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Cloning: No Longer Science Fiction

As we stand at a time when technology is quickly advancing, researchers have begun to bombard our nation and the rest of the world with questions of how far science can and should go. Since the pursuit of scientific breakthroughs and discoveries continues unfettered, our world is continually threatened with attacks on the sanctity of human life. Organizations and individuals that advocate human cloning are attempting to erode the basis for individual rights. Human life is not a commodity that should be copied and manipulated but a gift that should be respected.

The following is a fact sheet on human cloning. It contains information on the process of cloning, the numerous problems with human cloning for research, legislation on cloning, and Right to Life of Michigan's policy on cloning.

HOW CLONING WORKS

Cloning, also called somatic cell nuclear transfer, is a process of bypassing sexual reproduction and manipulating cells to produce a genetic twin of an organism. In this process, the nucleus of a somatic cell (any body cell other than an egg or sperm) is placed in an unfertilized egg cell where the nucleus has been removed. A catalyst is then used to stimulate the development of the new organism.

If the child survives for 5 or 6 days in culture, her fate depends on the goals of the research. If the researcher wants the child to be born, then she is placed in a surrogate womb and continues to develop. If the researcher wants to experiment on her or cannibalize her for spare parts, she is killed when she is no longer useful.

In 1997, English scientists announced they had used the cloning process to create a cloned sheep named Dolly.[1] Since the production of Dolly, scientists have been able to clone and bring to birth various kinds of animals including mice, cows, pigs and a dog. Creating cloned animals and bringing them to birth typically requires large quantities of eggs and many cloned embryos die before being born.

While few individuals today want to bring cloned human beings to birth, some researchers want to use the somatic cell nuclear transfer cloning procedure to create cloned human embryos so they can kill them for their embryonic stem cells. This is what some proponents of human cloning for research call "therapeutic cloning."

MISGUIDED THERAPY

With the emergence of embryonic stem cells, the term "therapeutic cloning" has been introduced into the debate surrounding human cloning. Besides being

linguistically misleading, this term seems to indicate that there is more than one type of cloning, but the only difference between so called "therapeutic" cloning and "reproductive" cloning is the clone's purpose in life. While reproductive cloning tries to create a being whose purpose is to be born and live a full life, therapeutic cloning tries to create a being whose only purpose in life is to be destroyed for research or to benefit another being. Both forms of cloning are reproductive since they both attempt to produce living human beings.

Many biotech companies hope to use cloning as a way of mass producing human embryos in order to remove their stem cells. Embryonic stem cells aren't from a person's own body, so they face the risk of the patient's immune system rejecting them.[2] Researchers hope to get around this problem by using cloning to create embryonic clones of patients and then killing their clones in order to harvest their tissues. Unfortunately, this "therapy" isn't very helpful to the unborn child whose only utilitarian purpose in life is to be sacrificed for the patient.

This method of "therapy" is another step in the attempt to destroy the sanctity of human life. Human beings are unique individuals with inalienable rights, but we are quickly becoming disposable products that can be experimented on and then thrown away when no longer useful. "Therapeutic cloning" allows scientists to hide behind the guise of helping sick people while concealing the fact that the "therapy" was created through the death of a human being.

THE EGG PROBLEM

Cloning human embryos for research will never save millions of lives. In order for this research to cure millions of people, scientists who attempt to clone and kill human embryos would need to get their hands on hundreds of millions of human eggs which would require tens of millions of women to agree to go through the process of donating eggs.

Researchers who first successfully created human embryonic stem cell lines from human beings they cloned and killed required an average of ten human eggs for every one cell line created.[3] To treat cardiovascular disease alone, which afflicts 83 million Americans, would require 830 million human eggs. That would require all of the 60 million American women of reproductive age to go through at least one round of egg donation. Millions of other Americans suffer from conditions for which cures have been promised.

Advanced Cell Technology, a biotechnology company hoping to clone and kill human embryos for stem cells, noted in a June 2006 Boston Globe article they'd been trying to recruit women for 6 months to donate eggs for research.[4] The small group of women who responded to the advertisements decided against donating after learning of the potential risks. In 2007, researchers at the University of Harvard announced they had spent $100,000 on advertisements attempting to entice women to donate their eggs for human cloning research but were unable to find a single donor.[5]

Women who may consider donating their eggs for research purposes face several physical risks that include bleeding, scarring and pelvic swelling. The donation process requires injections of powerful hormones to boost the production of eggs. These hormones used can cause ovarian hyperstimulation syndrome, which can lead to strokes, kidney damage and even death.

