

March 23, 2005

Q & A on Human Cloning & Embryo Research in Massachusetts

The Massachusetts Legislature is debating stem cell research. What's the concern?

There are two kinds of stem cell research. The first kind involves adult stem cells. The second involves embryonic stem cells. We object to the latter.

The Catholic Church fully supports adult stem cell research. Adult stem cells can be found throughout the body of a maturing human being at the fetal, infant, child and adult stages. They can be obtained without harming the individual from whom they are taken. Therapies involving adult stem cells are already working.

In fact, promising heart research with adult stem cells is going on right now at St. Elizabeth's Hospital in Boston. The lead researcher, Dr. Douglas W. Lasordo, told the press recently that he believes that research involving "embryonic stem cells is going to fade in the rearview mirror of adult stem cells".¹

Embryonic stem cell research involves the destruction of human life. Embryonic stem cells can only be obtained from human embryos. The process used to obtain embryonic stem cells kills the embryo.

So the Catholic Church supports adult stem cell research but opposes embryonic stem cell research?

Exactly. The debate is not over stem cell research generally but over one particular type of stem cell research. The Catholic Church joins those who oppose the taking of life even for the noble purpose of curing. That's what's at stake in embryonic stem cell research. The ends do not justify the means. Adult stem cell research involves none of this controversy.²

Somebody at the Harvard Stem Cell Institute claimed recently that no cures in people have come from adult stem cell research. Is that true?

No. Amazingly, Dr. Jeffrey Maclis, a Harvard Stem Cell Institute researcher at Mass. General Hospital told the Boston Herald that "Zero patients - period - have been helped by adult stem cell

¹ Rick Weiss, *Marrow Has Cells Like Stem Cells, Test Show*, Washington Post, Feb. 2, 2005, at A03, available online at <http://www.washingtonpost.com/wp-dyn/articles/A55369-2005Feb1.html>.

² See the March 2, 2005, statement against cloning and embryo from the Roman Catholic Bishops in Massachusetts at http://www.macathconf.org/05bishops_cloning_web_statement.htm.

biology”.³ Let’s take a look at the actual record.

According to the National Institutes on Health, medical therapies using adult stem cells are effectively treating patients for over 100 health disorders and conditions. As of August 2004, 563 clinical trials involving treatments for patients using adult stem cells were underway. No clinical trials involving human embryonic stem cells were reported.⁴

The website for the Cord Blood Registry carries several moving stories of people cured of such diseases as leukemia and sickle cell anemia. They benefited from adult stem cells found in placental and umbilical cord blood.⁵ In addition, patients being treated with adult stem cells for spinal cord injury and Parkinson’s Disease shared their successes at a congressional hearing in 2004.⁶

An excellent online review of scientific and medical journal reports of adult stem cells successes demonstrates that thousands of people have benefited from adult stem cell research.⁷ Adult stem cells work and are changing lives for the better. Science does not have to kill in order to cure!

Embryonic stem cell advocates say that we shouldn’t put all of our eggs into one basket. Would we close off a promising option by endorsing only adult stem cell research?

Dr. David Prentice⁸ has examined all of the supposed advantages of embryonic stem cells over adult stem cells closely. He summarizes the progress with adult stem cells as follows:

[A]dult stem cells have been shown by the published evidence to be a more promising alternative for patient treatments, with a vast biomedical potential. Adult stem cells have proven success in the laboratory dish, in animal models of disease, and in current clinical treatments. Adult stem cells also avoid problems

³ Kimberly Atkins, *Stem Cell Debate Gets Serious As Legislation Picks Up Steam*, Boston Herald, Mar. 17, 2005, at

⁴ Letter from James F. Battey, Jr. to Cong. Mark Souder (Sept. 8, 2004), published in Congressional Record, Sept. 9, 2004, at H-6956. Dr. James Battey is the Director of the Stem Cell Task Force of the National Institutes of Health, and his letter responded to a request from Rep. Souder to compare the progress on treatments using adult stem cells with the progress of embryonic stem cell research. See also the introductory floor remarks of Cong. Souder at H-6955-56 (characterizing the 79-page report that accompanied Dr. Battey’s letter).

