

research. This is a vote that millions of Americans are watching. People who are suffering from diabetes, Parkinson's, Alzheimer's, spinal cord injuries, they can't understand why America, for the last 5 years, has shut down medical research that promises hope—hope for cures. They can't understand that the President of the United States made the decision—almost unprecedented in our history—to close down medical research. He didn't do it absolutely, and that is the curious thing.

If this is a question of being driven by moral values, I don't understand how the President could conclude that using existing stem cell lines, 78 of them, is permissible, but using 1 more is immoral. I don't follow his logic. Frankly, I don't believe it is logical.

What we have before us is an opportunity to move forward on stem cell research with very strict ethical guidelines. We have a choice: Will we take these thousands of stem cells—which, frankly, will be discarded as waste and surplus—will we allow that to happen or use them in a laboratory to give a 12-year-old girl suffering from juvenile diabetes a chance for a normal, happy life?

Will we use these stem cells to try to explore possibilities for the epidemics of Parkinson's and Alzheimer's and Lou Gehrig's disease and finally have some avenue toward a cure? Are we going to tie our hands as a nation?

The Senate has a chance today to vote for the real bill: H.R. 810. That is the only bill dealing with stem cell research. There are two other bills we will be voting on, and honestly, they don't mean anything. They mean so little. One prohibits practices that are not occurring, and the other is just words—words that don't really lead to research.

What is really troubling is the President has sent us a message, and we received it yesterday. The President said, with his Statement of Administration Policy, if H.R. 810, the real stem cell research bill, were presented to the President, he would veto the bill. This President, who calls himself a compassionate conservative, has a chance with the stem cell research bill to show his compassion for the millions of people suffering from disease, people who are clinging to the possibility of hope in medical research. I hope the President will reconsider. I hope he will not just dig in and say: That's it, I won't even think about it.

I hope the President will pray on this because he is a prayerful man, and if he does, I hope he will understand that throwing away these stem cells, discarding them, declaring they are medical waste, is a waste of opportunity and a waste of hope.

We have a chance with this stem cell bill to give hope to people. I have gathered those in Chicago who are interested in the issue, and there are so many of them: Representatives of groups, a mother who wakes in the middle of the night two or three times

to take a blood test on her little girl to see if she needs insulin; a couple sitting before me—I will never forget them—he is suffering from Lou Gehrig's disease. He is in his thirties. He has reached the point now where he cannot speak or move. She brings him to our meeting, and as she describes what they have been through, tears are rolling down his cheeks, realizing he can't do anything to help himself at this point.

Well, there is a chance—a chance, perhaps, for him but certainly for others—a chance for them, for those suffering from Parkinson's.

My colleague from Illinois in the House, LANE EVANS, is my buddy. We came to the House together in 1982. What a great guy. He is a Vietnam era Marine Corps veteran. He wins an upset victory in Illinois, comes in, he is a great Congressman, and then Parkinson's strikes. He had to announce this year he is ending his public career to continue this valiant battle against Parkinson's.

He said, when he came to the floor and spoke on behalf of this bill: This is not just about the right to life, it is the right to live, the right for him to live, the right for others to live.

I implore my colleagues on both sides of the aisle to pass this bill today with a strong vote. Say to the President: Please, in prayerful reflection, think about these people who are counting on us. Think about our chance to show that we are not just compassionate conservatives and compassionate progressives and compassionate liberals, we are compassionate Americans.

I urge my colleagues to pass this bill, and I urge the President to reconsider his veto.

The PRESIDING OFFICER (Mr. DEMINT). The Senator's time has expired.

Mr. HATCH. Mr. President, I see the distinguished Senator from Alaska on the Senate floor. I believe he would like to introduce some people.

VISIT TO THE SENATE BY MEMBERS OF THE SENATE OF SPAIN

Mr. STEVENS. Mr. President, it is my high honor to introduce to the Senate a delegation from the Senate of Spain. Senator Rojo is the leader of this group, the President of the Senate of Spain. With him is Senator Lucas, Senator Anasagasti, Senator Caneda, Senator Garcia-Escudero, Senator Lerma, Senator Aleu, Senator Zubia, Senator Macias, Senator Mendoza, and Senator Cuenca.

Senator Rojo is the President. Senator Lucas is the Vice President. Senator Anasagasti is the First Secretary, and Senator Caneda is the Third Secretary. Senator Garcia-Escudero is the Spokesperson for the Popular Party, Senator Lerma is the Spokesperson for the Socialist Party. Senator Aleu is the Spokesperson for the Progressive Catalanian Parties, and Senator Zubia is the Spokesperson for the Basque Na-

tionals. Senator Macias is the Spokesperson for the Catalanian Coalition. Senator Mendoza is the Spokesperson for the Canary Islands Coalition, and Senator Cuenca is the Deputy Spokesperson for the Mixed Group.

Mr. President, we thought we had it bad. There are many parties represented here from our distinguished ally, Spain. I hope Senators will take a moment to say hello.

I explained to my colleagues that we are in a debate which is a prelude to a debate which will come up very soon.

RECESS

Mr. STEVENS. Mr. President, I will ask the Senate stand in recess for just a few moments to say hello to our distinguished colleagues.

With the Senate's indulgence, I would like to announce we will have a coffee reception for the President of the Senate of Spain and his colleagues, the Senators from Spain, in the President pro tempore's room starting immediately. All staff and Senators are invited.

I ask unanimous consent that the Senate stand in recess so we can greet our distinguished colleagues.

The PRESIDING OFFICER. The Senator will stand in recess subject to the call of the Chair.

Thereupon, the Senate, at 10:03 a.m. recessed until 10:04 a.m. and reassembled when called to order by the Presiding Officer (Mr. DEMINT).

CONCLUSION OF MORNING BUSINESS

The PRESIDING OFFICER. Under the previous order, morning business is now closed.

