

Stem Cell Research: A Response to Ron Reagan, Part 3

What About Adult Stem Cells?

Compiled by ATRI Research Staff

Because each of us began life in the womb as an embryo, common sense dictates that to end the life of a human embryo is to abort the existence of someone who could have grown to live and to love just as we have. Surely, the prudent approach is to presume life for the human embryo rather than to pursue his or her destruction. —Jonathan Imbody, *Christian Medical Association*

More Problems with Embryonic Stem Cell Research

In Part 1 we established that human life begins at the point of fertilization, which means that embryonic stem cell research results in the loss of human life.

In Part 2 we focused on “therapeutic cloning.” But here, again, we found that, regardless of whether the technique involved the use of eggs and sperm or eggs and adult tissue, the result was a human embryo. Since this embryo is killed (or, to use the more politically correct term, “harvested”) when it is only a few days old, again, this still involves the loss of human life.

Embryonic Stem Cell Research Breaks the Law

But there are further problems with embryonic stem cell research. First, it is against the law—both nationally and internationally. Here is just a sampling of the laws that are violated when the embryo (or any human life) is destroyed:

◆ **Declaration of Geneva:** “I will maintain the utmost respect for human life *from the time of conception*; even under threat, I will not use my medical knowledge contrary to the laws of humanity.”¹

◆ **The Nuremberg Code:** “The voluntary consent of the human subject is absolutely essential. This means that the person involved should have legal capacity to give consent; should be so situated as to be able to exercise free power of choice, without the intervention of any element of force, fraud, deceit, duress, over-reaching, or other ulterior form of constraint or coercion; and should have sufficient knowledge and comprehension of the elements of the subject matter involved, as to enable him to make an understanding and enlightened decision.”

“No experiment should be conducted, where there is an *a priori* reason to believe that death or disabling injury will occur; except, perhaps, in those experiments where the experimental physicians also serve as subjects.”

“Proper preparations should be made and adequate facilities provided *to protect the experimental subject against even remote possibilities of injury, disability, or death.*”²

◆ **The Declaration of Helsinki:** “In the purely scientific application of clinical research carried out on a human being, it is the duty of the doctor to remain the protector of the life and health of that person on whom

clinical research is being carried out.”³

◆ **United States Law:** “In 1996, Congress enacted an appropriations rider to prevent federal funding of human embryo research. The appropriations rider provided that: “(a) None of the funds made available by this Act may be used for (1) the creation of a human embryo or embryos for research purposes; or (2) research in which a human embryo or embryos are destroyed, discarded, or knowingly subjected to risk of injury or death greater than that allowed for research on fetuses in utero under 45 C.F.R. § 46.208(a)(2) and section 489(b) of the Public Health Service Act (42 U.S.C. §289g(b)).” The congressional prohibition against the use of HHS funds for human embryo research has been included in every appropriations bill since enactment of the initial rider. Most recently, Congress renewed its prohibition on embryo research in the HHS appropriations bill for 2001, which was signed into law on December 21, 2000. See Pub. L. No. 106-554, Omnibus Consolidated Appropriations Act of 2001, § 510.”⁴

(Federally funded groups like the NIH have found a clever way to circumvent this law. They contract with private companies to do the actual “harvesting” of the stem cells. The private company makes money, the federal agency stays within the letter of the law, and everyone is happy—except the embryo, of course.⁵)

“Throw Away” Embryos

Embryonic stem cell researchers argue they use embryos “left over” from in vitro fertilization treatments. Since these embryos would just be discarded, what could be more noble than to use them instead for medical research!

Well, how about the fact that these are human embryos? Were it not for the fact that the process has been interrupted at some point, these embryos are fully capable of continuing through the gestational period to the live birth of a baby. And indeed, they were created for that purpose.

Furthermore, a number of agencies have now been formed to “place” or adopt out these “extra embryos” with couples who have been unable to conceive on their own. Couples working with groups such as the Snowflakes Embryo Adoption Program and Adoption.com have successfully adopted these “throw away” embryos and carried babies to term.⁶

Embryonic Stem Cell Research is Unnecessary

Beyond the cavalier disregard of human life, the most outrageous thing about *embryonic* stem cell research is that it may not be motivated primarily by a desire to improve the human condition or cure diseases. But even if it were, frankly, *embryonic* stem cell research simply is not necessary. Wesley J. Smith of the *National Review Online* observes:

The pattern in the media reportage about stem cells is growing very wearisome. When a research advance occurs with embryonic stem cells, the media usually give the story the brass-band treatment. However, when researchers announce even greater success using adult stem cells, the media reportage is generally about as intense and excited as a stifled yawn.

