



The Science of Stem Cells

Finding Cures and Protecting Life

Yet embryonic stem cell research did not save me—cord blood research did. I am living proof that there are promising and useful alternatives to embryonic stem cell research and that embryos do not need to be killed to achieve medical breakthroughs.

—Nathan Salley, Testimony before U.S. Congressional Committee, 2001¹

The stem cell controversy in our state and nation is of vital concern for all people since it directly affects human life and humanity. This issue has become more intense through misinformation and one-sided promotion that has fueled great confusion.

Because decisions about human life are immensely important for all citizens now and in the future, the Catholic Church has dedicated significant efforts toward promoting ethical and proven adult stem cell research while firmly opposing unethical and unproven embryonic stem cell research.

The moral positions of the Catholic Church are based on reason and faith. For human reason to arrive at right decisions, it is essential to know and understand the facts, in this case about two different forms of stem cell research: adult and embryonic.

Adult stem cells are the abundance and variety of available stem cells in the human body. They may be

retrieved from such non-harmful locations as the amniotic fluid that surrounds unborn babies, bone marrow, umbilical cord blood, and even dental pulp, among others. The removal of these stem cells does not kill or even harm the donor. Embryonic stem cells are stem cells that reside in each and every embryo. Extracting these stem cells from the living human embryo for research purposes kills the embryo, which represents a profound violation of human life.

These scientific facts, known by reason, lead to a question: “What is society to think about the human embryo? Is this living human life to be valued and protected?” FAITH responds with a loving YES!

Catholics have the duty to assist the suffering and encourage research to discover treatments, even cures. Through the advancement of medical science, thanks to adult stem cell research, a door of hope has opened.

Michigan Law: Defending Human Life

The State of Michigan historically has been a strong supporter of human life in terms of legislation and ballot proposals. In 1972, voters rejected by a wide margin Proposal B, which would have allowed physicians to perform abortions upon demand within the first 20 weeks of a pregnancy. In 1988, voters rejected a referendum that would have overturned a state law outlawing taxpayer funding of abortion. Later, in 1998, over 70 percent of voters again spoke in favor of life by defeating a citizen initiative that would have legalized assisted suicide. Legislation creating parental and informed consent laws, multiple measures banning the heinous procedure known as partial-birth abortion, and a bill giving a woman the right to view an ultrasound of her child before procuring an abortion, have all been approved by the Michigan Legislature. The state, through its Constitution of 1963, also bans the death penalty.

Michigan has two additional laws that prevent the destruction of human life on a massive scale. Public Act 368 of 1978 protects the human embryo from being destroyed in Michigan for research purposes. According to the law: “This act prohibits a person from using a live human embryo, fetus, or neonate for scientific or laboratory research, or other kind of experimental or investigation not designed to improve the health of the research subject.” Since embryonic stem cell research requires the destruction of the human embryo in order to extract its stem cells, advocates of embryo destructive research aggressively seek to overturn PA 368 of 1978.

While destroying human embryos inside the boundaries of Michigan is illegal—research using embryonic stem cells is not. In 2003 the National Institutes of Health gave the University of Michigan a \$778,000 grant for “maintaining and distributing human embryonic stem cells to the University of Michigan scientific community, develop research tools to study stem cells and support education and training on the use of the cells.”² The

University of Michigan grant presents verification that, while it is legal for previously destroyed human embryos to be trafficked into the state, embryonic stem cell research is not illegal in Michigan.

A second and equally important law passed in 1998, as Michigan enacted the most comprehensive anti-human cloning law in the nation. Several countries, including France, Germany, Australia and Canada have since passed similar prohibitions, and the United Nations in 2005 passed a resolution calling for a world wide

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cloning ban to “protect adequately human life in the application of life sciences.”³ Michigan’s anti-cloning law prohibits the creation of a cloned human embryo for any purpose, therapeutic or reproductive. The scientific term for this process, Somatic Cell Nuclear Transfer (SCNT), is often used by embryo destructive research advocates in an effort to soften the emotional response to human cloning. Whether human embryos are cloned (and then killed) for “therapeutic” or “reproductive” purposes, the Church teaches that an evil means can never justify a good end.

