

## Embryonic Stem Cell Research *Science with Profound Moral Implications*

*“A free and virtuous society, which America aspires to be, must reject practices that devalue and violate human life at any stage from conception until natural death,” - Pope John Paul II  
July 23, 2001 address to  
President George W. Bush*

Over the past few months, we have all been bombarded on an almost daily basis by questions about the ethical and moral dimensions of stem cell research, especially when it involves human embryos. One of the major political questions involves whether such research should be federally funded. The decision to fund embryonic stem cell research with tax dollars is fraught with moral, ethical and political implications. At the heart of the issue are these two questions: When does human life begin? And, should the federal government fund research that destroys human embryos for the sake of potential advances toward curing devastating illnesses?

### **What is Stem Cell Research?**

Stem cells are relatively unspecialized cells that are characteristically of the same family type. They retain the ability to divide throughout life and give rise to cells that can become highly specialized and take the place of cells that die or are lost.

There are two categories of stem cells. *Adult stem cells* taken from the blood or organs of healthy adults have recently demonstrated an unexpected adaptability in lab experiments. *Human embryonic stem cells* are taken from fertilized eggs – human embryos - and in the process of extraction the embryo is destroyed.

There is no ethical or moral controversy involved with the harvesting of adult stem cells. The crux of the national debate centers precisely on the destruction of the human embryo, which is necessary to perform embryonic stem cell research.

Some scientists contend that the human embryonic stem cell, also known as the human pluripotent stem cell, holds more promise than the adult stem cell because the pluripotent stem cell offers greater possibilities of resembling organ cells. Proponents of embryonic stem cell research hold

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that adult cells do not seem to grow or replicate themselves as quickly as stem cells found in human embryos. For example, the pluripotent stem cells introduced into a diseased kidney become much like ordinary kidney cells. The other kidney cells “educate” and integrate the new cells until the organ is effectively regenerated.

### **The Scientific Debate**

What stem cells could do for us is not completely known. Because stem cells are indistinguishable, or not yet committed to being part of a particular organ, scientists are often able to stimulate them into becoming whatever type of cell may be needed for a particular therapy. The cells may also be able to replace damaged or sick cells in a patient with an injury or degenerative disease.

Where are scientists getting these cells? Until very recently, the vast majority of stem cells used in research came from discarded (or excess) embryos stored at in vitro fertilization clinics.

#### **Juvenile diabetes:**

##### Adult Pancreatic Islet Cells

15 people with serious Type I (juvenile) diabetes became “insulin free” after adult pancreatic islet cell transplants; 9 still need no insulin injections.  
- *American Diabetes Assoc. Report, June 24, 2001*

##### Embryonic Stem Cells

No person has benefited

#### **Spinal cord injury:**

##### Adult Immune-System Cells

A young woman rendered paraplegic by a car accident can move her toes and legs after 9 injections of her own immune-system cells into her severed spinal cord.  
- *Toronto Globe and Mail, June 15, 2001*

##### Embryonic Stem Cells

No person has benefited.

#### **Immune deficiency:**

##### Adult Bone Marrow Stem Cells

2 children born without immune systems (“bubble boy” syndrome) have left their sterile environment and lead normal lives after bone marrow stem cell treatment.  
- *Science, The Washington Post, April 28, 2000*

##### Embryonic Stem Cells

No person has benefited.

#### **Corneal repair:**

##### Adult Corneal Stem Cells

Several legally blind people can now see more clearly after their corneas were reconstructed with corneal stem cells.

- *New England Journal of Medicine, July 13, 2000*

Source: *National Conference of Catholic Bishops, Stem Cell Reality Check #1- 2001*

##### Embryonic Stem Cells

No person has benefited.

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To date, it is pure conjecture to claim that the human embryonic pluripotent stem cells are more beneficial than adult stem cells. In fact, human embryonic stem cell research has not assisted a single patient or demonstrated any therapeutic benefit. On the other hand, adult stem cells and other ethically acceptable alternatives have helped hundreds of thousands of patients, and new clinical uses expand almost weekly.

The August 2000 National Institutes of Health (NIH) guidelines for federal funding of human embryonic stem cell research require that cell lines must be derived from freely donated spare embryos resulting from the treatment of infertility, not from embryos created specifically for research. The Clinton administration did not prohibit federally funded experiments on stem cells provided that the embryo was destroyed by another party, without federal funds. The Bush administration initially called for a moratorium on federal funding. President Bush recently decided to permit federal funding of research using existing stem cell lines that have already been derived, but will not sanction or encourage the destruction of additional human embryos.

### **What is the Catholic Perspective?**

The central issue remains, *when does life begin?*

Catholic teaching holds that life is to be respected from the moment of conception; even an embryo enjoys basic human rights.

All human life deserves full respect and protection at every stage and in every condition. As long ago as 1965, the Council Fathers of Vatican II taught that “Life once conceived, must be protected with the utmost care; abortion and infanticide are abominable crimes.” Pastoral Constitution on the Church (Gaudium et spes) article 27.

More recently, the Charter of the Rights of the Family, issued by the Pontifical Council for the Family confirms that “Human life must be absolutely respected and protected from the moment of conception.” Holy See, Charter of the Rights of the Family, no. 4: L'Osservatore Romano, November 25, 1983.

Embryonic stem cell research is the beginning of a journey down a slippery slope leading the practitioner, and in turn the funding source, toward justification of destroying human life in order to advance scientific possibility. Our Catholic response is that even a good end or goal (in this case, discovering cures for chronic illnesses) never justifies the use of an evil or immoral means (in this case destroying embryos). The dignity of each human embryo must be the principal focus of scientists performing research as well as the legislative and executive branches that will make this important decision.

