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Should Christians Be in Favor of Stem Cell Research?



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*T*he solution to the confusion is not merely to determine which are false views and attempt to refute them. Bank employees learn to detect counterfeit money not by studying false bills, but by examining numerous samples of genuine money. They look at it, feel it, scrutinize it in every way. Then, when finally given bogus bills, they immediately recognize the difference. Similarly, correctly understanding the doctrinal teachings of Christianity is the solution to the confusion created by the myriad of claimants to belief.

MILLARD J. ERICKSON
CHRISTIAN THEOLOGY, SECOND EDITION (1998)

*T*he teaching of the apostles in everything was surely according to the mind of God. They neither forgot nor omitted any part of the Gospel.

TERTULLIAN (A.D. 210)

*T*he fault of the church has not been that she wrote creeds, but that she has ceased to write them.

ABRAHAM KUYPER

*T*his is only one of the many pivotal bio-ethical issues that the church is destined to face in the next decade, and it behooves each of us to be well informed about the sides upon which the ensuing debates will line up.

In my thirty-one years as a confessing Christian, plus thirty-four previous years of merely attending church, I have yet to hear a single message that was solely devoted to a bio-ethical issue, and that includes the years surrounding the Roe v. Wade decision.

Sadly, these serious questions have seemingly been swept under the rug in the narthex, or worse yet were never even asked by church attendees who continue to appear more concerned about their golf handicaps and stock portfolios than issues pertaining to the sanctity of life.

Abortion on demand should have been a wake-up call, a reveille. Instead it seems to have become more comparable to the bugler's evening taps and the church has responded by falling asleep.

In case you might have missed it, the bugler's call to reveille has sounded once again in the form of stem cell research. It's time to awaken the people of God! It's time to form our ranks.

Before making a decision either favoring or opposing any

vital issue, a Christian should become informed of (1) the facts regarding the subject and, (2) any biblical revelation pertinent to the topic. The purpose of this article is to bring to light some information relative to both.

WHAT IS A STEM CELL?

The ultimate stem cell is that first one which appears following a process involving the penetration of an egg by a sperm—a process known as fertilization or conception.

There are stem cells present in all creatures, but our discussion in this article will of necessity be limited to those that are specifically human. That first stem cell contains forty-six chromosomes (twenty-three from the mother and twenty-three from the father), each of which contains a specific number of genes, which in turn are filled with countless molecules of DNA.

DNA is an information storehouse, possessing much more memory capacity than the world's largest computer hard drive. It contains all of the information that the developing human will ever need for any of the physical, physiological, biochemical, intellectual, or reproductive functions that one could possibly imagine. DNA is located within genes, which in turn make up the content of our forty-six chromosomes (twenty-three pairs). One pair (the sex chromosomes) determines gender; XX and you are a female, XY and you are male. The other twenty-three pairs (called autosomes) determine the various functions enumerated above as well as our unique "selfness," thus the term "auto"-some.

That first cell is truly "pluripotential," a term you will hear or read many times as this very critical issue is discussed by the media. To be pluripotential means that it has the capacity, or potential, of becoming any tissue or organ in the body. As this first cell begins to divide and re-divide and we humans slowly develop in the womb, our cells ultimately differentiate into very specific cell types, utterly distinguishable through light or electron microscopy and histochemical analysis. But though different in appearance and function, each cell still retains, within its nucleus, the exact component of DNA

(genetic code or genome), as did the original stem cell (i.e., egg plus sperm). These highly differentiated cells have, however, at this point, lost the potential to become any other kind of tissue or organ.

Now then, within each highly differentiated tissue/organ system (e.g., liver, heart, bone marrow, brain, skin, bone, muscle, etc.) there are some stem cells, which *do* retain a certain degree of pluripotentiality. That is, these stem cells can become either whole new organs of their particular kind, or some other organ/tissue system. We will discuss these possibilities later in this article.

In discussing stem cell research, one needs to differentiate three major types of stem cells. First, there are adult stem cells. These are cells taken from fully developed humans. They can be *autologous*—that is harvested from one's own body, or *heterologous*—that is taken from another human.