FETUS FARMING PROHIBITION ACT OF 2006

ALTERNATIVE PLURIPOTENT STEM CELL THERAPIES ENHANCEMENT ACT

STEM CELL RESEARCH ENHANCEMENT ACT OF 2005

The PRESIDING OFFICER. Under the previous order, the hour of 10 a.m. having arrived, the Senate will resume consideration of S. 3504, S. 2754, and H.R. 810, en bloc, which the clerk will report.

The legislative clerk read as follows:

A bill (H.R. 810) to amend the Public Health Service Act to provide for human embryonic stem cell research.

A bill (S. 3504) to amend the Public Health Service Act to prohibit the solicitation or acceptance of tissue from fetuses gestated for research purposes, and for other purposes.

A bill (S. 2754) to derive human pluripotent stem cell lines using techniques that do not knowingly harm embryos.

Mr. HATCH. Mr. President, I rise to speak in support of stem cell research.

I plan to vote in favor of each of the three bills that we will be considering today. I call upon my colleagues to pass all three of these bills. I call upon the President to sign all of them into law.

Make no mistake about it. This is an important debate. We will cast important votes today.

Even with all the events taking place the world today, including the developments in Lebanon, Syria, and Iran, it is my hope—and the hope of many others—that when the history of our time is written, the ultimate outcome of today's debate over stem cell research will have been a major breakthrough in our understanding of, and ability to promote, human health and prevent and treat disease.

I admire and respect President Bush tremendously for being the first President to dedicate Federal funds for stem cell research. As many may recall, in August 2001, the President announced that Federal funds would be used for research on 60 stem cell lines that were created from embryos that have already been destroyed. Unfortunately, many of these stem lines became contaminated so the cells could never be used for scientific research. I believe that H.R. 810 must be signed into law in order to make the President's policy work because in my view, the President already made the decision to use the cells. H.R. 810 just changes the guidelines for stem cell research by allowing embryos that would otherwise be discarded to be made available for research. I believe that by using these embryos for medical research, we are, in fact, promoting life.

One of the reasons why so many are so interested in this debate is that literally everyone either has, or knows, a loved one who has, one of the diseases or conditions that may one day benefit from stem cell research.

One reason why I support stem cell research so strongly is because I have heard from so many of my fellow citizens of Utah and fellow Americans about how important this issue is to them and their families.

That is the reason why Nancy Reagan wrote me the following letter about stem cell research:

MAY 1, 2006

DEAR ORRIN: Thank you for your continued commitment to helping the millions of Americans who suffer from devastating and disabling diseases. Your support has given so much hope to so many.

It has been nearly a year since the United States House of Representatives first approved the stem cell legislation that would open the research so we could fully unleash its promise. For those who are waiting every day for scientific progress to help their loved ones, the wait for United States Senate action has been very difficult and hard to comprehend.

I understand that the United States Senate is now considering voting on H.R. 810, the Stem Cell Research Enhancement Act, sometime this month. Orrin, I know I can count on friends like you to help make sure this happens. There is just no more time to wait.

Sincerely,

NANCY.

I want to make it clear that there is broad consensus among leading scientists that among the three bills we will vote upon today—the Stem Cell Research and Enhancement Act, H.R. 810; the Alternative Pluripotent Stem Cell Therapies Enhancement Act, S. 2754; and the Fetus Farming Prohibition Act of 2006—it is H.R. 810 that can most immediately advance science.

The vote on H.R. 810 is the one that really counts.

Some in this debate suggest that passage of the Specter-Santorum alternatives bill would obviate the need for H.R. 810. Neither Senator SPECTER nor I believe that. Nor do the leading scientists in America believe that. Nor should you believe that.

To put a point on it, the other two bills, S. 2754 and S. 3504, are most emphatically not a substitute for H.R. 810. These bills complement H.R. 810. In no way can, or do, they replace H.R. 810.

I support the alternatives bill, S. 2754, for a lot of the same reasons why I coauthored the cord blood stem cell research bill that President Bush signed into law last year. I believe that all scientifically credible and ethically sound avenues of stem cell research ought to be pursued. I might add that when we passed the cord blood legislation, that form of research had already yielded tangible results for several types of diseases, such as some forms of bone marrow cancer.

In sharp contrast, whatever benefits the alternatives bill may yield, experts tell us that they are largely unrealized today and, as often the case with cutting edge science, uncertain in the future. But that is the way science works. Advance in science often progresses in fits and starts. Sometimes, actually most of the time, particular avenues of research are found to be blind alleys and advances do not come. Many seeds of discovery have to be planted for the flower of progress to bloom.

Today's votes give us an opportunity to move forward on several fronts.

Let us be clear that the centerpiece of today's debate is H.R. 810. This is the bill that will help provide the long overdue expansion of the number of stem cell lines eligible for federally funded biomedical research. This is what our leading scientists have told us they want and need to move the field of stem cell research forward.

I have worked with leading scientists throughout my 30-year career in the Senate. Few, if any, issues have created the genuine sense of excitement among the scientific community as have the current opportunities in stem cell research.

Listen to what Dr. Harold Varmus has said about the promise of stem cell research. Dr. Varmus is a Nobel Laureate. He is the former Director of the National Institutes of Health. He currently runs the prestigious Sloan-Kettering Cancer Center. By all accounts, he is one of the leading scientists in the world. I met with Dr. Varmus on

several occasions to learn what scientists think about stem cell research.

Here is Dr. Varmus' assessment:

(t)he development of a cell that may produce almost every tissue of the human body is an unprecedented scientific breakthrough. It is not too unrealistic to say that this practice has the potential to revolutionize the practice of medicine.

More than 40 other Nobel prize-winners and as well most of our Nation's leading scientists, disease advocacy organizations, and many other interested citizens and organizations share this view.

For example, here is what Dr. Edward Clark of the University of Utah Department of Pediatrics has told me about stem cell research:

. . . I can assure you that the scientific progress of stem cell research is extraordinary.

. . . In pediatrics, stem cell research offers therapy, and indeed possibly a cure, for a wide variety of childhood diseases, including neurologic disease, spinal cord injuries, and heart disease . . .

