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November 4, 2009

LifeCell – Daily News Update
October 8, 2009

Key Industry News:

Publication	ajc.com
Headline	Stem Cell Research Offers Hope for Colon Cancer Vaccine
Gist of the article	Human stem cells may provide a means of creating a vaccine against colon cancer and other types of cancers, say American and Chinese scientists. "Cancer and stem cells share many molecular and biological features. By immunizing the host with stem cells, we are able to 'fool' the immune system to believe that cancer cells are present and thus to initiate a tumor-combating immune program," Dr. Zihai Li, of the University of Connecticut Stem Cell Institute, said in a news release. The research by Li and colleagues is the first to make the connection between human stem cells and colon cancer vaccination. It has long been believed that immunizing people with embryonic materials may trigger an anti-tumor response by the immune system, but this theory has never advanced beyond animal research. The finding that human stem cells may help immunize against colon cancer is new and unexpected, the study authors pointed out. In this study, the researchers vaccinated mice with human embryonic stem cells and found that the mice developed a consistent immune response against colon cancer cells. The vaccinated mice showed a dramatic decline in tumor growth, compared with non-vaccinated mice. While human embryonic stem cells triggered an immune response, artificially induced pluripotent stem cells did not, a finding that challenges the theory that induced pluripotent stem cells are the same as human embryonic stem cells and may replace them at the forefront of stem cell research, Li and colleagues said.

Publication	**evliving.com**
Headline	Gilbert Stem Cell Research Programs are Making Healthcare History
Gist of the article	Members of the Gilbert Town Council learned about local advancements in stem cell research at the Council Meeting on Tuesday night. Dr. Nabil Dib, Director of Cardiovascular Research at the Mercy Gilbert Medical Center, explained that Mercy Gilbert is leading the nation in stem cell research. Dib aims to advance the use of adult stem cells that may be used to restore the health of patients who've suffered heart-related diseases.

	Dib discussed how the first human stem cell transplant occurred in Phoenix back in 2000. Mercy Gilbert also housed the world's first allogeneic stem cell transplant, where cells were taken from a donor. "Dr. Dib's work for Mercy Gilbert rivals that found primarily in university and research hospitals, so we are proud and honored to have him working here in Gilbert at Mercy Gilbert Medical Center," Councilmember Joan Krueger said. Dib discussed one of Mercy Gilbert's new programs, the Genomic Program, which will collaborate with renowned universities including Harvard, Oxford, Stanford and Duke. "All of those options, we have them at Mercy Gilbert," Dib said. "Those programs are extremely valuable to Mercy Gilbert, but are also valuable for the world." Mercy Gilbert currently offers stem cell therapy for patients with refractory heart failure, and aims to offer the therapy within 10 days of a patient's heart attack. "History is being made in our town of Gilbert at Mercy Gilbert Hospital," Mayor John Lewis said. Dib will also serve as the Medical Director and Chief Investigator at the Celebration Stem Cell Centre, a private umbilical cord blood bank and research facility, located across the street from Mercy Gilbert. According to Rob Schemitsch, a representative of the Centre, the facility will open in early 2010, and offer cord blood and adult stem cell processing and genetic counseling, among other services, to the public. "This will be the first facility in Arizona to work with hospitals throughout the state to process and store umbilical cord blood donations," Schemitsch said.

Publication	**mirror.co.uk**
Headline	**Walkies Wonder**
Gist of the article	Just months ago he was paralysed by a damaged spine, but here's Henry the dog walking again thanks to pioneering stem cell treatment. Vets took the cells from the six-year-old's nose and implanted them in his back to successfully repair ruptured discs. Experts now hope the revolutionary therapy could be used to cure humans with spinal injuries. Delighted owner Sarah Beech said she feared the smooth-haired miniature dachshund would have to be put down after he suddenly lost the use of his legs a year ago. The 34-year-old added: "It's incredible, I didn't think Henry would ever walk again, but over the last few months he has been wagging his tail and taking steps. "The vet told me to put him to sleep because he wouldn't have a very good quality of life and he was very depressed. But this really helped." Sarah, of

	Birmingham, told of the moment Henry's legs packed up last November. Advertisement - article continues below » She said: "One day he yelped when I picked him up and two days later he couldn't walk. "The discs in his back were pushing into his spinal cord. I think he may have fallen down the stairs at some point before I bought him as his spine was quite badly damaged." Henry had an operation to relieve the pressure on his spine but it failed. Sarah then enrolled him on a trial at Cambridge University run by vets Professor Nick Jeffery and Professor Robin Franklin who had successfully treated rats. The nose cells were chosen because they support the growth of new nerve fibres. They were multiplied then injected into the spine. Prof Jeffery said: "The potential of this procedure is enormous. "We hope if the results are positive in a few years' time the treatment could perhaps be used to help people."

Publication	**telegraph.co.uk**
Headline	**Stem cell vaccine for cancer step nearer**
Gist of the article	Researchers have engineered stem cells to mimic some characteristics of cancer that when injected trick the body into building up a natural immunity to the disease. The work focuses on colon cancer but the scientists believe it could be widened to provide a "universal cancer vaccine". The novel approach by scientists in America and China is based on the principle that stem cells and cancer cells share many characteristics. The theory is similar to a normal vaccine which mimics the disease it is vaccinating against and so builds up natural immunity. Then when the patient is exposed to, or in danger of developing, the actual disease the body is ready to fight back. Dr Zihai Li, of the University of Connecticut Stem Cell Institute, said the findings opened up a whole new model approach to cancer research. "Cancer and stem cells share many molecular and biological features", he said. "By immunising the host with stem cells, we are able to fool the immune system to believe that cancer cells are present and thus to initiate a tumour-combating immune programme. The immunologist's colleague Dr Bei Liu, added: "Although we have only tested the protection against colon cancer, we believe that stem cells might be useful for generating an immune response against a broad-spectrum of cancers, thus serving as a universal cancer vaccine." The latest research is the first to use human stem cells to vaccinate against

	cancer. The team witnessed a 'dramatic' decline in tumour growth within the immunised mice. The findings published in the journal Stem Cell, come just two months after scientists found a link between bacteria and many cases of colon cancer. The breakthrough also pointed the way to vaccines or drugs to fight the disease, one of the most common forms of cancer in Britain. More than 37,000 people are diagnosed with colon cancer every year in Britain Researchers at Johns Hopkins University in Baltimore believed that they have uncovered how the bacteria could be a trigger for cancer. Dr Julie Sharp, Cancer Research UK's science information manager, said: "This is an interesting study and suggests a new approach to cancer vaccines – however scientists will need to test these ideas in clinical studies before we know if this approach can be used to treat cancer patients."