Autologous bone marrow stem cells have been used for years in the treatment of cancer. The patient's bone marrow is stimulated to produce these cells through a series of injections of erythropoietin (a bone marrow stimulant), following which they are harvested from the patient's blood. These pluripotential cells have the capacity of reproducing each of the three major kinds of blood cells normally produced in the marrow: red cells (which carry oxygen), white cells (that fight infection), and cells that produce platelets (which facilitate blood clotting).

Once a sufficient number of stem cells have been harvested and stored, the patient receives massive doses of either potent chemotherapeutic agents or radiation therapy, sufficient to kill every cancer cell in the body, while at the same time, unfortunately, also destroying the entire bone marrow. Following this cancer-killing therapy, the stored stem cells are reintroduced, and the body's bone marrow subsequently begins to be replenished.

Some stem cells that fall into this fully developed human or adult stem cell category are those taken from a newborn's umbilical cord blood. These fall under the heterologous class. Birth products (e.g., umbilical cord and placentas) are not

part of the human body (either mother or baby's) but were merely a life support system utilized during the baby's intrauterine existence. They are normally assigned to the garbage can and incinerator. However, if they can add something of benefit to the life of a human being they should be used to that end before being discarded.

The stem cells in question these days are embryonic stem cells. They may be classified in two different ways: cloned and natural. A cloned embryo is one that is formed by inserting John Doe's DNA, or his complete genome (i.e., the nucleus of any one of his cells), into Mary Doe's egg, which has been stripped of her own DNA that had been contained in the egg cell's nucleus. The egg has thus been "enucleated." The embryo that comes from this procedure is purely "John Doe" in every respect and thus all stem cells within the embryo will have the exact genetic code as John Doe—that which is contained in his specific set of forty-six chromosomes. Thus John's body will recognize the stem cell from this clone as "self" and will thus not reject it when it begins the process of replacing John's particular organ/tissue system which happens to be diseased. These stem cells are harvested when the embryo has reached a stage of six days of age; that's six days of life. The unfortunate part of this picture is that the embryo is sacrificed (in other words, killed, murdered, or slain) in order to get its stem cells. Thus to save John Doe, baby Doe must die.

Here's an analogy that might bring the complex matter into greater focus:

John Doe, the man who cloned his own embryo, is instead an identical twin boy. His twin brother Jim Doe, nearly John's genetic clone, is perfectly healthy, but at age six John developed an incurable and rapidly fatal heart condition.

John Doe can only live if Jim Doe is sacrificed for his heart. Far fetched? Not if you believe that a six-day-old embryo and a six-year-old child are equally human.

As Charles Krauthammer so aptly put it, this represents ". . . the deliberate creation of embryo factories for the sole purpose of exploiting and destroying them."¹

Now I have referred to this cloned human as "baby Doe" and you may immediately object to the notion of regarding a six-day-old embryo as a "baby," but we shall address this later. The other kind of embryonic stem cell, which I have called natural, is obtained in much the same way as those embryos that are being obtained for infertile couples through the more "natural" procedure of invitro fertilization—the so-called "test-tube" babies. In this process eggs are taken from a female donor and sperm from a male donor and then are mixed in a glass tube containing some necessary nutrients. In embryonic stem cell research labs the resulting embryos are allowed to grow to the desirable six-day-old stage after which they are sacrificed for their stem cell components. The result is the same; one human being is involuntarily sacrificed to save another human being, and that is both morally and ethically unacceptable.

IS A SIX-DAY-OLD EMBRYO REALLY A HUMAN BEING?

A human being is possessed of both a body and a soul. According to information supplied to us by God, the soul is present at the moment of conception; in fact it comes directly from God (Ecclesiastes 12:7). David said, "Surely I was sinful from the time my mother conceived me" (Psalm 51:5 NIV). It is the soul that is sinful, not the body. The soul directs the activities of the body. "The soul who sins is the one who will die" (Ezekiel 18:4 NIV). God, therefore, must impart the soul to the body at the moment of conception or the original sin that David said he possessed (and I should add, we also possess) could not have been present.

Thus it is evident that the embryo produced through invitro fertilization, in which a natural sperm penetrates a natural egg, is clearly possessed of a soul and is, in fact, a living human being.

