

CATHOLIC TEACHING ON STEM CELL RESEARCH

Part I: Introduction to the Ethics and Science

- This winter the General Assembly will consider legislation on stem cell research here in NC
- Many are pushing for the state to fund human *embryonic* stem cell research
- We as Catholics need to educate ourselves and respond to this serious issue

Catholic Teaching on Life

The starting point for evaluating stem cell science

Life is sacred

The central fact at the core of our Church's teaching on life is that *life is sacred*. God created us "in his image" and called His creation "very good" (Gn 1: 27, 31); from the beginning of each person's existence God has given that person the remarkable gift of life, which reflects His own life. Elaborating on this gift, the Catholic Church teaches that "human life is sacred because from its beginning it involves 'the creative action of God' and it remains forever in a special relationship with the Creator" (Donum Vitae, intro 5). This core value of human life cannot be removed by any circumstance; every patient dying of cancer, every prisoner on death row, every mentally handicapped person, every embryo frozen in a fertility clinic, every person in poverty is beloved by God and each of their lives is sacred.

God's love calls us to action

God loves us. Christ took on human nature out of love, in order to offer salvation to us. However, he calls us not only to receive His love, but to give love to each other; as he says to the apostles at the Last Supper "love one another as I love you" (Jn 15:12). This love takes many forms, and among them is love for the sacred life in each person. In this light, the commandment "you shall not kill" establishes the minimum requirement of what we must not do, but Christ's command to love as He loves pushes us to aim for the best we can accomplish rather than merely avoid the worst. John Paul II captured this when he wrote that the commandment not to kill "culminates in the positive commandment which obliges us to be responsible for our neighbors as for ourselves: 'you shall love your neighbor as yourself'" (Evangelium Vitae 40).

"Who is my neighbor?" (Lk 10:29)

With regard to the pending legislation in North Carolina, our neighbors are our embryonic brothers and sisters whom researchers propose to create through cloning or obtain from fertility clinics and to kill in the lab for embryonic stem cells. Despite the good the researchers hope to accomplish, *we can never use evil as a tool to accomplish good*.

Stem Cell Science

What is a stem cell?

A stem cell is a "precursor" cell, an undifferentiated cell, capable of producing more specialized types of cells; just as the stem of a plant grows and becomes leaves and berries, stem cells give rise to the developed cells that form the organs and tissues of the body, such as brain cells, heart cells, etc.

What are "embryonic stem cells" vs. "adult stem cells"?

Embryonic stem cells are named for where they come from: embryos. In the first days after conception the new person develops the embryonic stem cells that develop into all the organs and different types of tissue in

Look for more bulletin inserts on this topic for the next two weeks.

Catholic Teaching on Stem Cell Research

Part II: Myths and Facts of Stem Cell Research

- In 2007 the N.C. State Legislature and U.S. Congress will consider whether to fund the destruction of human embryos for embryonic stem cell research using tax dollars.
- As Catholics, we have a "duty to condemn the particular gravity of the voluntary destruction of human embryos obtained 'in vitro' for the sole purpose of research..." *Donum Vitae* (The Gift of Life) I, 5 (1987)
- This second of three bulletin inserts continues the discussion of the science and morality of stem cell research by dispelling some myths and emphasizing some facts.

MYTHS:

- 1) **Stem cells can only come from embryos.** FALSE. Adult stem cells can come morally from adult tissues like bone marrow, fat, and skin, from afterbirth tissues like the placenta and umbilical cord, and from tissues from miscarriages.
- 2) **The Church is opposed to stem cell research.** FALSE. The Church encourages all adult stem cell research when the donors have given informed consent.
- 3) **Embryonic stem cell research is necessary.** FALSE. No human being has been helped by embryonic stem cells.
- 4) **Adult stem cells are not good enough.** FALSE. Thousands of people have been cured with morally acquired adult stem cells. The best successes are with bone marrow stem cell transplants and umbilical cord blood transplants. Well over 70 human diseases have already been treated with adult stem cells, with over 1000 more U.S. trials approved.
- 5) **All excess embryos in fertility clinics will be thrown away.** FALSE. Parents often change their minds and choose to implant their embryos or place them for adoption with other couples.
- 6) **The embryos already in fertility clinics are all that scientists want.** FALSE. Scientists want to generate new embryos by many different methods, including cloning.
- 7) **Embryonic stem cell research is against the law.** FALSE. There are no U.S. or N.C. laws or regulations against destroying human embryos for research purposes.
- 8) **There is no embryonic stem cell research in NC.** FALSE. Researchers at UNC-Chapel Hill, Duke University and other public and private institutions already perform human embryonic stem cell research and/or publicly lobby to increase federal and state funding to destroy more human embryos for research.

