Written by **Dave Bohon** on November 21, 2011

Leader in Embryonic Cell Research Abandons Ten-Year Project

Citing the uncertain economy and the scarcity of needed capital, the company that launched the first government funded embryonic stem-cell trials announced that it is halting further stem-cell research and will lay off nearly 40 percent of its staff. The California-based Geron Corp., which began the first FDA-approved stem-cell trials in 2010, said that it would shift its focus to cancer research.

Explaining what he insisted was purely a financial decision, Geron Chief Executive John Scarlett told the *Wall Street Journal* that the "time frame for meaningful value inflection [for stem-cell programs] would occur substantially further in the future than for our oncology products." Suspension of Geron's research, which involved patients with spinal cord injuries, still leaves at least two other companies invested in the controversial project.

Pro-life activists have been vocal in their opposition to the research because it requires the destruction of human embryos. While it has received the lion's share of attention from the scientific community and the media, embryonic stem-cell therapy "has yet to produce any treatments or cures," reported Baptist Press News. "By contrast, pro-lifers say, research using non-embryonic forms of stem cells — such as adult stem cells and induced pluripotent stem cells — has been far more promising. Adult stem cells — found throughout the body — have produced 73 medical treatments, according to a tally by the Coalition of Americans for Research Ethics. In induced pluripotent stem cells, researchers reprogram adult skin cells into stem cells that have virtually the identical properties of embryonic ones."

Mailee Smith, a spokesperson for Americans United for Life, said that her pro-life group was not surprised by Geron's decision, noting that "investors have realized this kind of research is not going to pay off, and we know adult stem cell research will. This was the first trial run and Geron is not able to complete it. It continues to demonstrate that finances and government funds should be poured into adult stem-cell research, which actually works."

Smith expressed the hope among pro-life leaders that the move represented a death knell "for unethical and unproductive embryo stem-cell research," adding that "it will not have a devastating impact on the field of stem cell research as a whole."

Wesley Smith, a blogger for the conservative Christian website FirstThings.org, noted that the major

media "has been utterly fawning in its promotion of embryonic stem cell research for more than ten years, and still often reports that it is the best hope for regenerative treatments, when that is clearly no longer true. Indeed, the media has been so in the tank that it has often ignored far superior results from ethical approaches."

In fact, in its reporting the *New York Times* said that Geron insisted its decision "did not reflect a lack of promise for the controversial field," and quoted Geron CEO John Scarlett as saying, "I deeply believe in the promise of stem cells. I don't think that promise is in any way, shape, or form changed by what we're doing."

The *Times* recalled the company's early investment in the controversial research, noting that Geron had "helped pay for the initial derivation of human embryonic stem cells at the University of Wisconsin in the late 1990s, giving it fundamental patent rights in the field." More that ten years later, after successfully lobbying for FDA approval to move ahead, the company launched its first clinical trial of embryonic stem-cell therapy on spinal cord patients, injecting nervous system cells derived from embryonic cells into patients with severe spinal injuries. Throughout the testing, Geron admitted, there were "no signs" of any improvement in patients.

But what if the research had proven hopeful? Pro-life leaders say that would not make the procedure any less objectionable. C. Ben Mitchell, professor of moral philosophy at Union University in Jackson, Tennessee, told *BP News* that whatever the results, "the experiment is morally tainted if the cells came from embryos who were destroyed for their biological parts. Life-saving organs could be derived from killing innocent people, but that would be morally reprehensible. Follow the logic."

In 2001 President George W. Bush limited federal funding for embryonic stem-cell research to cells from embryos that had been destroyed before August 2001. But eight years later President Obama brushed aside that move, and following a battle in the federal courts, federal funding was opened up earlier this year for research on new embryonic stem-cell lines.

Geron had received funding from the state of California for its research. The Wall Street Journal reported that last May, "the California Institute for Regenerative Medicine announced a $25 million loan to Geron to support the spinal-cord injury trial," and in mid-November Geron repaid the $6.4 million it had received of the loan, plus interest.

Financial analysts appeared pessimistic about Geron's chances of finding a company interested in taking over its research assets. "One potential partner could be drug giant Pfizer Inc.," reported the *Journal*, "which in 2008 created a Regenerative Medicine research unit in Cambridge, U.K., and earlier this year started a clinical study of a stem-cell therapy for ulcerative colitis."

Meanwhile, noted Dr. Peter Saunders of the UK-based Christian Medical Fellowship, ethical stem-cell research marches on with great hope. In an article published on the National Right to Life website, Saunders wrote that in recent weeks "there have been some fantastic advances in using stem cells from ethical sources" even as Geron was throwing in the towel on embryonic cell research. "It appears that ethical stem cell research is opening more and more doors whilst unethical research using embryos is foundering."

In his blog posting Saunders highlighted a handful of the most hopeful advances in ethical stem-cell research, including:

• The use of adult stem cells from a patient's own hearts to successfully treat heart ailments. Saunders noted that in the research carried out at the University of Louisville, "the heart's blood-pumping

efficiency in 14 patients who responded to the stem cell treatment increased from 30.3% to 38.5% whilst at the same time the amount of dead heart muscle tissue decreased by 24% percent over four months. Seven control patients who did not receive the stem cell treatment showed no improvement."

• The creation of a stem-cell "bandage" for mending torn knee cartilage. Saunders explained that the same research doctor who "helped save the life of a Colombian woman … with the transplant of a tissue-engineered windpipe, will lead a team treating patients with torn knee cartilages. The doctors aim to transplant stem cells derived from a patient's bone marrow on to a damaged knee joint, where it is hoped the cells will act like a repairing bandage to mend the tissue." Clinical trials on the procedure are set to begin next year.

• The discovery of "embryonic-like" stem cells in a mother's breast milk, raising "the possibility of sourcing embryonic stem cells for regenerative medicine, without the need to destroy embryos," explained Saunders.

Noting the unceremonious way in which Geron's ten-year, multi-million-dollar project was abandoned, Saunders wrote that "ethical stem cell research" continues to offer hope while "embryonic stem cell work has ground to a halt. What were perhaps always blind alleys are now closing but new highways of promise are opening ever and ever wider." The pro-life British physician concluded that Geron's abandonment of its failed project, along with the ongoing advances in other research arenas, demonstrate that the "best and most effective treatments are also ethical treatments."