Those favoring embryonic stem cell research do not regard a six-day-old embryo as human. Yet they either don't specifically say, or don't all agree on the time when embryos or fetuses actually become human. With one accord, however, they do object to the notion that conception is the genesis of

life. The arguments offered for their beliefs are either baseless and arise from an emotionally charged and vacuous sentiment, or are the product of mere casuistry. The question of whether a cloned embryo (e.g., possessing only John Doe's DNA) has a soul will never be answered this side of eternity, but since it has the exact appearance as the embryo formed by natural means, the one that has a full compliment of egg DNA plus a full compliment of sperm DNA, we should not presume to be morally justified in killing it.

SHOULD WE FAVOR ANY STEM CELL RESEARCH?

The short answer is yes and no, depending on the source of the stem cell in question. The long answer requires further explanation.

All adult stem cell research is morally, legally, and bio-ethically sound; no human life is sacrificed to obtain the necessary stem cells. Nonetheless, no embryonic stem cell research is even legal at this juncture. There is currently a congressional ban that prohibits federal funding for research in which human embryos are destroyed, discarded, or knowingly subjected to the risk of injury or death. In addition, on July 31, 2001, the United States House of Representatives defeated a bill that would have permitted the legalization of cloning of human embryos; the margin was one-hundred votes. The Senate has, of this writing, not acted upon the bill but is expected to take up the matter at the start of its Fall 2001 session.

Unfortunately there is as yet no prohibition on the use of private funds for this endeavor and even now some entrepreneurial scientists are scrambling to be the first to clone a human.

To create any kind of human life, soul-possessed or not, is an act bordering on playing God. Producing life is the private domain of our sovereign God who said, "I put to death and I bring to life" (Deuteronomy 32:39 NIV). In Acts 3:15, the apostle Peter is quoted as referring to Jesus as "the author of life." And Paul tells us that it is because of God that "we live and move and have our being" (Acts 17:28 NIV).

Besides the above-mentioned use of stem cells in the

treatment of cancer, there is already a study which demonstrates that some multipotential stem cells taken from adult bone marrow have been successfully transformed into nerve cells. In addition, insulin-secreting cells produced from stem cells have been found to normalize blood sugars in mice, and when applied to research in humans may provide a cure for diabetes. Likewise, there has been promising research involving the use of stem cells from ones own skin to produce vitally needed substances such as insulin.

Critics claim that these adult-derived stem cells have lost some of their potential and are thus not as likely to produce numerous organs or tissues as will those that are harvested from embryos. Their negative claims have as yet not been fully tested in the laboratory, and a preconceived bias may be driving their conclusions.

On August 9, 2001, President George W. Bush had to make a pivotal decision regarding this crucial issue. After weeks of wise counsel, intense investigation, and much prayer, his decision, which was announced to the country in a nationally televised address, appeared to be both brilliant and inspired. He said that he would approve the funding of all adult stem cell research in addition to that which is about to begin on the sixty-four lines (the exact number of useful lines is debatable) of embryonic stem cells already available. A "line" is a colony of cells that have been grown from stem cells extracted from a particular embryo. He would not however, approve government funding for any research that involved the cloning of, or invitro production of, embryos for the purpose of harvesting their stem cells. Bush aptly called embryonic stem cell research "an ethical minefield" and wisely said that it "is at the leading edge of a series of moral hazards."

Those on the political left rued the day because the President had not allowed funding for all embryonic stem cell research. Those on the political right, especially conservative Christians, were upset about using the existing stem cell lines for which he had approved funding. To this latter group I offer this plausible explanation for my reading of President Bush's landmark decision as both "brilliant and inspired":

The embryos that supplied those various stem cell lines have long been dead. They can't be brought back to life, and the reasons for their particular deaths may never be known; they may have succumbed to attrition since stored embryos only have a "shelf life" of five years. Suffice it to say they are dead and their souls have returned to God. My driver's license indicates that I am a volunteer organ donor, and that when I die, from whatever cause, according to God's set time, and my soul has returned to God who gave it, my organs will be available for whomever they might benefit. Those dead embryos are no different than I will be when I die. Their stem cells, like my organs (and probably more so) will be of great benefit to someone, somewhere, sometime. In fact those lines, representing many potential separate body organs or tissues, may ultimately benefit millions of human beings in the distant future that would currently be doomed to organ failure. That should serve to salve the consciences of the opponents and it probably would if there did not exist the possibility of a proverbial "fly in the ointment."