⁵ “Real People, Real Stories,” CBR—Cord Blood Registry, at

http://www.cordblood.com/cord_blood_banking_with_cbr/realpeople_realstories/index.asp.

⁶ July 2004: Testimony Before the U.S. Senate Commerce Committee on Science, Technology, and Space, linking to several individual testimonies, online at <http://www.stemcellresearch.org/testimony/>.

⁷ *Selected References Documenting the Scientific Advances in “Adult” Stem Cell Research—Current Treatments Update (Post-Natal or Tissue Stem Cells, Which Are Not Derived From Embryos)*, at <http://www.lifeissues.org/cloningstemcell/adultstemsuccess.htm>.

⁸ Dr. Prentice is a cell biologist. He is serving as an affiliated scholar at the Center for Clinical Bioethics, Georgetown University Medical Center. For twenty years he was Professor of Life Sciences at Indiana State University and Adjunct Professor of Medical & Molecular Genetics at Indiana University School of Medicine. He also has conducted federally-funded laboratory research, lectured, and advised on stem cell research extensively, in the U.S. and internationally. He has testified before Congress, state legislatures, and the President’s Council on Bioethics. He serves currently as a research fellow with the Family Research Council.

with tumor formation, transplant rejection, and provide realistic excitement for patient treatments.⁹

Besides already helping people, according to Dr. Prentice:

- 1) Adult stem cells are proving to be much more versatile than first believed;
- 2) Adult stem cells are demonstrating the capacity to produce a “virtually unlimited” supply;
- 3) Adult stem cells are obtainable through methods that are not controversial;
- 4) Adult stem cells do not carry the risks of tumors posed by embryonic stem cells.

“By contrast,” he adds, “human embryonic stem cells have never successfully been used in clinical trials, have had lackluster success in combating animal models of disease, and carry significant risks, including immune rejection, tumor formation, and genomic instability.”¹⁰

How is cloning involved in this debate?

Scientists want to create an unlimited supply of human embryos to be laboratory sources for embryonic stem cells, all made to order. Cloning is the process they want to use to copy human life at the embryonic stage in the laboratory. Stem cells would then be harvested from these embryos. The scientists want the legislature to remove any legal impediments to cloning embryos in Massachusetts.

What is cloning, anyway?

Cloning works this way: The scientists take a fully developed cell from an adult. An ordinary skin cell would suffice. They also acquire a woman’s egg through a method that is painful and risky to women, called super-ovulation. Then they transfer the nucleus of the skin cell into the egg after removing the egg’s own nucleus. The nucleus of the skin cell has the full genetic code of the person who gave the skin cell. Finally, the scientists apply an electrical charge or add chemicals to jump-start growth.

This process creates a living embryo with the full human genetic code. In research planned in Massachusetts, the embryo clone would then be marked for laboratory use only, and eventually destroyed when embryonic stem cells are extracted.

At a hearing before the state legislature in February 2005, scientists noted that the embryonic stem cells would provide the means to study the causes of diseases. This indicates that cloning would be used to intentionally create diseased embryos for basic research!¹¹

What’s the distinction between “therapeutic” and “reproductive” cloning?

Advocates for embryonic stem cell research make this false distinction. They argue that cloning to create embryos to harvest their embryonic stem cells is not “reproductive”. Instead, they

⁹ His most recent testimony took place on September 29, 2004 before the U.S. Senate Commerce Subcommittee on Science, Technology, and Space, online at

<http://www.stemcellresearch.org/testimony/20040929prentice.htm>.

¹⁰ Testimony of David A. Prentice, Subcommittee on Criminal Justice, Drug Policy, and Human Resources, U.S. House Committee on Government Reform, July 17, 2001, available online at

http://www.christianlegalsociety.com/clrfPages/advocacy/testimony_Prentice.php.