I can think of nothing that will provide as much meaningful therapy for children and children's problems than the promise offered by stem cell research.

It is not hard to understand why the additional stem cell lines that can and will be used by federally funded scientists if H.R. 810 becomes law is so exciting for scientists and important for the American public.

The stakes of today's debate are high. As a report of the influential National Academy of Sciences Institute of Medicine has stated:

(S)tem cell research has the potential to affect the lives of millions of people in the United States and around the world.

This Institute of Medicine Report goes on to cite the following high prevalence diseases as likely candidates for stem cell research: Cardiovascular Disease—58 million U.S. patients; Auto-immune Diseases—30 million U.S. patients; Diabetes—16 million U.S. patients; Osteoporosis—10 million U.S. patients; Cancer—10 million U.S. patients; Alzheimer's Disease—5.5 million U.S. patients; Parkinson's Disease—1.5 million U.S. patients.

What family in America does not include someone afflicted with a disease on this list? And a complete list includes many other diseases and conditions such as spinal cord injuries, burns, and many birth defects. Experts believe that upward of 100 million Americans—and hundreds of millions of others around the world—may one day benefit from stem cell research.

For example, let us consider spinal cord injuries. Who does not know, or know of, someone whose life has been devastated by a spinal cord injury?

Mr. President, I ask unanimous consent to have printed in the RECORD a letter I received just last month from Michael Armstrong, Chairman of the Board of the Johns Hopkins School of Medicine.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

JOHNS HOPKINS MEDICINE,
Naples, FL, June 26, 2006.

Hon. ORRIN G. HATCH,
Hart Senate Office Building,
Washington, DC.

DEAR SENATOR HATCH: I'm writing to let you know about an exciting recent breakthrough in biomedical research at the Johns Hopkins University. Using mouse embryonic stem cells, scientists led by Dr. Douglas Kerr have regenerated damaged nerve tissue in paralyzed rats, thereby restoring motor function. The details of Dr. Kerr's research are described in a press release attached to this letter.

This breakthrough represents the first time that scientists have actually re-grown damaged components of a nervous system, and it could lead to human therapies that seemed previously to be beyond our reach. Treatments not only for paralysis, but for ALS, multiple sclerosis, and similar diseases of the brain now seem possible. The exact timeframe is impossible to predict, but it will almost certainly depend on the availability of federal funding.

Due to restrictions on federal funding of embryonic stem cell research, Dr. Kerr will likely seek state support for his continuing work. We at Johns Hopkins applaud the courageous efforts of the Maryland General Assembly to make that support possible by passing the Maryland Stem Cell Enhancement Act earlier this year.

The level of funding that will ultimately be required to advance this field of science to human trials, however, suggests that federal funding will be necessary. Yet under current federal policy, the only stem cell lines eligible for federal funding were created using mouse feeder cells and could never be used in clinical trials with humans. It is therefore crucial that current federal stem cell policy be revised.

We are grateful for your ongoing commitment to biomedical research. I'm sure your leadership on this issue will continue to uphold the best interests of American researcher, physicians, and above all, patients.

Sincerely,

C. MICHAEL ARMSTRONG,
Chairman.

Mr. HATCH. Mr. President, this letter describes groundbreaking research conducted by a Johns Hopkins scientist, Dr. Douglas Kerr, on how mouse embryonic stem cells have been able to regenerate damaged nerve tissue in paralyzed rats. According to the letter from Johns Hopkins University, one of the world's most respected biomedical research institutions in the world, Dr. Kerr's "breakthrough represents the first time that scientists have actually re-grown damaged components of a nervous system, and it could lead to human therapies that seemed previously to be beyond our reach. Treatments not only for paralysis, but for ALS, multiple sclerosis, and similar diseases of the brain now seem possible."

The current Director of the National Institutes of Health, Dr. Elias Zerhouni, has said that this research is "a remarkable advance that can help us understand how stem cells can begin to fulfill their great promise."

However, unless H.R. 810 becomes law and the number of stem cells lines eligible for Federal funding is expanded, this promising research could die on the vine.

As Mr. Armstrong explains in his letter:

The level of funding that will that will ultimately be required to advance this field of science to human clinical trials, however, suggests that federal funding will be necessary. Yet, under current federal policy, the only stem cell lines eligible for federal funding were created using mouse feeder cells and could never be used in clinical trials with humans. It is therefore crucial that current stem cell policy be revised.

The precise type of revision that the scientists at Johns Hopkins tell us is needed is precisely the change in Federal policy that H.R. 810, the Castle-DeGette bill, will bring about.

And the scientists at Johns Hopkins are hardly alone.

Mr. President, I ask unanimous consent to have printed in the RECORD a letter from Dr. Darrel Kirch, President of the Association of American Medical Colleges.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

ASSOCIATION OF
AMERICAN MEDICAL COLLEGES,
Washington, DC, July 11, 2006.

DEAR SENATOR: The Association of American Medical Colleges (AAMC) urges you to vote in favor of the "Stem Cell Research Enhancement Act of 2005" (H.R. 810) when it is considered by the Senate. The AAMC, which represents the nation's 125 accredited medical schools, some 400 major teaching hospitals, and more than 105,000 faculty in 94 academic and scientific societies, endorses this legislation to expand Federal support for stem cell research while adhering to strict federal oversight and standards. In accordance with current law, the legislation ensures that no Federal funding shall be used to derive stem cells or destroy embryos.

The discovery of human pluripotent stem cells is a significant research advance and Federal support to American researchers is essential both to translate this discovery into novel therapies for a range of serious and intractable diseases, and to ensure that this research is conducted under a rigorous and credible ethical regime. The therapeutic potential of pluripotent stem cells is remarkable and could well prove to be one of the important paradigm-shifting advances in the history of medical science. These cells have the unique potential to differentiate into any human cell type and offer real hope of life-affirming treatments for diabetes, damaged heart tissue, arthritis, Parkinson's, ALS and spinal cord injuries, to name but a few examples. There is also the possibility that these cells could be used to create more complex organ structures that could replace diseased vital organs, such as kidneys, livers, or even hearts.