Some have interpreted President Bush's remarks on "existing stem cell lines" to include the tens of thousands of so-called "spare embryos" now sitting frozen in fertility labs. They represent those left over embryos that were produced for infertile couples in the process of invitro fertilization. That procedure generally produces several embryos and only one is chosen for implantation within the mother's womb. The remaining lives are put into cold storage. Using these embryonic stem cells would be no different than using those of embryos produced explicitly for stem cell research. There remains, however, this moral dilemma: What becomes of such humans frozen in a state of suspended animation, even if they are not used for research? A recent court decision ruled out the possibility that these embryos could be "adopted" by other infertile couples, on the rather spurious notion that the female donor involved in producing the embryo in the first place could not be *forced* into motherhood against her will. Correct me if I'm wrong, but I thought that motherhood involved a continuous process of first becoming pregnant, fol-

lowed by carrying the baby to term, having the baby delivered, and then nurturing the child toward a state of independence.

The bottom line is this, some research into this very important breakthrough in the treatment, and/or cure, of human disease can and should be encouraged, but it should be strictly limited, in the future, to the exclusive use of *adult stem cells*.

Furthermore one must realize that this research is in its infancy. Any progress in this seminal work will be both slow and tedious. There are bound to be more failures than successes before any "cures" are produced. Those reading this article will very likely never benefit in any way from the final curative stage that this research hopes to attain. We can only pray that our grandchildren will profit from the genius and tireless efforts of those who have dedicated themselves to this project. Those who complain that opponents of embryonic stem cell research are depriving current disease sufferers from a cure are simply deceiving such patients with a false sense of hope.

One must also keep this in mind—stem cells are, as stated above, pluripotential. This means that they can become just about whatever they "decide" to become, even a cancer. One such occurrence was reported in China after stem cells that were injected into the brain of a woman who was suffering from Parkinson's disease developed into a teratoma in her cranial cavity. A teratoma is a failed cellular attempt to reproduce a human body; i.e., a clone. These tumors often contain skin, hair, teeth, thyroid tissue, cartilage, and muscle. That should not be terribly surprising since we did all begin as a single stem cell that ultimately produced these diverse types of tissue. What is obvious in all of this is the fact that scientists need to learn more about controlling the behavior of these cells before subjecting any patient to a "cure" that could prove worse than the disease.

Those who would categorically ban *all* stem cell research are simply not informed enough about the moral and ethical implications of embryonic vs. adult stem cell research. And

those who insist on approving of embryonic stem cell research are apparently not conversant with God's Word or the serious moral and ethical implications of their accommodations.

Blaise Pascal (1623-62) wisely said, "Ignorance is at both ends of science." This issue certainly proves his point. It is somewhat akin to two blind men examining an elephant from its opposite ends and then trying to define the creature to a third man deprived of his sight. The one holding the tail insists that an elephant "is like a rope." The one grasping the gyrating trunk argues that "No, an elephant is more like a constrictor snake." Result? The third blind man never learns the truth.

WHAT IS THE GREATEST DANGER IN LEGALIZING EMBRYONIC STEM CELL RESEARCH?

In 1973 the proverbial "camel" got his nose in the tent so to speak with the passage of *Roe v. Wade* and the legalization of abortion on demand. In their landmark book *Whatever Happened to the Human Race?* dealing with several sanctity of life issues, the late Christian theologian and philosopher Francis Schaeffer and former Surgeon General C. Everett Koop warned that the legalization of abortion was merely the first in a series of life-ending decisions to be made by the courts: First there was abortion (stage 1), then infanticide (stage 2), and finally euthanasia (stage 3).

As we all know, abortion on demand has become the law of the land. Thus the first stage is firmly in place. Infanticide, the killing of newly born, but unwanted, babies is already occurring on mainland China, where girl babies are drowned while boy babies are allowed to live because they are more "useful" to the cause of the masses. Boys are considered more "fit" to survive and thus, in the greatest of Darwinian traditions, are deemed to be more valuable to the evolution of the Chinese people. Hitler felt that same way about preserving Aryans as opposed to Jews and other "less qualified" races. In the United States, partial birth abortion is somewhere between Stage 2 (infanticide) and Stage 1 (abortion). I say this because in the course of this heinous procedure all but

the head has been delivered, the skull is broken open and the baby's brains are extracted by way of a suction apparatus. The killing of six-day-old humans living outside the womb in the process of stem cell harvest is little less than infanticide.