INCREDIBLY INEFFICIENT

The process of creating cloned human embryos, killing them for their stem cells and then using those cells to try to treat a patient would be incredibly inefficient and costly. Numerous experts in embryonic stem cell research have noted how unlikely it is that this process could ever be used to treat disease.

Thomas Okarma was a former president of the biotech firm Geron, which was once at the forefront of human embryonic stem cell research. Okarma said, "The efficiency of making a stem cell line from an embryo made by nuclear transfer (cloning) is vanishingly

small, and you're going back to the case by case, individualized therapy story again with enormous costs. The whole idea is to make this therapy internationally available, broadly. Nuclear transfer procedures just are never going to get us there."[6]

Alan Trounson is the former senior scientific advisor and president of the California Institute for Regenerative Medicine, which was created by California voters in 2004 to engage in human embryonic stem cell research. Trounson said, "My view is there are at least three or four other alternatives that are more attractive already... I can't see why, then, you would argue for therapeutic cloning in the long term because it is so difficult to get eggs and you've got this issue of (destroying) embryos as well."[7]

HOW DOES THE PUBLIC VIEW HUMAN CLONING?

Polls have consistently shown that an overwhelming majority of the public is opposed to human cloning. A poll taken by International Communications Research in May of 2006 found that 83.4 percent of individuals surveyed thought scientists shouldn't "be allowed to use human cloning to try to create children for infertile couples" and 81.2 percent thought scientists shouldn't "be allowed to use human cloning to create a supply of human embryos to be destroyed in medical research."

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A Gallup poll conducted in May of 2017 showed that 86 percent of participants thought that "cloning humans" was morally wrong.

Another poll taken of likely Michigan voters in 2007 by Public Opinion Strategies showed that 73 percent of respondents agreed with the statement, "While I think we need to find cures for horrible diseases, I worry about the future if the cloning of human embryos is allowed."

CLONING BANNED IN MICHIGAN

On June 3, 1998, Michigan became the first state to completely ban human cloning. The Cloning Prohibition Package made cloning a felony, punishable by up to 10 years in jail and a $10 million dollar fine. It also imposed a license/registration revocation of three to 10 years for health professionals that attempt to clone humans and prohibited any state funds from being used for human cloning. Senator Loren Bennett, an author to one of the bills in the package said, "this legislation boils down to one thing: Prohibiting the creation of human life for scientific research. Human cloning is wrong now; it will be wrong five years from now; and wrong 100 years from now!"[8]

FEDERAL LEGISLATION TO STOP HUMAN CLONING

On July 31, 2001, the United States House of Representatives voted to ban human cloning. The bill that was passed, known as the Weldon-Stupak bill, included a prohibition against any kind of cloning, including "therapeutic cloning." Some members of Congress wanted to pass a separate bill, known as the Greenwood bill, that would allow "therapeutic cloning" and outlaw reproductive cloning for 10 years. This bill was described by many in the prolife community as the "clone and kill" bill since all of the cloned embryos would have to be destroyed. The U.S. House of Representatives voted to again ban human cloning on February 27, 2003. The U.S. Senate did not take a vote on either pieces of legislation. In June of 2007, the U.S. House rejected a bill which would have allowed the creation of cloned human embryos for research. Until a ban on human cloning is passed by both the U.S. House and U.S. Senate and then signed by the president, human cloning is still a legal possibility in the United States.

RLM POLICY STATEMENT ON CLONING

Right to Life of Michigan finds human cloning to be an inherent violation of human dignity. As with abortion and assisted reproductive technologies, such as in

vitro fertilization, human cloning research denies the most fundamental of human rights -- the right to life. The research process inevitably requires scientists to destroy and discard their 'failed' experiments. For example, it took 277 attempts at cell manipulation and 29 embryo implants before the sheep, Dolly, was produced.

Cloning would further violate human dignity by denying the intrinsic value of each human life, thereby viewing human beings as products or commodities. For this same reason we already oppose surrogate parenting contracts, genetic screening of embryos before uterine implanting and sex-selection abortion.

Cloning could not possibly respect the intrinsic value of the person created, because a cloned person will not be created simply for their value as a person. There will always be an intended and specific utility attached to a cloned person because he or she was created with a particular genetic make-up for some purpose. Any action taken to create or destroy human beings based on their genetic qualities denies their intrinsic value.

Right to Life of Michigan strongly advocates for the passage of tightly written legislation at the national and state levels that will permanently ban all human cloning including research on embryos. If human cloning proceeds, our minds can conjure up many scenarios of abuse of human cloning as our narcissistic society creates human beings not in God's own image but in our own.

Learn more about stem cell research on the Right to Life of Michigan website **RTL.org**.

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