FACTS:

- 1) **Human life begins with an embryo.** Every person started as a single special cell, which grew into an embryo, then a fetus, and then was born.
- 2) **All human embryos are human beings.** Whether the embryo is conceived normally inside her mother, in a Petri dish through fertilization of an egg by a sperm, or by cloning, she is still a human being.
- 3) **Creating human embryos outside of the marital conjugal act is immoral.** Church teaching is very clear that artificial insemination, in vitro fertilization (IVF), freezing embryos, pre-implantation diagnosis, and other reproductive technologies are contrary to God's design for procreation and therefore immoral.
- 4) **Cloning produces an embryo.** Regardless of the method, all forms of cloning produce an embryo that must be destroyed to get embryonic stem cells.
- 5) **Somatic cell nuclear transfer (SCNT) is one type of cloning.** SCNT results in an embryo. This is how Dolly the sheep was conceived.
- 6) **Embryonic stem cells have serious disadvantages.** Embryonic stem cells tend to form life-threatening tumors in recipients. Embryonic stem cells have dangerous genetic instability that gets worse over time. Embryonic stem cells from fertility clinic embryos would require dangerous immune suppression if transplanted.
- 7) **You are already funding human embryonic stem cell research.** Beginning in 2001 for the first time in US history, President Bush and Congress have authorized approximately \$100 million for human embryonic stem cell research with your tax dollars.
- 8) **Millions of human eggs will be needed for embryonic stem cell treatments.** Because of the poor rate of acquiring embryonic stem cells from embryos, problems with tumor formation, and the need for matching tissues because of immune rejection, there are not nearly enough human eggs safely available.
- 9) **Human egg donation is painful, dangerous, and potentially deadly.** To get enough eggs for research, significant financial incentives are offered to young women. This disproportionately affects poor and/or disadvantaged women. Eggs are harvested surgically after a woman is given a drug to super-ovulate. There are many serious physical side effects including a risk of death.

What can I do about this issue?

- More information is located at this website: www.nccatholicsforlife.org
- To contact your legislators by email or phone start here:
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**Look for Part III of this Catholic education series in next week's bulletin.
You may also find all three parts of this series at www.nccatholicsforlife.org.**

Catholic Teaching on Stem Cell Research Part III: A Call to Action

This third and final bulletin insert regarding the status of stem cell research and particularly embryonic stem cell research will summarize what has been stated in the two earlier inserts and deal with our Church's teaching on this activity.

In the previous two inserts we have learned about:

- 1) the science of stem cells and their potential uses and
- 2) the false claims and myths that have been widely circulated in our information media about stem cell research.

In summary, we have read about what stem cells are and what they do in each of us. We have learned of the two categories of stem cells, adult and embryonic. We now know where each type comes from. We have learned that cloning has many other names, including somatic cell nuclear transfer and that human cloning is an underlying issue tied to embryonic stem cell research. Most importantly, we realize that embryonic stem cells **always are produced from the destruction of an embryo**, whether formed in the laboratory with In Vitro Fertilization or whether formed from an asexual method such as **cloning**.

We have learned of the uses and potential uses for these types of cells and particularly that **all therapies in humans are currently being done with adult stem cells**. We know that there are significant problems with using embryonic stem cells for therapy and that these problems may not be solved for years to come in spite of the hype that is being proclaimed in our media.

At the present time the North Carolina legislature is beginning debate on whether the tax-payers of NC should fund this type of research, particularly embryonic stem cell research. A select committee of the legislature has made a recommendation to the full legislature that the ethics of this research be debated and that funding of this research possibly be done with your taxes.