¹¹ See Anne Harding, *Harvard Has Human Cloning Plans: Institute Seeks Nod to Create Embryos Using Genes From Patients With Diabetes, Parkinson’s*, *The Scientist*, Oct. 15, 2004, online at

<http://www.biomedcentral.com/news/20041015/03>.

claim, it is only “therapeutic” because the goal is to find cures, and not grow the clone beyond the embryonic stage. That is, don’t worry, because we don’t want to implant the cloned embryo and bring it to birth.

Yet, all cloning is reproductive. And research that kills human life is hardly therapeutic to the destroyed embryos.

Besides, as the American Society for Reproductive Medicine has noted, “If undertaken, the development of SCNT [somatic cell nuclear transfer, or cloning] for such therapeutic purposes, in which embryos are not transferred for pregnancy, is likely to produce knowledge that could be used to achieve reproductive SCNT.”¹² The research involved would just lay the groundwork for creating and implanting cloned human life to mature to birth and beyond.

That’s another reason why all research involving the ‘therapeutic’ or ‘reproductive’ cloning of humans should be banned.

Supporters of embryonic stem cell research claim that they want to ban cloning. They also deny that embryonic stem cell research requires the destruction of human embryos. Are they correct?

No. This doesn’t square with the evidence.

The denials are based on two false assertions. First, researchers argue that the process they are using is not cloning but rather is something different, called “somatic cell nuclear transfer”. Second, they argue that the product of this process is not a human embryo or even human life, but is only a collection of cells.

For starters, two different federal bioethics commissions contradict these claims.

Under the Clinton administration in 1997, the National Bioethics Advisory Commission, in a report that supported embryo research, stated that “any effort in humans to transfer a somatic cell nucleus into an enucleated egg involves the creation of an embryo”.¹³ Under the current Bush administration in 2004, the President’s Council on Bioethics stated that “the initial product of somatic cell nuclear transfer is a living (one-celled) cloned human embryo”.¹⁴

A February 26, 2005, report in JAMA makes clear that the creation of human embryo clones is a key element of the research envisioned in Massachusetts. Dr. George Daley of the Harvard Medical School has used mice to perfect his cloning technique and his goal “for the next decade or so is to translate the platform—all the fundamental principles learned in mice—to human cells.”

As detailed in the JAMA article, Daley’s technique includes a step at which “the cell developed into a blastocyst-stage embryo” and then “[c]ells from the inner cell mass were removed to

¹² Ethics Committee, Am. Soc’y for Reproductive Med., *Human somatic cell nuclear transfer (cloning)*, 74 *Fertility & Sterility* 873 (Nov. 2000).

¹³ *Cloning Human Beings: Report and Recommendations of the National Bioethics Advisory Commission* (Rockville, MD: June 1997), p. 3.

¹⁴ *Human Cloning & Human Dignity: An Ethical Inquiry* (July 2002) chapter 3 “On Terminology”, online at <http://www.bioethics.gov/reports/cloningreport/terminology.html>.

generate an embryonic stem cell line”.¹⁵

It is this extraction that kills the embryo, as admitted by cloning researchers at Advanced Cell Technologies in Worcester. They agree that their cloning work to produce embryonic stem cells “requires the deliberate creation and disaggregation [cutting apart] of a human embryo.”¹⁶

Finally, according to Dr. Glenn McGee, a bioethicist at the University of Pennsylvania who supports embryo research, “Pretending that the scientists who do stem cell research are in no way complicit in the destruction of embryos is just wrong, a smoke and mirrors game”.¹⁷

Is the embryo, whether cloned or otherwise created, a human life? Is it a human being?

Yes to both questions.

The National Bioethics Advisory Commission concluded in 1999 that “human embryos deserve respect as a form of human life.”¹⁸ The President’s Council on Bioethics stated in 2004 that “the developing embryo . . . is not a mere heap or aggregate” of cells but instead “is governed by an internal principle of development that shapes and directs its transformations” from “a primordial and unfolding whole that functions as a whole . . . into a mature whole being.”¹⁹ In other words, the embryo is human, alive, and growing and is not “a bunch of cells”.