Euthanasia, that is mercy killing, has taken a giant leap toward fruition with the legalization of physician-assisted suicide, ala Jack Kevorkian, in the state of Oregon. Active Euthanasia (Stage 3), the purposeful killing of the terminally ill by lethal injection, could eventually become a reality when our financially strained healthcare system has incited some morally bankrupt judge or lawmakers into deciding that the elderly are too costly a group to be allowed the privilege of continued life.

The evident progression of these stages certainly lends credibility to President Bush's caveat concerning "a series of moral hazards" and, in fact, we may already have progressed beyond "the leading edge." The camel has moved half of its body into the tent and stage 3 is not really that far off. Those of us over sixty-five had better listen for footsteps in the night if that is ever allowed to occur. Lest you think that scenario might merely represent the irrational ranting of an alarmist, simply reflect back to Nazi Germany. The place and time to stop this horrendous disregard for the sanctity of life is *here and now*; with the defeat of the movement to allow embryonic stem cell research.

WHAT CAN A CHRISTIAN DO TO STOP THIS?

Psalm 11:3 (NIV) reads, "When the foundations are being destroyed, what can the righteous do?" What greater foundation of life is there than an embryo? What can we, "the righteous" in Christ, do? We can protest. We can write to our representatives in the House and Senate and the editors of our local newspapers. The clergy can begin to educate and stimulate their ignorant and apathetic congregations concerning this sanctity of life and other bio-ethical issues. Our churches can hold town meetings with expert panelists from the Christian community who can educate the public on these vital issues pertaining to the sanctity of life, and our Christian edu-

cational institutions can make bio-ethics a required part of their curriculum.

A pragmatist will do whatever it takes to accomplish his or her goal, regardless of the legal, moral, ethical, or biblical implications.

You may be a person who approves of abortion under certain circumstances (e.g., rape or incest to save the life of the mother) but that's another issue, and the subject of a future article. These embryos, however, created outside the womb for the sole purpose of harvesting their vital stem cells, thus killing them, are not the products of either rape or incest. They are the products of an ideology called "pragmatism" and a mindset of "me-ism." A "me-ist" is typically a baby-boomer that wants to know, "What's in it for me?" If it benefits me it must be good. A pragmatist will do whatever it takes to accomplish his or her goal, regardless of the legal, moral, ethical, or biblical implications. In other words, the end justifies the means.

The Lord has told us, "No man can redeem the life of another" (Psalm 49:7 NIV). Likewise no human embryo should ever be used to redeem the life of another human being. How many Christians even know that Scripture? How many even care to know it? How many pastors have preached it?

Pragmatists will always get their way when working in an environment of apathy. To do or say nothing about this issue of *embryonic stem cell research* is to give tacit approval to its legalization and implementation, and to then give the proverbial "camel" full access to the tent—your tent.

Pastors and key laypersons need to lead the way in this educational process. They must first become informed themselves and then pass on their newly discovered knowledge to

their congregations. During the Nazi atrocities of the late 1930s and early 1940s the voice of one Christian pastor rang out loudly and clearly, that of Reverend Dietrich Bonhoeffer and it cost him his earthly life.

Less well known to us, but equally known to God is another German pastor, one Martin Niemöller, whom Chuck Colson quoted in his book, *Kingdoms in Conflict*.²

Having been imprisoned for speaking out against Hitler, but too late to make a real difference Niemöller said,

In Germany they came first for the Communists, and I didn't speak up for them because I wasn't a Communist. They came for the Jews, and I didn't speak up because I wasn't a Jew. Then they came for the trade unionists, and I didn't speak up because I wasn't a trade unionist. Then they came for the Catholics, and I didn't speak up because I was a Protestant. Then they came for me, and by that time no one was left to speak up.

It's now time for each of us to speak up and to encourage others to speak as well. After all, every one of us certainly has this particular thing in common; we all used to be embryos. If someday Stage 3, Active Euthanasia, has become the law of the land, and you hear those ominous footsteps in the night headed for your bedroom door where you're living in some extended care facility, you will probably wish that you had not remained silent in the year 2002!

Author

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Notes

1. Charles Krauthammer, "The Great Stem Cell Hoax," *The Weekly Standard*, (August 20-27, 2001).
2. Charles Colson, *Kingdoms in Conflict* (Grand Rapids, Michigan: Zondervan, 1987), 125.