As a consequence, many people in this country continue to believe that embryonic stem cells offer the greatest promise for developing new medical treatments using the body’s cells—known as regenerative medicine—while in actuality, adult and alternative sources of stem cells have demonstrated much brighter prospects. This misperception has societal consequences, distorting the political debate over human cloning and embryonic-stem-cell research (ESCR) and perhaps even affecting levels of public and private research funding of embryonic and adult stem-cell therapies.⁷

Joni Eareckson Tada, who suffered a spinal cord injury in 1967, reached the same conclu-

sion. She says:

Most Americans, out of a mixed sense of sympathy and awe, looked at people in wheelchairs and think: *Who would want to deny them a cure?* No one better understands the desire for a cure than I do, as a quadriplegic who has lived in a wheelchair for decades. But even Christopher Reeve's chances for a cure are more realistic using adult stem-cell therapies.⁸

The Christian Medical Association explains how adult stem-cells are already proving successful in treating a variety of diseases and conditions. By contrast, embryonic stem-cells are still highly problematic and years away from clinical trials, much less actual treatments:

Studies using non-embryonic stem cells, derived ethically and safely from umbilical cord blood, bone marrow, brain tissue and fat, have moved well beyond theory to application. These clinical studies offer solid benefits to patients suffering from heart disease, blood disorders and other afflictions. Adult stem cells have already been used successfully with patients: to treat cartilage defects in children; restore vision to patients who were legally blind; relieve systemic lupus, multiple sclerosis, and rheumatoid arthritis; and to serve as an aid in numerous cancer treatments. The use of a patient's own stem cells is even preferable to using embryonic stem cells because it avoids the problem of the body rejecting cells other than its own. Other new methods such as somatic cell gene therapy are increasingly successful in tissue regeneration and otherwise treating disease.

By contrast, embryonic stem cells have yet to demonstrate a single human therapeutic benefit. The most recent studies in animals have shown ES cells to be unstable and unpredictable—"errors [that] can lead to premature death or serious abnormality." Worried ES cell researchers were caught doctoring their interpretations of ES cell problems because they reportedly feared that "any mention of that potential problem in the article might be exaggerated by political factions that oppose the research on religious and ethical grounds." As the ES cell hype smokescreen disappears, a lot of disillusioned and angry patients will question scientific integrity.⁹

Dr. Mary Davenport is a practicing obstetrician/gynecologist in El Sobrante, California. She received her M.D. from Tufts University School of Medicine, and completed her residency at the University of California, San Diego. She explains some of the more recent advances in treatments using adult stem cells:

Advances in adult stem cell research since Bush's 2001 decision have been nothing short of awesome. At a recent Senate hearing on cutting-edge adult stem cell research, two young women, victims of horrific automobile accidents causing spinal cord paralysis, actually walked into the hearing room. They described their dramatic improvement after spinal cord paralysis. They were treated in Portugal by transplantation of their own stem cells, taken from olfactory tissue that has the ability to form new nerve cells.

In Germany, a cancer victim whose jaw had been removed re-grew bone tissue utilizing adult stem-cells from his own bone marrow, and was able to eat a bratwurst sandwich for the first time in nine years. Patients with Parkinson's disease have reported significant improvement, some even regaining their sense of taste and smell, with injections of GDNF, an adult stem cell related therapy. A recent PBS special recounted other significant human cures with adult stem cells, and a Texas surgeon liposuctioned himself to promote excess fat as a viable source of adult stem cells. Do No Harm, the web site of a coalition of American scientists for ethical research, is replete with dozens more successful examples of cures from adult stem cell research.¹⁰

So Why Isn't the Scientific Community Advocating Adult Stem Cell Research?

First, there is a great deal of research going on in the area of adult stem cells, so the problem isn't so much in the scientific community as it is with the way the media has reported what is going on. As Wesley J. Smith stated, "When a research advance occurs with embryonic stem cells, the media usually give the story the brass-band treatment. However, when researchers

announce even greater success using adult stem cells, the media reportage is generally about as intense and excited as a stifled yawn.”¹¹

Second, many scientists do not think that adult stem cells are as flexible as embryonic stem cells. Conventional wisdom is that the stem cell, past about the 4th or 5th day of life (4-5 days after fertilization) loses some of its ability to differentiate into different types of cells. However, Dr. Wolfgang Lillge reveals,

It has been known for about 30 years that stem cells are present in the tissue of the adult, but it was assumed that they could only form cells of a particular tissue. That is, reprogramming them was considered impossible. In recent years, however, pluripotent stem cells were discovered in various human tissues—in the spinal cord, in the brain, in the mesenchyme (connective tissue) of various organs, and in the blood of the umbilical cord. These pluripotent stem cells are capable of forming several cell types—principally blood, muscle, and nerve cells. It has been possible to recognize, select, and develop them to the point that they form mature cell types with the help of growth factors and regulating proteins.

