

A Decade Later: Time for a Dose of Reality on Stem Cells

By Richard M. Doerflinger



In 1998, Dr. James Thomson of the University of Wisconsin first isolated human embryonic stem cells (ESCs). These early, unspecialized cells were hailed as a way to create all cell types of the human body at will, a Holy Grail for curing diseases. Moral qualms about killing embryos for the cells were swept away in this wave of enthusiasm. In a few years, it was said, life-saving medical advances would show that such objections should be ignored.

A decade later it is time for a reality check. ESCs have been involved in some interesting experiments, but are not close to producing cures. This is not due to limited federal funding -- it is equally true in countries with no such limits, and in states pouring their own public funds into the research. ESCs in fact are unpredictable, difficult to control, and prone to causing tumors in animals. Experts now admit that human treatments using them may not emerge for decades, if ever.

The U.S. bishops' statement "Forming Consciences for Faithful Citizenship" urges Catholics to become informed on important moral issues in public life, including this issue of destroying embryos for stem cell research.

One fact is that treatments are emerging from stem cell research. But these use stem cells (once seen as less versatile) found in adult tissues and in umbilical cord blood from live births. In human trials these cells have repaired heart damage, restored vision, and helped reverse autoimmune diseases like multiple sclerosis and juvenile diabetes as well as some cancers. A search on "stem cell" on the federal site www.clinicaltrials.gov shows over 2,000 clinical trials using these cells, half of them still recruiting patients.

Last November an additional breakthrough transformed the stem cell debate. Scientists in Japan and in Wisconsin – the latter team led by the same James Thomson who first isolated human ESCs – learned how to "reprogram" ordinary adult cells into cells with the properties of ESCs, without producing or destroying a human embryo. These "induced pluripotent stem cells" (iPS cells) have already been used to reverse disease in animals. Dr. Thomson says this is "the beginning of the end" of the ethical debate, as fewer and fewer laboratories will see any need to kill embryos for stem cells.

Americans are pragmatic. We find it hard to focus on an ethical principle when medical benefits are placed on the other side of the scale. But the noise about the benefits of ESCs may now die down enough to let us hear that message about ethics again.

Though at a very early stage of development, the human embryo is one of us – a living individual of the human species, with the innate potential to grow into a mature human being if given nourishment and protection. Here, as in all human research, we must never harm or kill an innocent, unconsenting human being solely for alleged benefit to others. Crossing that moral line leaves more ethical abuses in its wake.

This has proved true. The problem of tissue rejection has led researchers to support cloning human embryos, to obtain cells that genetically match individual patients. This means mass producing human lives in the laboratory solely to destroy them. Researchers have hired women to take fertility drugs to produce many eggs at once for cloning attempts, risking the women's health. Some propose using animal eggs instead, to produce bizarre human/animal hybrid embryos for stem cell research. Some, to address ESCs' tendency to form tumors, have proposed gestating cloned embryos in the womb to a stage where more usable cells may be obtained – the grotesque practice of “fetus farming” that Congress has prohibited.

Most Americans abhor the idea of cloning human embryos for research, as well as these other abuses. Polls show they are ambivalent on the ESC question generally. In a survey published in the Spring 2008 issue of *The New Atlantis*, 69 percent of respondents said they support “stem cell research.” But 51 percent agreed that it is unethical to destroy human embryos for such research, notwithstanding the hope of curing disease. When told about the new alternative of iPS cells, 61 percent said public funding should go to that avenue and not to research that destroys human embryos.

Americans want to be fair and humane. They do not seek out the most unethical way to pursue medical progress -- rather, they want science and ethics to move forward hand in hand. It is not too much to ask the same of our researchers and policy makers.

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