The leading clinical textbook on embryology recognizes the one-cell embryo at the zygote stage to be “the beginning of a new human being” and defines an embryo as “the developing human during its early stages of development.”²⁰ In 2002, the National Academy of Sciences acknowledged that “in medical terms,” the embryo is a “developing human from fertilization” onwards.²¹

The science tells us that an embryo is the youngest member of the species of human beings. Ethics determines how we treat this most vulnerable innocent life.

What about those who claim that an embryo created outside the womb is not a human being as long as the embryo is kept outside the womb?

A flyer circulated by the Juvenile Diabetes Research Foundation International asserts that the “resulting cell” from cloning “has no chance of developing into a human being because it is never placed in a uterus.” That’s like saying that a homeless person does not exist as long as he

¹⁵ M.J. Friedrich, *George Daley, MD, PhD, Talks About the Clinical Promise of Stem Cell Research*, 293 JAMA 787 (Feb. 16, 2005).

¹⁶ Robert P. Lanza, Arthur L. Caplan, Lee M. Silver, Jose B. Cibelli, Michael D. West & Ronald M. Green, *The Ethical Validity of Using Nuclear Transfer in Human Transplantation*, 284 JAMA 3175 (Dec. 27, 2000).

¹⁷ Quoted in J. Spanogle, “Transforming Life”, *The Baylor Line* (Winter 2000), and p.30. An excellent summary of the secular authorities acknowledging the scientific facts can be found online. See testimony of Richard Doerflinger, U.S. Conference of Catholic Bishops, before the U.S. Senate (Sept. 29, 2004), listing all the protections and official acknowledgements of the human embryo’s status as human life worthy of respect, online at <http://www.usccb.org/prolife/issues/bioethic/embryo/test092904.htm>.

¹⁸ *Ethical Issues in Human Stem Cell Research* (Rockville, MD; Sept. 1999), vol. I, at p. ii.

¹⁹ *Human Cloning & Human Dignity* at chapter 3.

²⁰ K. Moore & T.V.N. Persaud, *The Developing Human: Clinically Oriented Embryology* (7th ed. Saunders: Phila. 2003), at 2, 3.

²¹ *Scientific and Medical Aspects of Human Reproductive Cloning* (Nat’l Academy Press 2002), p. 262.

or she is barred from entering a house. All that changes during implantation is location, not the existence of the embryo. Denying the embryo a nurturing environment—and then causing his or her destruction—does not prevent the embryo from being human. Rather, it results in a death that is itself inhumane.

Does the cloned embryo have the same biological status as a human embryo formed by the union of an egg and sperm?

Yes. As the President's Council on Bioethics put it, "Human cloning, therefore, is the asexual production of a new human organism that is, at all stages of development, genetically virtually identical to a currently existing or previously existing human being."²² To be "virtually identical" says it all. Outside of the means used to create the new life, a cloned human embryo is no different in biological status from any other human being.

Why would the embryonic stem cell researchers want to deny what their work is actually about in the face of all the authorities contradicting their claims?

Perhaps the scientists are concerned about the financial ramifications. The controversy involved with using human sacrifice as a means to develop medicines and therapies has scared investors. As noted recently in the *Journal of Biolaw & Business*, "[I]argely due to the controversy surrounding the harvesting sources of HESCs [human embryonic stem cells], governmental and private funding for HESC research has been difficult to attract in many countries."²³

It should be no surprise if they want to minimize the connection between such research and the killing of human life. While there are scientists who undoubtedly are sincere and are seeking to help sick people, the prestige that comes with being the first to accomplish breakthroughs and the potential for economic gain continue to exert their own pressures to deny the moral issues at stake.

Also, there is a very strong ethical tradition in this country that human beings are not to be treated as fodder for harmful research. There is a tragic history of exploitation, even among our prestigious scientific and academic institutions. This has prompted society to put limits on science in the name of human dignity. Promoters of embryonic stem cell research want to avoid any perception that they are involved with unethical science.