We recognize the significant ethical issues that are raised about embryonic stem cell research and we respect the view of those who oppose such research, including some in our own medical school community. However, we are persuaded otherwise by what we believe is an equally compelling ethical consideration, namely, that it would be tragic to waste the unique potential afforded by embryonic stem cells, derived from embryos destined to be discarded in any case, to alleviate human suffering and enhance the quality of human life.

This legislation recognizes the need to expand Federal support of research on pluripotent stem cells so that the tremendous scientific and medical benefits of their use may one day become available to the millions of patients who so desperately need them. Again, we urge you to vote for this

bill, which will help ensure the potential of this research is translated into treatments and cures.

Sincerely,

DARRELL G. KIRCH, M.D.,
President.

Mr. HATCH. Mr. President, this organization represents our Nation's 125 accredited medical schools, 400 teaching hospitals, and more than 105,000 medical school faculty in 94 academic and scientific societies. This letter, sent to all Senators last Tuesday, call for us to support H.R. 810. The AAMC letter states:

The therapeutic potential of pluripotent stem cells is remarkable and could well prove to be one of the important paradigm-shifting advances in the history of medical science.

Support for H.R. 810 is not confined solely to academicians. Last year, when the House took up and passed H.R. 810 on a bipartisan basis, over 200 organizations gave their wholehearted support for this legislation. This includes many leading patient advocacy organizations such as the Coalition for the Advancement of Medical Research, the Juvenile Diabetes Research Foundation, the Elizabeth Glaser Pediatric Aids Foundation, the Christopher Reeve Foundation, the American Association for Cancer Research, and the Alliance for Aging Research, to name a few.

Mr. President, I ask unanimous consent to have printed in the RECORD a list of organizations that support the passage of H.R. 810.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

JULY 14, 2006.

U.S. Senate,
Washington, DC.

DEAR SENATOR: We, the undersigned patient advocacy groups, health organizations, research universities, scientific societies, and other interested institutions and associations, representing millions of patients, scientists, health care providers and advocates, write you with our strong and unified support for H.R. 810, the Stem Cell Research Enhancement Act. We urge your vote in favor of H.R. 810 when the Senate considers the measure next week.

Of the bills being considered simultaneously, only H.R. 810 will move stem cell research forward in our country. This is the bill which holds promise for expanding medical breakthroughs. The other two bills—the Alternative Pluripotent Stem Cell Therapies Enhancement Act (S. 2754) and the Fetus Farming Prohibition Act (S. 3504)—are NOT substitutes for a YES vote on H.R. 810.

H.R. 810 is the pro-patient and Pro-research bill. A vote in support of H.R. 810 will be considered a vote in support of more than 100 million patients in the U.S. and substantial progress for research. Please work to pass H.R. 810 immediately.

Sincerely,

Alliance for Aging Research; Alliance for Stem Cell Research; Alpha-1 Foundation; ALS Association; American Association for Cancer Research; American Association of Neurological Surgeons/ Congress of Neurological Surgeons; American Autoimmune Related Diseases Association; American College of Neuropsychopharmacology; American

College of Obstetricians and Gynecologists; American Diabetes Association; American Gastroenterological Association; American Medical Association; American Parkinson's Disease Association (Arizona Chapter); American Society for Cell Biology; American Society for Microbiology; American Society for Neural Transplantation and Repair; American Society for Reproductive Medicine; American Society of Hematology.

American Thyroid Association; Association of American Medical Colleges; Association of American Universities; Association of Independent Research Institutes; Association of Professors of Medicine; Association of Reproductive Health Professionals; Axion Research Foundation; Biotechnology Industry Organization; B'nai B'rith International; The Burnham Institute; California Institute of Technology; Californians for Cures; Cancer Research and Prevention Foundation; Cedars-Sinai Health System; Children's Neurobiological Solutions Foundation; Christopher Reeve Foundation; Columbia University Medical Center; Cornell University; CuresNow.

Duke University Medical Center; Elizabeth Glaser Pediatric AIDS Foundation; FasterCures; FD Hope Foundation; Genetics Policy Institute; Hadassah; Harvard University; Hereditary Disease Foundation; International Foundation for Anticancer Drug Discovery (IFADD); International Longevity Center—USA; International Society for Stem Cell Research; Jeffrey Modell Foundation; Johns Hopkins; Juvenile Diabetes Research Foundation; Leukemia and Lymphoma Society; Massachusetts Biotechnology Council; National Alliance for Eye and Vision Research; National Association for Biomedical Research; National Coalition for Cancer Research.

National Council on Spinal Cord Injury; National Health Council; National Partnership for Women and Families; National Venture Capital Association; New Jersey Association for Biomedical Research; New York University Medical Center; Parkinson's Action Network; Parkinson's Disease Foundation; Pittsburgh Development Center; Project A.L.S.; Quest for the Cure; Research!America; Resolve: The National Infertility Association; Rett Syndrome Research Foundation; Robert Packard Center for ALS Research at Johns Hopkins; Rutgers University; Sloan-Kettering Institute for Cancer Research; Society for Women's Health Research; Stanford University.

Stem Cell Action Network; Stem Cell Research Foundation; Steven and Michele Kirsch Foundation; Student Society for Stem Cell Research; Take Charge! Cure Parkinson's, Inc.; Texans for the Advancement of Medical Research; Tourette Syndrome Association; Travis Roy Foundation; University of California System; University of Minnesota; University of Rochester Medical Center; University of Southern California; University of Wisconsin—Madison; Vanderbilt University and Medical Center; Washington University in St. Louis; WiCell Research Institution; Wisconsin Alumni Research Foundation; Wisconsin Association for Biomedical Research and Education.

Mr. HATCH. Mr. President, support for the passage of H.R. 810 is not limited to the not-for-profit sector. While

it is sometimes typical for the private sector to keep out of some controversial issues, this is not the case with stem cell research.