It is very important at this juncture that all Catholics are aware of our Church's teaching on this topic. Our Church has always held the firm belief and teaching that all human life from the moment of conception until natural death is of inestimable value since we are created out of love by God in his image and likeness.

Since it must be treated from conception as a person, the embryo must be defended in its integrity, cared for, and healed, as far as possible, like any other human being. *Catechism of the Catholic Church #2274*

We know from science that life begins at fertilization and is a **continuum** from the newly fertilized egg through embryonic development, the fetus, infancy, adolescence, adulthood until death. Our Church teaches that **at every point in this continuum, life is precious** and that destruction of this life created by God is never morally permissible at any point. To arbitrarily assign a time in this early continuum when we “become a person” is to deny that we have all come through each of these time-defined stages to become the persons that we are today. It is never permissible for one group of persons to decide when life is not important in another group of persons, particularly when the latter group cannot protect itself and has no “voice.” It is the responsibility of all Catholics to be the “voice” that protects these most vulnerable human brothers and sisters of ours, particularly now when they will soon be under assault in our state with our tax dollars funding this activity.

Bishop Jugis of the Diocese of Charlotte and Bishop Burbidge of the Diocese of Raleigh will be making a **call to action** to all Catholics in our state to help defeat this legislation that would destroy innocent human life. Please respond to our Bishops’ call when it comes and contact your representatives to voice your concerns and objections to the funding of human embryonic stem cell research. At the same time, reaffirm your support for **adult** stem cell research that is helping people at this moment through clinical trials and established therapies.

The inalienable right to life of every innocent human individual is a constitutive element of a civil society and its legislation. *Catechism of the Catholic Church* #2273.

With our efforts and love for human life, we can exert a profound influence on our legislators both now and in the future.

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the growing body. Once these embryonic stem cells have made the first steps in developing into specific types of tissues, they are then called *adult stem cells*. In the analogy to a plant, an embryonic stem cell would be at the base of the stem while an adult stem cell would be higher up on the stem, where the stem forks into branches.

Why are researchers interested in stem cells?

The most prominent and most often mentioned reason is treatment of disease. Because stem cells can form into specialized cell types, the idea is that they could treat illnesses in which diseased cells and tissues do not work normally. Adult stem cells already are used to treat many diseases (i.e., bone marrow transplants are actually adult stem cell transplants!)

Where can you obtain stem cells?

- *Adult stems cells* are all over the body: in bone marrow, in blood from a baby’s umbilical cord, in the liver, in the skin, etc.
- *Embryonic stem cells* come only from embryos, and obtaining these cells involves destroying the embryo to remove the stem cells. Thus, adult stem cells can come from a tissue sample from a willing donor, but embryonic stem cells come from killing a human at the earliest stage of life.

Where would researchers obtain embryos?

1. From the many embryos “left over” after IVF (in vitro fertilization). Though frozen in suspended animation, these youngest of our brothers and sisters are fully human and their lives are sacred.
2. From a process called “somatic cell nuclear transfer”: a scientist removes the genetic material (the nucleus & DNA) from a woman’s egg and replaces it with the genetic material from a developed cell (a “somatic” cell) such as a skin cell. This mixed cell acts like a fertilized egg and grows into an embryo. This is how Dolly the sheep was made; i.e., *this is cloning*.
→Recognize this important point: somatic cell nuclear transfer (SCNT) equals cloning, and *human cloning would be one of the major sources of embryos for research*.

What are the moral issues with stem cell research?

- *Adult stem cells*: the Catholic Church fully supports research and treatment with adult stem cells. Using adult stem cells for treatment and research is the same as using donated blood or a donated kidney to study disease or treat a person with kidney failure.
- *Embryonic stem cells*: the Church firmly opposes human embryonic stem cell research because obtaining embryonic stem cells involves killing embryos and because creating embryos by somatic cell nuclear transfer means cloning humans. Both cloning and the killing of embryos violate the sacred life we are given by God and thus are evil.

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