That means when they deny any connection between their research and the cloning and taking of human life, we have to be very careful. The facts, and the incentives, point the other way.

What about "leftover" embryos in frozen storage at fertility clinics?

As the Massachusetts Catholic Bishops put it in their March 2005 statement, "the intrinsic worth of human life is not affected by whether one is wanted or abandoned."²⁴

²² President's Council on Bioethics, *Frequently Asked Questions About Human Cloning and the Council's Report on Human Cloning and Human Dignity: An Ethical Inquiry*, available online at http://www.bioethics.gov/topics/cloning_faq.html.

²³ Ella De Trizio & Christopher S. Brennan, *The Business of Human Embryonic Stem Cell Research and an International Analysis of Relevant Laws*, 7 *Biolaw & Business* (No. 4, 2004), at p. 5, available online at <http://www.dechert.com/library/BusinessOfStemCellResearch.pdf>.

²⁴ See statement online at http://www.macathconf.org/05bishops_cloning_web_statement.htm

One of the scientists doing destructive embryonic research, Dr. Douglas Melton of the Harvard Stem Cell Institute, refers to such embryos as “excess material”.²⁵ This dehumanizes them. It crosses an ethical line to deny the dignity of human beings in order to exploit them in medical experiments.

Why is there such a push to clone human beings if frozen embryos are already available?

There is some bait-and-switching going on. When embryo researchers first started lobbying in the public policy arena, they argued that the use of “leftover” frozen embryos would be critical to and sufficient for their research.

For example, in 2001, a letter to President George W. Bush drafted by scientists at Advanced Cell Technology in Worcester on behalf of 80 Nobel Laureates appealed for federal support, carefully noting that “it is important to understand that the cells being used in this research were destined to be discarded in any case.”²⁶

Now they have changed their tune.

So, researchers no longer favor the use of frozen embryos?

They are saying now that the frozen embryos won’t meet their needs after all. They want to ski further down the slippery slope by cloning human life to destroy it.

In 2002, the RAND Corporation, a non-profit research and analysis group, issued a study indicating the existence of 400,000 frozen embryos stored in IVF clinics in the United States. The study determined that while 11,000 of these embryos were available for research, only about 275 stem cell lines could be expected to be produced due to the poor condition of the embryos, their time in storage, and inability to survive the thawing process.²⁷

After first being told that “discarded” embryos were essential, now we are being told that the vast majority of frozen embryos would be unavailable or of no use to scientists. In actuality, “the perception that fertility clinics are overstuffed with extra embryos is the result of press sensationalism.”²⁸

Then that means the party line has changed?

Yes. In the words of a pro-cloning group called the Coalition for the Advancement of Medical Research, the “[b]ottom line [is]: scientists need more cell lines to fulfill the promise of

²⁵ Dr. Melton made this reference during the question and answer session of a conference entitled “Unlocking the Promise of Stem Cells” sponsored by the Harvard Stem Cell Institute on March 2, 2004. A recording of the entire conference is available online at <http://athome.harvard.edu/programs/psc/index.html>, which contains a separate link to that session.

²⁶ Nobel Laureates’ Letter to President Bush, Feb. 21, 2001, available online at <http://www.washingtonpost.com/wp-dyn/articles/A37117-2001Feb21.html>.

²⁷ *RAND Law & Health Research Brief: How Many Frozen Embryos Are Available for Research?* (2002), available online at <http://www.rand.org/publications/RB/RB9038/>.

²⁸ Andis Robeznieks, *Ethics for Extra Embryos: Doctors Face A Dilemma*, AmMedNews.com, Feb. 14, 2005, available online at <http://www.ama-assn.org/amednews/2005/02/14/prsa0214.htm>.

embryonic stem cell research.”²⁹

The trouble is, cloning has its own supply and demand problem, and it has to do with getting enough eggs from women. This increases the risk that women, especially poor women of color, will be exploited.