Last week, I received a letter of support for H.R. 810 from the Biotechnology Industry Organization. BIO represents more than 1,100 biotechnology companies, state biotechnology centers, and academic institutions. The BIO letter notes:

Expanded support of embryonic stem cell research could also go a long way toward reducing the time and expense needed to develop drugs because new chemical or biological compounds meant to treat diseases could be tested in specific human cells prior to their use in live human beings.

Mr. President, I ask unanimous consent to have printed in the RECORD the July 12, 2006, letter from BIO calling for passage of H.R. 810.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

BIOTECHNOLOGY INDUSTRY ORGANIZATION,
Washington, DC, July 12, 2006.

Hon. ORRIN HATCH,
U.S. Senate,
Washington, DC.

DEAR SENATOR HATCH: As President & CEO of the Biotechnology Industry Organization (BIO), I am writing to express BIO's support for H.R. 810, the Stem Cell Research Enhancement Act. Other stem cell legislation being debated by the Senate has merit, but only H.R. 810 expands the research that our nation's leading scientists believe holds the promise of finding cures and treatments for the millions of patients who currently suffer from a variety of diseases and disabilities.

BIO is the national trade association representing more than 1,100 biotechnology companies, academic institutions, state biotechnology centers and related organizations in all 50 U.S. states and 33 foreign nations. BIO members are involved in the research and development of health-care, agricultural, industrial and environmental biotechnology products.

Our nation's top scientists agree that embryonic stem cell research has the potential to lead to cures and treatments for many of our society's most devastating diseases and disabilities such as cancer, diabetes, ALS, Parkinson's disease, Alzheimer's disease, and spinal cord injuries. Embryonic stem cell research will further the development of cell-based therapies by leading to greater scientific understanding of cell differentiation—the process by which our cells become specialized to perform certain functions—and proliferation—the process where cells expand, or multiply for controlled use as a potential therapeutic.

Expanded support of embryonic stem cell research could also go a long way toward reducing the time and expense needed to develop drugs because new chemical or biological compounds meant to treat diseases could be tested in specific human cells prior to their use in live human beings.

Importantly, the legislation creates an ethical framework for this research. It prohibits funding unless the cell lines were derived from excess embryos from in vitro fertilization clinics that were created for reproductive purposes and would otherwise be discarded. It also requires voluntary informed consent from the couples donating the excess embryos and prohibits any financial inducements.

H.R. 810 provides hope to millions of patients and their families by expanding cur-

rent federal policy regarding federal funding of stem cell research. I urge you to support its passage.

If you have any questions, please feel free to call me or Brent Del Monte, BIO's Vice President for Federal Government Relations, at 202-962-9200.

Thank you for your attention to this important matter.

Sincerely,

JAMES C. GREENWOOD,
President & CEO,

Biotechnology Industry Organization.

Mr. HATCH. Mr. President, some aspects of this issue involve complicated scientific facts and complex moral questions. Elected officials and the American public alike have had much to learn and consider since this issue first arose on the scene in 1998.

The more the American public thinks about this issue, the more it coalesces around the policy embraced by H.R. 810 which will significantly improve and expand taxpayer supported stem cell research.

Public opinion polls show that U.S. citizens are squarely behind stem cell research and H.R. 810.

For example, a poll commissioned by the Coalition for the Advancement of Stem Cell Research and taken in May of this year found that 72 percent of Americans support embryonic stem cell research and 70 percent favor the Senate adopting H.R. 810, the Stem Cell Research Enhancement Act. This finding of broad public support is consistent with other previously conducted polls. For example, a Harris poll taken in August 2004 found that 73 percent of Americans think stem cell research should be allowed and a June 2004 Wall Street Journal/NBC News poll placed public support for this research at 71 percent.

Some may try to quibble about how particular poll questions were phrased in particular surveys, but few would question the fact that for some time most Americans have wanted the type of research that H.R. 810 will help enable to go forward.

I can tell you this. The poll results I have just cited are consistent with what I hear from my neighbors and constituents in Utah. I come from a conservative State. But whenever the issue of stem cell research comes up at one of my meetings in Salt Lake City or other places in my State, somebody will come up to me to tell me their personal story with the diseases of a loved one and tell me that I am doing the right thing on stem cell research.

One of the reasons why I got involved with the issue of stem cell research in the first place was because of a little boy named Cody Anderson, whose family used to live in West Jordan, UT.

Cody and his family came to visit me in Washington in 2001 to tell me their tragic family struggle with diabetes. Cody's grandfather succumbed to diabetes at age 47 after a series of painful amputation operations. Cody, his grandfather's namesake, never got the chance to meet or know his grandfather because of diabetes.

Let me read you part of a letter that Cody and his family wrote me:

I don't want other small children like me to have to go through the things that I have already had to go through. I do not want to suffer the effects that my grandfather did throughout his life because of this disease. I want to grow old and not have to worry about all the bad things that could happen to me because of diabetes. We have seen what diabetes can do to an innocent life. Please don't let this happen to me in my life now. I hope you will take it in your hearts to listen to us, the people who live with this disease for every minute of every day for now and the rest of our lives.

In a few hours we can pass a bill that can only help Cody and thousands of others suffering from diabetes and millions of others who suffer from other diseases and conditions that may benefit from stem cell research.

How do you think young Cody's parents felt when they learned of their son having the same diagnosis as his grandfather?

How would you feel if you were told that your child would lead a life revolving around multiple daily blood tests, insulin injections, and a tightly regulated diet and constricted activity schedule that no child would relish?

The answer of any parent is that you would want your government to leave no stone unturned in finding a cure for that disease. And you would want the cure found as soon as possible.

Let me say a few sobering words about the immediacy of the promise of stem cell research. Cures are not around the corner. While stem cell research may prove in time to be a revolutionary advance in science such progress does not come quickly or on the cheap.

If we start a vigorous program of federally funded stem cell research program progress will not likely be measured in hours and days. It will take years, perhaps 10 or 20 years, before American patients are administered a new class of products and treatments derived from stem cell research.