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## **What Respect is Due to the Human Embryo, Taking into Account his Nature and Identity?**

The human embryo is a live human being and is deserving of the utmost respect and dignity. The human embryo has an identity that is continuous and developing. As such, its destruction is considered an immoral act. Through the years, Catholic teaching has forcefully and unequivocally addressed the question of when life begins and the morality of human embryonic stem cell research.

Last year, writing on this very question, the Pontifical Council for Life explained that “no end believed to be good, such as the use of stem cells for the preparation of other differentiated cells to be used in what looks to be promising therapeutic procedures, can justify an intervention of this kind. A good end does not make a right action which in itself is wrong.” Pontifical Council for Life, Declaration on the Production and the Scientific and Therapeutic Use of Human Embryonic Stem Cells, L'Osservatore Romano August 25, 2000.

In their 1987 Instruction on Respect for Human Life In its Origin and the Dignity of Procreation (*Donum Vitae*), the Congregation for the Doctrine of Faith specifically addresses human embryonic stem cell research in the following points:

- Medical research must refrain from operations on live embryos, unless there is a moral certainty of not causing harm to the life or integrity of the unborn child and the mother, and on condition that the parents have given their free and informed consent to the procedure. It follows that all research, even when limited to the simple observation of the embryo, would become illicit were it to involve risk to the embryo's physical integrity or life by reason of the methods used or the effects induced.
  - No objective, even though noble in itself, such as a foreseeable advantage to science, to other human beings or to society, can in any way justify experimentation on living human embryos or fetuses, whether viable or not, either inside or outside the mother's womb.
  - To use human embryos or fetuses as the object or instrument of experimentation constitutes a crime against their dignity as human beings having a right to the same respect that is due to the child already born and to every human person.
  - Every human being is to be respected for himself and cannot be reduced in worth to a pure and simple instrument for the advantage of others. It is therefore not in conformity with the moral law deliberately to expose to death human embryos obtained ‘in vitro.’ In consequence of the fact that they have been produced in vitro, those embryos which are not transferred into the body of the mother and are called “spare” are exposed to an absurd fate, with no possibility of their being offered safe means of survival which can be licitly pursued. See Congregation for the Doctrine of Faith, Respect for Human Life In its Origin and the Dignity of Procreation (Donum Vitae) (22 February 1987), in *Acts Apostolicae Sedis* 30 (1988) 70-102.
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Pope John Paul II, in his Encyclical the Gospel of Life, affirms the position of the Catholic Church:

“The Church has always taught and continues to teach that the result of human procreation, from the first moment of its existence, must be guaranteed that unconditional respect which is morally due to the human being in his or her totality and unity as body and spirit: *‘the human being is to be respected and treated as a person from the moment of conception; and therefore from that same moment his rights as a person must be recognized, among which in the first place is the inviolable right of every human being to life (Donum Vitae)’*”. John Paul II Encyclical Letter Evangelium Vitae (25 March 1995), no.60 in Apostolicae Sedis 87 (1995) 469.

Catholic teachings on the beginning of life and respect for life are quite clear. Human embryos obtained in vitro are human beings and subjects with rights: their dignity and right to life must be respected from the first moment of their existence. It is an immoral act to destroy the embryo for it is an act that ends life.

### **Will Private Research Continue on Human Embryonic Stem Cells?**

Even though the federal government will fund embryonic stem cell research in a limited manner, the practice of destroying human embryos will continue. New techniques for gathering the cells are in development. Scientists at a privately funded Norfolk, Virginia fertility clinic have admitted that they have created in vitro human embryos for the express purpose of harvesting stem cells for research. This privately funded research is under way despite startling new advances in adult stem cell research and other new means of regenerating human tissue. Creating an embryo only to dismantle it is clearly immoral; a supposed good purpose is being invoked to justify an act of killing.

### **A Concluding Summary**

The moral cost of federally funding embryonic stem cell research, and giving the federal government’s imprimatur to a developing science that destroys human life is troubling. Embryonic stem cell research treats human life as a means to an end. The practice goes against the Church’s consistent moral teaching that all human beings are “ends” in and of themselves, and should not be treated with any less dignity in the name of science. The end result of such scientific research using human embryos is tragic. The potential destruction of so many human lives still to be born is extremely grave and disturbing. Equally troubling is the fundamental shift in the practice of medicine from “do no harm” to the “ends justify the means”, which is the result of the recently announced policy.

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Embryonic stem cell research is both immoral and unnecessary. It is immoral because it constitutes the act of taking a life. It is unnecessary because only adult stem cells have proven to be scientifically worthwhile and deserve even further research to amass their potential capabilities.

Basic human dignity dictates that all life, from the fertilized egg through natural death, be treated with respect and honor. Embryonic stem cell research fails this primary test. Because it does so, federal funds should not be used to further escalate the creation of a culture of death.

*“... I believe that God is the author of and architect of human life and no one else. As an American, I trust that my ‘inalienable’, or inherent, rights to ‘life, liberty and the pursuit of happiness’, and those of our future generations, should never be co-opted by government funded scientists in the name of research.*

*“Indeed, society must be very careful when it puts its hand on the switch of life. By design or default, we could easily begin a dangerous journey down the ‘slippery slope.’ Embryonic stem cell research points down that path. And, by appropriating taxpayers’ money for such experiments with human life, our elected officials would make us all unwitting partners along the way.” – Adam Cardinal Maida*

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*<http://www.micatholicconference.org/> • Staff Contact: Brian D. Broderick*

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