What do you mean? How will cloning threaten the interests of women?

This is one of the few areas where abortion rights feminists and the Catholic Church are in agreement. Judy Norsigian, the executive director of the Boston Women’s Health Collective and author of “Our Bodies, Ourselves”, has testified against cloning before Congress and before the Massachusetts Legislature because of the negative impact it will have on women.

In a recent op ed in the Boston Globe, Norsigian wrote:

Omitted from the polarized debate is any discussion of the thousands of women who will need to undergo egg extraction procedures for such embryo cloning. A primary concern is the substantial risks to women’s health posed by the extraction procedure and the inability to obtain true informed consent from egg donors given the current lack of adequate safety data.³⁰

In her 2002 committee testimony before the U.S. Senate, Norsigian provided more background:

One researcher stated that stem cells might be able to provide up to 1.7 million therapies per year. This would require a minimum of 5-8 million human eggs per year—assuming a very optimistically high success rate of 1 stem cell culture out of 3-5 clonal embryos. Thus, it is highly likely that many women will become repeat donors, and that there would be massive expansion in the use of women as paid “egg producers.” We know nothing about the health risks of such repeat donations.³¹

Do the scientists recognize this as a problem?

Yes. According to the JAMA article referenced above, “One limiting feature for human nuclear transfer is the availability of eggs, said [Dr. George] Daley. His group [at Harvard] has been interested in coming up with strategies that do not depend on female egg donors, an expensive and impractical approach for research.”³² To date, they have not succeeded.³³

In a memorandum submitted to the Joint Committee on Economic Development and Emerging Technologies in February, 2005, Dr. Suzanne Parisian, former Chief Medical Officer of the Food

²⁹ Coalition for the Advancement of Medical Research, *Frequently Asked Questions About SCNT (Therapeutic Cloning)*, available online at <http://www.camradvocacy.org/fastaction/faqs.asp>.

³⁰ Judy Norsigian, *Risks to Women in Embryo Cloning*, Boston Globe, Feb. 25, 2005, available online at http://www.boston.com/news/globe/editorial_opinion/oped/articles/2005/02/25/risks_to_women_in_embryo_cloning/.

³¹ Statement of Judy Norsigian before the Senate Health, Education, Labor and Pensions Committee, Mar. 5, 2002, available online at <http://www.ourbodiesourselves.org/clone4.htm>.

³² M.J. Friedrich, *George Daley, MD, PhD, Talks About the Clinical Promise of Stem Cell Research*, 293 JAMA 787, 788 (Feb. 16, 2005).

³³ Id.

& Drug Administration, writes that “[f]rom a purely practical perspective, those promoting SCNT [somatic cell nuclear transfer, or cloning] may be unknowingly tackling a far more costly and serious health burden by allowing the expanded use of IVF stimulation drugs for SCNT.”³⁴

Dr. Parisian outlines several concerns:

- “many of the drugs used during these procedures [for super-ovulation to create and extract multiple eggs from a woman] have not been adequately studied for long term safety, nor do some of these drugs have FDA approval for these specific indications”;
- “The long term health risks for a woman receiving IVF drugs for egg retrieval are unknown”;
- “studies to date have not ruled out a possible link between stimulation drugs and an increased risk of ovarian cancer”;
- short term risks, “although rare, include death, respiratory or cardiac arrest, brain damage, paraplegia, paralysis, loss of function of a limb or organ, hemorrhage, allergic reaction, and infection, bleeding or other injuries which occur during retrieval may require an invasive surgical procedure to correct and could affect future fertility.”

It sounds like women are the guinea pigs in all this. You mentioned that women of color will be targeted. What do you mean?