In this regard I am reminded of an instance in which, when advised that a certain type of rare plant took years and years to bloom if placed in a certain hostile environment, a great French General simply said, "Then we must not delay, we must plant today."

We have to proceed with stem cell research with a passion and urgency today precisely because we do not know how long it will take to find tomorrow's cure. But we do know that the sooner we start, the faster we will get there.

Nor will this research be inexpensive. No doubt one reason why the biotechnology industry is supporting H.R. 810 is because since the end of World War II basic biomedical research in this country has primarily been funded by taxpayers through the programs conducted or supported by the National Institutes of Health. Today, about 80 percent of the \$28 billion NIH budget is invested in highly-competitive, peer-reviewed research that is undertaken by universities and research hospitals.

There has been a continuum of effort between the public sector basic research and private sector applied research that attempts to translate the new basic knowledge gleaned from federally supported NIH research into tangible FDA-approved products or other treatments before they can reach even the first patient's bedside. Americans should take pride in the fact that virtually every major advance in the biological sciences in the last 50 years emanated in some way from our investment in the NIH.

In my view, it would be in tragic and nearly incalculable mistake for our country to continue our present policy that materially constricts the cadre of investigators leading over 46,000 ongoing university based, NIH research grants from pushing the envelope of stem cell research. To cede our leadership in such a promising field of endeavor of biomedical research as stem cell research can only be shortsighted in the long run.

For example, the University of Utah is the proud home of one of the world's foremost mouse stem cell researchers. His name is Dr. Mario Capecchi and he has already won one of the most prestigious awards in American science, the Lasker Award. A great deal of the support for Dr. Capecchi and other researchers at the University of Utah and other research universities across the country come from NIH grants and contracts.

I want Dr. Capecchi to stay in Utah. I want the world's leading scientists to stay in the United States. It is critical to relax the current straitjacket on testing new stem cell lines if we are to keep the best stem cell researchers in this country.

Some might say good riddance to this research and to stem cell researchers. Look what happened in South Korea when a group of stem cell researchers conducted unethical experiments, faked the results and lied to the public.

I say that if the NIH is involved in this research and it is conducted in America, federally supported researchers will have to live within long-standing NIH ethical guidelines and principles as well as special rules that will apply only to stem cell research. In this way, as we have done so many times in the past with breakthrough research such as with recombinant DNA technology and organ transplants, the United States can help set a moral and ethical climate that our neighbors in the world community will emulate and follow.

I hope we never reach the day when the best biomedical researchers trained in America must go elsewhere to conduct the most cutting-edge basic biomedical research. Once that happens, we could face the day when sick Americans must actually leave our country to get the latest in treatments. I sure would not want to see a day when a citizen of Salt Lake City has to go to South Korea or any place else to get the best medical treatment possible.

Today, for all of its warts, the U.S.A. is widely recognized as the world's leader in developing and disseminating the latest in medical breakthroughs.

Passage of H.R. 810 will help us keep it that way.

The purpose of H.R. 810 is to expand the opportunities for the type of federally funded basic biomedical research that has proven so beneficial to the American public time and time again in the past.

Having described how many experts and interested parties believe that the promise of stem cell research is so great, I want to spend the next few minutes describing why some are opposed to this research and why I think their opposition is misplaced.

In order to do this, I feel compelled to spend a few minutes to define and discuss some technical scientific terms. I know that others have used many or all of these terms during the course of the debate but please bear with me if I am repeating some one or get too technical.

Perhaps the best place to start a discussion of stem cell research is with a broader term that many scientific experts believe more accurately describes the field and what is at stake.

The term is regenerative medicine.

Regenerative medicine seeks to uncover knowledge about how healthy cells contained in tissues and organs are formed and how they are lost through normal wear and tear or impaired more extensively through injury or degenerative disease.

The growing field of regenerative medicine is increasing our understanding of embryonic development, birth defects, organ transplantation, and the developmental biology of both healthy and diseased tissues. A key avenue of research of regenerative medicine involves stem cells. A stem cell is an undifferentiated cell that has the unique capacity to renew itself and give rise to specialized cell types. These stem cells are called pluripotent because of this ability to develop into different kinds of specialized cells, perhaps into all or most of the 200 known types of tissues that comprise the human body. Stem cells have the ability to divide and replicate for long periods of time in a laboratory colonies called cell lines.

The flexibility of these pluripotent stem cells is distinct from most cells in the body, because most cells are typically dedicated to performing a specific task such as heart muscle cells and specialized nerve cells. Scientists, like Dr. Kerr, the Johns Hopkins nerve cell researcher whom I talked about earlier, hope to be able to use stem cells to study how healthy and diseased cells work and, one day use this knowledge and use stem cell lines to treat or repair diseased tissues or organs. If this research is successful, many currently untreatable diseases and conditions may go the way of small pox and polio.

There are several different sources of stem cells.

Adult stem cells are undifferentiated cells that are found in specialized adult tissues. These cells can renew themselves and, with certain limitations, can differentiate to yield all the specialized cells types of the tissue in which they are found, and perhaps others as well. Adult stem cells have been found in many tissues including bone marrow, blood, the brain, skeletal muscle, dental pulp, liver, skin, eye, and the pancreas.

There is no serious opposition to adult stem cell research. I fully support this research.

There is, however, much debate over the potential limitations of adult stem cell research. For example, the seminal 2001 National Academy of Sciences study I mentioned earlier summarized the concerns:

(It is not clear whether . . . adult stem cells . . . truly have plasticity or whether some tissues contain several types of stem cells that each give rise to only a few derivative types. Adult stem cells are rare, difficult to identify and purify, and when grown in culture, are difficult to maintain in the undifferentiated state. It is because of those limitations that even stem cells from bone marrow, the type most studied, are not available in sufficient numbers to support many potential applications of regenerative medicine.

Although some opponents of H.R. 810 have taken exception to this characterization of the limitations of adult stem cells, it is my understanding that most experts in the field believe that embryonic stem cells offer advantages over adult stem cells because of the reasons I have just reported from the NAS study.

