# **Which Organizations Support Embryonic Stem Cell Research?**

Over **300** nationally known organizations for medical research either support or participate in embryonic stem cell research. There are only a few dedicated pro-life research groups like the John Paul II Medical Research Institute throughout the United States.

You can learn about an organization's stance on embryonic stem cell research through the following:

- Official policy statements
- Coalitions with lobbyists for the research.
- Signatures on letters to Congress expressing public support for the research.
- Funding contributions for human embryonic stem cell research.

You can also review this list from The Right to Life of Michigan:

http://www.rtl.org/prolife\_issues/ESCRsup porters.html



#### About JP2MRI:

JP2MRI is a pro-life non-profit, founded in 2006. We specialize in using adult stem cells to find cures for incurable diseases such as cancer, Alzheimer's, Parkinson's, ALS, and more. We believe all research should uphold the dignity of all human life. You can learn more at jp2mri.org.

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## **Presents:**

# Stem Cells, Medical Research, and the Culture of Life

"The service of humanity leads us to insist, in season and out of season, that those using the latest advances of science, especially in the field of biotechnology, must never disregard fundamental ethical requirements by invoking a questionable solidarity which eventually leads to discriminating between one life and another and ignoring the dignity which belongs to every human being."

~Saint Pope John Paul II

#### What Are Stem Cells?

Whenever a cell divides, it has the option to become either a stem cell or another specific kind of cell like blood cells, heart cells, liver cells, etc. Everyone has stem cells in his or her own body. They have the power to develop into any cell and repair damaged tissue in the body.

### **Adult Stem Cells**

Everyone has adult stem cells inside him or her. They are in our organs and tissues, and they can also be found in placentas and umbilical cords. Adult stem cells repair damaged tissue and organs in our bodies and help them heal.

# **Embryonic Stem Cells**

Embryonic stem cells come from embryos. An embryo is an unborn offspring in the process of development. Human embryos start out as small as the dot on a pencil.

To obtain embryonic stem cells, researchers must destroy the embryos before using them for research.

#### **IPS Cells**

Induced pluripotent stem cells, or IPS cells, start out as adult stem cells. Then they are genetically reprogrammed to an embryonic-

like state. These cells have the same diversity as embryonic stem cells but do not require using an embryo.

# **Is Stem Cell Research Morally Evil?**

Not exactly. The Vatican has approved adult stem cell and IPS cell research as ethically and morally acceptable. Adult stem cell and IPS research does not go against Catholic teaching.

However, embryonic stem cell research is morally evil because it destroys the lives of embryos.

As Catholics, we believe human life begins at conception and to destroy lives of embryos is morally evil. Every human life is a miracle from God, and no one has the right to take life away from a human being. Finding cures and healing sick patients should not require taking innocent lives.

# Why Are Scientists Interested in Embryonic Stem Cells?

Adult stem cells have limitations in the types of cells that they can develop. The reason many secular scientists are attracted to embryonic stem cells is that embryonic stem cells have the potential to become any cell in

the human body. Yet, IPS cells now can provide the same opportunities as embryonic stem cells.

However, over the years, scientists have run across difficulties with embryonic stem cells. First, many embryonic stem cells have tendencies to develop tumors. Second, embryonic stem cells have a high possibility of immune rejection. Whenever something foreign enters the body, the immune system will try to destroy it and protect the body.

# Future of Medical Research: Regenerative Medicine and Drug Discovery

For all drug development, researchers test drugs on animals prior to human drug testing. However, animal testing does not predict drug efficacy and safety in humans.

Researchers believe that stem cells are the key to curing many current incurable diseases. For sick patients, their diseases are often in their stem cells, and researchers can take those stem cells and use them for drug testing. Not only is stem cell drug testing more accurate, but it also decreases the need for animal testing.