The pro-cloning group, the Coalition for the Advancement of Medical Research, states that:

the cells currently available to researchers [from frozen embryos in IVF clinics] is insufficient because . . . [t]hey are not sufficiently racially or ethnically diverse. Certain diseases are more prevalent in people of particular races, like sickle cell disease. By creating new stem cells from people of specific races, scientists could help unravel the causes of these diseases.³⁵

This is the proof that women of color will be targeted for their eggs. This is not the goal of a fringe organization. The CAMR “is comprised of nationally-recognized patient organizations, universities, scientific societies, foundations, and individuals with life-threatening illnesses and disorders, advocating for the advancement of breakthrough research and technologies in regenerative medicine.”³⁶

Members include Harvard University, the Massachusetts Biotechnology Council and its national counterpart the Biotechnology Industry Organization, as well as the American Medical Association, and Hadassah, which recently rallied at the State House.³⁷

Concern about this targeting of women of color, especially in Third World countries, was one of the reasons that the United Nations adopted a declaration in February against all forms of human cloning and embryo research.

³⁴ Suzanne Parisian, Memorandum to the Joint Committee on Economic Development and Emerging Technologies, Feb. 16, 2005.

³⁵ Coalition for the Advancement of Medical Research, *Frequently Asked Questions About SCNT (Therapeutic Cloning)*, *supra* (emphasis in original).

³⁶ From the coalition’s website at <http://www.camradvocacy.org/fastaction/>.

³⁷ The full membership list is on the coalition’s website at <http://www.camradvocacy.org/fastaction/members.asp>.

The United Nations condemned cloning? Tell me more about this.

Yes, on March 8, 2005, the United Nations General Assembly adopted the historic Declaration on Human Cloning.³⁸ The Declaration calls on all countries

- “to adopt all measures necessary to protect adequately human life in the application of life sciences;”
- “to prohibit all forms of human cloning inasmuch as they are incompatible with human dignity and the protection of human life;”
- “to adopt the measures necessary to prohibit the application of genetic engineering techniques that may be contrary to human dignity;” and,
- “to prevent the exploitation of women in the application of life sciences”.

In the preamble to its Declaration, the U.N. emphasized that “the promotion of scientific and technical progress in life sciences should be sought in a manner that safeguards respect for human rights and the benefit of all” and warned of “the serious medical, physical, psychological and social dangers that human cloning may imply for the individuals involved, and also . . . the need to prevent the exploitation of women”.

So, what’s the crux of the issue?

Mrs. Patricia Payne, who has Parkinson’s Disease, and yet who testified against embryonic stem cell and cloning research at the State House in Boston, put it best:

As you can see, I am suffering immensely from my Parkinson’s, and from the bone disintegration around my lower spine, which floods my whole body with constant pain. How I want to relieve my suffering; especially of the body which I carefully conditioned for years as a classical dancer. But my suffering isn’t the real issue! The real issue is what we are being asked to do in the hope of relieving our suffering. In Embryonic Stem Cell research, an embryonic human being is sacrificed in order to get a hold of embryonic stem cells. I don’t want to see cures, even a cure for my terrible disease, to be obtained by destroying a fellow human being at their earliest and most vulnerable stage of their existence. . . .

There is a universal moral law, which transcends history and culture, and is a characteristic principle of high civilization. It is that “the end does not justify the means.” To kill one human being for the benefit of another is never morally justifiable. To kill the weak in order to benefit the strong is even more objectionable. Please choose a good, not an evil means for helping those who suffer. The choice is not between science and ethics, but between a science that is ethically responsible and a science that is not.³⁹

This is not an issue of religion against science. The move in the United Nations to ban cloning and embryo research demonstrates rather that this is an issue about human rights and ethical science.

³⁸ For the official U.N. press announcement see <http://www.un.org/News/Press/docs/2005/ga10333.doc.htm>. A text of the Declaration can be found at <http://www.macathconf.org/undeclarationoncloning.htm>.

³⁹ Testimony of Patricia Payne to the Commonwealth of Massachusetts Joint Committee on Economic Development and Emerging Technologies Against SB 25—An Act Promoting Stem Cell Research, Feb. 16, 2005, available online at http://www.macathconf.org/05cloning_testimony_mrs_payne.htm.