Moreover, some proponents of adult stem cell research claim that many diseases have been effectively treated with adult stem cells. Unfortunately, the weight of evidence does not support many of these claims. Nor do most of the leading experts in the field agree with the notion that adult stem cell research exceeds the promise of embryonic stem cell research despite the fact that adult stem cell research has at least a 40-year head start on embryonic stem cell research and has enjoyed a sustained funding commitment from the NIH.

The current issue of Science magazine contains a detailed letter written by three scientists, Shane Smith, William Neaves, and Steven Teitelbaum challenging claims made by a leading advocate of adult stem cell research, Dr. David Prentice. I understand that most experts come down on the Smith-Neaves-Teitelbaum side of the debate concerning the scientific limitations and opportunities of embryonic stem cells relative to adult stem cells.

Additional sources of stem cells are those acquired from placental and umbilical cord blood. Last fall the Congress passed and President Bush signed into law legislation that I co-authored to expand the use of the valuable and proven source of stem cell therapy. Due to the work of pioneers like Dr. Joanne Kurtzberg from Duke University and

Dr. Pablo Rubinstein of the New York Blood Center, cord blood has become an important mode of treatment for diseases like bone marrow disorders and has proven to be particularly useful in the African-American community where it is often difficult to find suitable bone marrow matches.

Yet another source of stem cells is those derived from human embryos. Public debate and discussion have centered on two types of embryonic stem cells.

First, stem cells may be derived from embryos created for, but no longer needed in, the in vitro fertilization process.

Second, stem cells can potentially be derived from so-called cloned embryos through the process of somatic cell nuclear transfer.

Today's debate centers on the first source of embryonic stem cells—excess embryos formed in fertility clinics slated for destruction.

Under the terms of the unanimous consent agreement—and it is an agreement I fully support and commend Senators FRIST and REID for negotiating—the bills we debate today do not involve cloned embryos formed by somatic cell nuclear transfer. This is the process whereby the nucleus of an egg and its complement of 23 chromosomes is removed and replaced with the nucleus of one of the standard 46-chromosome containing somatic cells that constitute the 200-plus tissues of the human body.

Senator FEINSTEIN and others have developed legislation that would ban and criminalize the act of using the somatic cell nuclear transfer process to give birth to a cloned human being. In addition, our bill, the Human Cloning Ban and Stem Cell Research Protection Act, S. 876, would set forth a tightly defined set of ethical restrictions and NIH oversight for anyone in the private sector that undertakes somatic cell nuclear transfer in order to produce new stem cell lines.

Others, led by Senator BROWBACK, have offered legislation that would effectively ban somatic cell nuclear transfer altogether, even purely for research purposes and even with tight ethical controls that will govern wholly private sector funded experiments.

One day we will have that debate. We will not have it today under the rules of this debate. As I will describe, those opposed to deriving additional stem cell lines through the somatic stem cell process also oppose using spare embryos as a source of additional stem cell lines and do so for the same basic argument.

The great topic of today's debate is whether it is ethical and proper for taxpayer funded scientists to use stem cells derived from embryos no longer needed in fertility treatment.

The process of in vitro fertilization consists of fertilizing a woman's egg in a laboratory and then placing the fertilized egg in a woman's womb so that gestation and childbirth can occur.

This is what is done when couples have fertility problems. Although IVF procedures were very controversial when they were first developed and used back in 1983, over 200,000 Americans have been born through this technique that is widely accepted today.

Many had grave reservations about the IVF process when it was developed. Some of the fiercest opponents of IVF back then are also the most ardent opponents of S. 810. While I respect their views—and these are sincere and earnest individuals—I think they were wrong then and wrong now.

As part of the fertility treatment process, it is inevitable that there will be some test tube embryos that will not be needed and will never be implanted in a mother's womb. And let me be clear here, I believe that the highest and best use of a human embryo is to be used by loving parents to add to their family. I wholeheartedly support adoption of spare embryos and would give adoption precedence over use for research. I think most would agree with me on this.

But the fact of the matter today is that there may exist at any point in time more than 400,000 such unused embryos in the United States and each year tens of thousands of such spare embryos are routinely and unceremoniously discarded and destroyed. It is important to note that more than 11,000 of these embryos have already been used for research.

It is from these embryos that scientists have derived stem cell lines.

Here is how it works.

During the first few days of embryo development, whether in a mother's womb or in a Petri dish inside a fertility clinic, the fertilized egg—called a zygote—begins to divide and transform into a sphere of cells called a blastocyst. Depending on its stage of development, a blastocyst is comprised of about 30 to 150 cells. It is from the inner layer of the blastocyst that scientists can derive the unspecialized but pluripotent stem cells that hold so much promise.

As I said earlier, while there is some debate on this issue, the great bulk of the evidence and consensus view of leading experts is that, at this point in time, research on the embryonic stem cells holds at least as much, and probably a lot more, promise than research on adult stem cells and cord blood. That is because the experts believe that embryonic stem cells appear to be easier to identify and work with and appear to be more flexible than other sources of stem cells.

The sole purpose of H.R. 810 is to expand the number of stem cell lines eligible for Federal funding. If H.R. 810 passes and is signed into law, Americans will finally get the vigorous program of federally funded stem cell research complete with a rigorous system of Federal oversight of the ethical protections that the National Institutes of Health will place on this research.

The policy dispute that requires the legislative fix set forth in H.R. 810 revolves around the moral status of a spare embryo. Some, including President Bush and some in Congress, have reservations about using stem cells derived from embryos for research purposes. This concern is anchored in the perspective that human life begins at the moment of conception, be it in the womb or in the lab of a fertility clinic.

While I respect this view and those who hold it, I do not agree with it.

Let me say that I come into this debate as longtime, right-to-life Senator. I oppose abortion on demand. I think that *Roe v. Wade* was wrongly decided. I have worked to return the power to outlaw abortion from the courts to the states. In 1981, I proudly worked to report an anti-abortion constitutional amendment from the Senate Judiciary Committee.

