well as stem cell company Corestem to collaborate on research on stem cell therapy for "intractable neurodegenerative diseases" or diseases relating to the worsening of the cells of the brain and the spinal cord.</p> <p>A memorandum of understanding was signed Monday by Jose F. G. Ledesma, president and chief executive officer of St. Luke's and Chong Yang Kim, president of Hanyang University.</p> <p>Dr. Filipinas F. Natividad, vice-president for research and biotechnology of the nonprofit health institution, said yesterday that under the agreement, the parties would cooperate on providing stem cell therapy for patients with amyotrophic lateral sclerosis (ALS), a neurodegenerative disease which causes muscle weakness throughout the body as nerve cells degenerate.</p> <p>Medical experts are hoping stem cell research will provide therapy for the disease, which may eventually lead to the loss of the patient's control over all voluntary movement.</p> <p>Stem cells have the ability to transform into specialized cells and be developed into tissue or muscles, which can then be used to treat diseases. Research on stem cells has been controversial because of ethical disputes over human cloning, as well as the harvesting of stem cells from human embryo. But it holds promise for treating diseases such as Parkinson's and Alzheimer's.</p>

Publication	scientificamerican.com
Headline	Stem cells bring new insights to future treatment of vision--and neural--disorders

Gist of the article

Deep in the brain, buried in the hippocampus and subventricular zone, reside adult neural stem cells, cells that retain the ability to become other types of neural cells and could serve as possible treatments for ailments ranging from vision impairment to Parkinson's to spinal cord injuries. Doctors, scientists and patients, however, are understandably hesitant to go digging around for them, their location being "a great deterrent," Sally Temple, founder of the New York Neural Stem Cell Institute, said at the 2009 World Stem Cell Summit here on Wednesday.

Researchers, therefore, are anxious to uncover other, more accessible neural stem cell candidates. Temple and her team have turned their sights to the retinal pigment epithelium (RPE), a layer of tissue at the base of the retina that comes into being within 30 to 50 days of conception, before many other parts of the neural system differentiate. Cells from this area of the eye can be easily harvested from retinal fluid that is usually discarded during retinal surgery, she explained.

After culturing retinal pigment epithelium cells, her group was able to coax them into showing potential to become a host of different visual and other neural cells. The researchers also found, to their surprise, that in working with donated cadaver eyes, cells harvested from 99-year-old eyes had just as much plasticity as those from 22-year-old eyes. She asserts that they are similarly flexible because they have been "held in a dormant state," she said.

Aside from working to transform the retinal pigment epithelium cells into other neural incarnations, the group also expects them to be useful foils on which to model diseases in the lab and test drugs, Temple noted. If these cells are to become a viable treatment, however, years of research and trials remain ahead.

Others in the stem cell field are still waiting for the perfect cell to come along. Tina Guanting Qiu, the program leader of translational retinal stem cell research at Bristol University in the U.K., is hunting for a stem cell that her lab can turn into photoreceptor cells. Her goal is to find treatments for conditions, such as age-related macular degeneration and injury, in which photoreceptors have died off. Her team has had success using embryonic stem cells from rats, but those that have worked best came from nearly full-term rodent fetuses, a source obviously out of the question for human work.