The Pontifical Academy for Life states the Church’s position on human cloning (SCNT) in this manner: “In relation to the dignity of the human person, however, any type of cloning is to be considered illicit which implies the creation or splitting of embryos, no matter what techniques are used or what aims are pursued because it is not licit to do evil even to bring about good” and labels the act of cloning itself an “offense to the creator’s design.”⁴

Promoting Adult Stem Cell Research in Michigan & Congress

The stem cell research debate that is playing out nationally and in Michigan seems to focus on whether or not an individual supports or opposes only one form of stem cell research. The distinctions between adult and embryonic are rarely made. Because of this, the hype of embryonic stem cell research has greatly overshadowed the medical conditions that are benefiting from adult stem cell research. In fact, over 70 different medical conditions are being treated by adult stem cells in human patients, including brain cancer, sickle cell anemia, type-1 juvenile diabetes, and many others.⁵

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Jeni Rummelt of Grand Rapids was involved in a vehicle accident that left her paralyzed from the waist down. Doctors initially gave her little hope of recovery. But after intense physical therapy, and receiving adult stem cell treatments that are only available overseas, Jeni gives the following testament: “There are some days where you feel like giving up because it will be easier. But then there are days where I see the progress. It seems like something is always either improving, getting stronger, or I am feeling different things when I put weight through my legs or weight transferring. A lot of little things that you wouldn’t think about and take for granted I am able to do now. My end goal is to walk again.”⁶ Jeni’s story is not uncommon for patients receiving adult stem cell therapies. Thousands of people across the country are benefiting from its progress.

Both Congress and the Michigan Legislature have passed legislation promoting the use of adult stem cells through umbilical cord blood donation. The retrieval of adult stem cells from cord blood does no harm to the

donor. This process is instrumental in treating several diseases, mostly through bone marrow transplants, such as lymphoma, leukemia, sickle cell anemia, immune system disorders, and several metabolic disorders. In 2005 Congress passed the Stem Cell Therapeutic and Research Act. It required the Secretary of Health and Human Services to contract with qualified cord blood stem cell banks to assist in the collection and maintenance of 150,000 new units of high-quality cord blood to be made available for transplant. The legislation also required the Secretary to establish and maintain a National Bone Marrow Donor Registry, which houses a wealth of information related to bone marrow patients and donors at www.marrows.org. Congressional action coordinating cord blood banks was a precursor for similar efforts in Michigan.

On January 1, 2007 Public Act 637 of 2006 was enacted. The legislation, which passed both the Michigan House of Representatives and Senate without a single dissenting vote, required the Department of Community Health (DCH) to establish a statewide network of cord blood stem cell banks; establish criteria for a donor bank to enter the network, including the establishment of a system of strict confidentiality and the implementation of donor screening and cord blood collection practices to prevent the transmission of disease; and required the DCH to promote public awareness of the uses, benefits, and viability of cord blood cells, and make available on its website information on cord blood cells in a printable format.

The reality is that, together, Michigan residents can participate in the obligation to help those who are suffering by supporting ethical and proven adult stem cell research while protecting the human embryo from destruction. According to the Catechism of the Catholic Church: “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.”⁷

Where to Donate Cord Blood in Michigan

In Michigan, cord blood donations are accepted through hospitals in the Michigan Community Blood Bank service area and in areas that help support the cord blood bank through fundraising. These areas include Bay City, Clare, Grand Haven, Holland, Midland, Muskegon, Niles, Saginaw, St. Joseph, Traverse City and Zeeland. More information about the Michigan Community Blood Bank is available at www.miblood.org or (866) MIBLOOD. The National Marrow Donor Program lists on its Web site, www.marrow.org, five hospitals in the State of Michigan that collect cord blood for public cord blood banks that are part of the national network. Those hospitals and their contact information are listed at right.

<i>Participating Hospital</i>	<i>Cord Blood Bank to Contact</i>
Huron Valley Hospital Commerce Township	J.P. McCarthy Cord Stem Cell Bank (800) Karmanos www.karmanos.org/cordblood
Oakwood Hospital Medical Center Dearborn	CORD: USE (407) 667-4842 www.corduse.com
Hutzel Hospital Detroit	J.P. McCarthy Cord Stem Cell Bank (800) Karmanos www.karmanos.org/cordblood
Saint John Hospital & Medical Center Detroit	Cryobanks International, Inc. (800) 869-8608 www.cryo-intl.com/enroll_donate.html
Providence Hospital Southfield	J.P. McCarthy Cord Stem Cell Bank (800) Karmanos www.karmanos.org/cordblood

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- 2 NIGMS Center Grants to Explore Stem Cell Biology. <http://stemcells.nih.gov/news/NIGMSgrants.asp>. Accessed 7 August 2007.
- 3 General Assembly Adopts United Nations Declaration On Human Cloning By Vote Of 84-34-37. <http://www.un.org/News/Press/docs/2005/ga10333.doc.htm>. Accessed 7 August 2007.
- 4 Notes on Cloning. Pontifical Academy for Life. http://www.vatican.va/roman_curia/pontifical_academies/acdlife/documents/rc_pa_acdlife_doc_28091998_cloning-notes_en.html. Accessed 7 August 2007.
- 5 Do No Harm: The Coalition of Americans for Research Ethics. <http://www.stemcellresearch.org>. Accessed 7 August 2007.
- 6 Rummelt, Jeni. Personal Interview with SaintMax Worldwide. 25 July 2007.
- 7 Catechism of the Catholic Church, ¶2274.

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