This shows that in tissues of the body, adult stem cells possess a much greater potential for differentiation than previously assumed. This knowledge must be brought into the public consciousness with all possible emphasis.¹²

It's One for the History Books!

Another motivating factor may be the “glory” factor. After all, who remembers the name of the doctor who performed the first successful bone marrow transplant—a treatment which used adult stem cells to treat disease?¹³ On the other hand, we probably *all* remember the name of the doctor who performed the first “successful” heart transplant, right? (In case you don't...¹⁴). How much glory might be attached to successfully using embryonic stem cells to allow Superman(!) to walk again!

Show Me the Money!

But there is, or seems to be, one other factor that is driving the private and public fight for embryonic stem cell research. Dr. Mary Davenport explains:

Yet another reason has emerged why there is incessant pressure for embryonic stem cell research, despite mounting evidence of its inferiority to adult stem cell research, in testimony before a Senate Committee on July 14, 2004. After discussing the cases of the two paralyzed young women who were now walking after adult stem cell treatment in Portugal, Dr. Jean Peduzzi-Nelson pointed out that an embryonic stem cell product could become patentable and potentially yield enormous profits. But an adult stem cell therapy, in which the patient's own cells were used, could not produce a patentable procedure or product according to current laws.¹⁵

Dr. Davenport concludes her article with this statement:

It would be tragic if political considerations and greed diverted funding away from fruitful lines of research utilizing adult stem cells, which show promise in producing the cures sought by so many desperate patients.¹⁶

Jonathan Imbody, whose quote began this article, provides an apt conclusion to it as well. He writes:

Researchers of adult stem cells are quietly providing hope and help for people with Parkinson's disease, heart disease, spinal cord injuries, immunodeficiencies, sickle cell anemia, autoimmune diseases and stroke. **Scientific evidence, fiscal prudence and compassion for the afflicted** all point to investing our tax dollars in adult stem cell research, where proven results are yielding real treatments for real patients.¹⁷

It would appear that adult stem cells allow us to have Candide's "best of all possible worlds": treatments for debilitating or deadly diseases are being discovered, while the lives of unborn babies are protected.

Notes:

- ¹ http://en.wikipedia.org/wiki/Declaration_of_Geneva, emphasis added.
- ² <http://www.med.umich.edu/irbmed/ethics/Nuremberg/NurembergCode.html>, emphasis added.
- ³ <http://www.bioscience.org/guides/declhels.htm>
- ⁴ Christian Medical Association, "Executive Summary" <http://www.cmdahome.org/?CONTEXT=art&cat=251&art=940&BISKIT=&controlfield=subject&unitid=4016>
- ⁵ See, for example, <http://neuro-mancer.mgh.harvard.edu/ubb/Forum97/HTML/000031.html>
- ⁶ While we do not necessarily endorse either the procedure or these organizations, they are mentioned here for your information: <http://www.snowflakes.org/>; <http://adopting.adoption.com/child/embryo-adoption.html>; <http://www.conceivingconcepts.com/learning/articles/embryo.html>;
<http://preconception.com/resources/articles/embryoadooption.htm>
- ⁷ Wesley J. Smith, "Spinning Stem Cells," National Review Online, April 23, 2002 <http://www.nationalreview.com/comment/comment-smith042302.asp>
- ⁸ Joni Eareckson Tada, "Research Cloning and Moral Responsibility," www.joniandfriends.org
- ⁹ Christian Medical Association, "Stem Cell Research: Executive Summary" <http://www.cmdahome.org/?CONTEXT=art&cat=251&art=940&BISKIT=&controlfield=subject&unitid=4016>
- ¹⁰ Mary Davenport, M. D., "The Truth About Stem Cell Research," http://www.americanthinker.com/articles.php?article_id=3826
- ¹¹ Smith, "Spinning Stem Cells," National Review Online, <http://www.nationalreview.com/comment/comment-smith042302.asp>
- ¹² Wolfgang Lillge, M.D., "The Case for *Adult* Stem Cell Research," http://www.21stcenturysciencetech.com/articles/winter01/stem_cell.html
- ¹³ It was Dr. Robert Good: <http://www.infoplease.com/ipa/A0908522.html>
- ¹⁴ It was Dr. Christiaan Barnard: <http://history1900s.about.com/b/a/047759.htm>
- ¹⁵ Davenport, http://www.americanthinker.com/articles.php?article_id=3826
- ¹⁶ Ibid.
- ¹⁷ Jonathan Imbody, "Superior Stem Cells," <http://www.cmdahome.org/index.cgi?CONTEXT=art&art=2201&BISKIT=944597648>, emphasis added.