

Harvard Stem Cell Institute to Extract Stem Cells from Cloned Human Embryos

BY Dave Andrusko

On June 6 the Harvard Stem Cell Institute announced that researchers at Harvard University and Children's Hospital are going to attempt to extract stem cells from cloned human embryos.

A story that appeared the next day in the New York Times pointed out that the University of California, San Francisco (UCSF) had done the same thing "less conspicuously a month ago, resuming a program abandoned in 2001."

As is typically the case, the press release used scientific jargon—"Somatic Cell Nuclear Transfer"—to avoid bringing up the obvious: that the researchers are creating human lives by cloning and then destroying them.

In its coverage of the press conference, the Boston Globe pointed out the many practical and ethical landmines.

"These goals are distant hopes because there is no assurance that cloned human embryonic stem cells can even be made," wrote the Globe's Gareth Cook. "Although cloning has been used successfully in many animals, each species presents a unique set of technical challenges."

In addition, "Beyond the biological puzzles, there are practical obstacles, such as finding women who are willing to donate the eggs needed for cloning. The research is controversial because scientists destroy days-old embryos, which some opponents say is essentially taking human lives, and because the research uses human eggs, which can place donors at a slight risk of side effects."

Even one of the speakers at the press conference, George Daley of Children's Hospital Boston, conceded, "Clinical applications may be a decade or even more away." Daley was joined by Douglas Melton and Kevin Eggan of the Harvard Stem Cell Institute.

Critics were quick to point out that not so long ago proponents insisted that "all" researchers wanted were "spare embryos" which were "left over" from fertility clinics. The rationalization was that they were, in many cases, not going to be implanted and/or that they would "die anyway."

Now, the researchers are proposing to create human lives to be destroyed for their stem cells.

According to Nature magazine, the Harvard enterprise will go even further than the work in San Francisco. Helen Pearson writes that the UCSF researchers are "using eggs that failed to fertilize during in vitro fertilization (IVF)." Harvard's Melton and Eggan will "ask healthy women in the Boston area to donate eggs." (According to the Times, however, a UCSF spokesman said that "Dr. Reijo Pera [one of the researchers] will switch to using donated eggs if those rejected by fertility clinics do not work.")

At the press conference Harvard Provost Dr. Steven E. Hyman argued that following extensive reviews by eight committees over two years, the research was "ethically justified." According

to published reports, the research had been okayed by a review panel at Columbia University and “institutional reviews at Harvard, two affiliated hospitals, and a fertility clinic.”

How would the cloned human embryo be created? Women would “donate” their ovum. The DNA from the human egg would be removed.

This “hollowed-out” egg is then fused with a cell from a patient’s body, most often a skin cell.

The cloned human embryo would essentially be genetically identical to the skin cell donor.

The Globe’s account noted that the Harvard project is “particularly large.” The Harvard scientists “have laid extensive groundwork, including building laboratory space and getting all the necessary approvals, and one group has already begun its experiments,” Cook wrote. “This places Harvard ahead of several of the other teams.”

According to the Harvard Gazette, Melton, co-director of the Harvard Stem Cell Institute, said, “The reality of the suffering of those individuals far outweighs the potential of blastocysts that would never be implanted and allowed to come to term even if we did not do this research.”

But as critics point out, this gets the cart before the horse—or, perhaps better put, confuses the horse with the cart.

Why do these human embryos exist in the first place? Because Melton and his associates needed “source material” to destroy for their stem cells. As one observer noted, “He made them, and he intends to do nothing to let them survive, and these two prior immoral decisions make it moral for him to kill them for research.” In other words, “Three wrongs don’t make a right!”

There is any number of reasons why it is highly unlikely that embryonic stem cells—whether harvested from existing embryos or vacuumed out of cloned human embryos—will ever “cure” anything. In fact, all the successes to date involve sources of stem cells other than from human embryos. Indeed, the more so-called “adult” stem cell sources are probed, the greater is the likely range of illnesses they may help remedy or cure.