In the 108th Congress, I served as chairman of the House-Senate Conference Committee that finalized long-overdue legislation to outlaw the barbaric practice of partial birth abortion. I was at the President's side when he signed this bill into law.

When it comes to a right-to-life philosophy, I do not take a back seat to anyone in this Chamber or the House of Representatives. I will put my pro-life track record up against anyone inside or outside of Congress.

When I considered the question of the moral status of stem cells created for, but no longer needed in, the in-vitro fertilization process, I did so from a long and fervently held pro-life philosophy.

I have discussed this issue with many experts in science and ethics on all sides of this issue. I spoke to many Utahns and other citizens about their views on this matter. I consulted books ranging from medical texts and the Bible.

I thought long and hard about this matter.

Sometimes, I simply prayed to God for guidance.

I take my pro-family, pro-life philosophy very seriously.

I believe the worth of each soul is absolute.

Accordingly, I reject any purely utilitarian argument that the promise of stem cell research is so great that the ends justify the means.

I do not think that research can ever justify the taking of even a single human life, no matter how frail or defenseless that person may be.

Let me just say that there is not a fairer or finer man in the U.S. Senate than my friend from Kansas, Senator SAM BROWNBACK. As he has attempted to frame the issue:

The central question in this debate is simple: Is the embryo a person or a piece of property? If you believe . . . that life begins at conception and that the human embryo is a person fully deserving of dignity and the protection of our laws, then you have to believe that we must protect this innocent life from harm and protection.

After much thought, reflection, and prayer, I concluded that life begins in,

and requires, a nurturing womb. Human life does not begin in a Petri dish.

I do not question that an embryo is a living cell.

But I do not believe that a frozen embryo in a fertility clinic freezer constitutes human life.

To my knowledge, as a matter of law, no member of the U.S. Supreme Court has ever taken the position in even a dissenting opinion, let alone a majority opinion, that fetuses, let alone embryos, are constitutionally protected persons.

I cannot imagine, for example, that many Americans would view an employee of a fertility clinic whose job it is to destroy unneeded embryos as a criminal—and a murderer at that. Yet this is a task that is performed thousands of times each and every year by hundreds of fertility clinic employees.

As well, the logical extension of Senator BROWNBACK's life-begins-at-conception view might be to criminalize the actions of a woman or her doctor from using, or recommending the use of, some longstanding forms of contraception that impede fertilized eggs from attaching onto the uterine wall.

I simply do not believe that passing H.R. 810 and allowing federally funded researchers to use new stem cell lines derived from spare embryos from fertility clinics is somehow ethical.

It seems to me that you would have to believe that the in vitro fertilization process was unethical to begin with if you believe that it is unethical to use spare embryos that would never be used for fertility purposes and were slated for routine destruction.

I find both fertility treatment and embryonic stem cell research to be ethical.

I believe that being pro-life involves helping the living.

Regenerative medicine is pro-life and pro-family; it enhances, not diminishes human life.

My friend and colleague, Senator GORDON SMITH, and I share a similar perspective on this important issue. Here is Senator SMITH's eloquent response to the concerns raised by our friend, Senator BROWNBACK:

. . . when does life begin? Some say it is at conception. Others say it is at birth. For me in my quest to be responsible and to be as right as I know how to be, I turn to what I regard as sources of truth. I find this: "And the Lord God formed man of the dust of the ground and breathed into his nostrils the breath of life, and man became a living soul." This allegory of creation describes a two-step process to life, one of the flesh, the other of the spirit . . . Cells, stem cells, adult cells, are, I believe, the dust of the earth. They are essential to life, but standing alone will never constitute life. A stem cell in a petri dish or frozen in a refrigerator will never, even in 100 years, become more than stem cells. They lack the breath of life. An ancient apostle once said: "For the body without the spirit is dead." I believe that life begins in the mother's womb, not in a scientist's laboratory. Indeed, scientists tell me that nearly one-half of fertilized eggs never attach to a mother's womb, but naturally

slough off. Surely, life is not being taken here by God or by anyone else.

I find much wisdom in Senator SMITH's remarks and ask all of you to reflect upon his thoughtful and valuable perspective.

When the roll is called on H.R. 810, I will vote yea. I urge my colleagues to do likewise.

I applaud President Bush's decision to allow Federal funds to be used in connection with a limited number of stem cell lines that preexisted his August 9, 2001 speech. Frankly, I had hoped back in 2001 that President Bush would announce a more expansive policy.

Mr. President, I ask unanimous consent to have printed in the RECORD a letter I wrote to President Bush on this matter in June, 2001 on the issue of stem cell research as well as an accompanying letter to then Secretary of Health and Human Services, Tommy Thompson.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

U.S. SENATE,

Washington, DC, June 13, 2001.

The President GEORGE WALKER BUSH,

The White House,
Washington, DC.

DEAR MR. PRESIDENT: I urge you to support federal funding of human pluripotent embryonic stem cell research. Upon substantial reflection, I find—and hope you will as well—that proceeding with this research is in the best interests of the American public and is consistent with our shared pro-life, pro-family values.

After carefully analyzing the factors involved, I conclude that, at this time, research on human pluripotent embryonic stem cells is legal, scientifically compelling, and ethically sound. I want to emphasize that my support for such research is contingent upon adherence to the applicable statutes, regulations and guidelines. For your information, I have provided a copy of my correspondence to Secretary Thompson that more fully explains my reasoning on this important matter.

Mr. President, one of the great legacies of your father's Presidency was the fall of the Berlin Wall which represented the victory of democracy in a 50-year battle with totalitarian regimes. Through sacrifice and love of country "the Greatest Generation" prevailed over both fascism and communism and proved more than equal to the challenges of the times. As a result, today the United States is in a unique position of leadership in the world. How America exerts this influence and invests our resources and energies will be observed closely by all of our global neighbors. It seems to me that leading the way in finding new cures for disease is precisely the type of activity that accrues to our benefit both at home and abroad.

In the opening days of your term in office, scientists have completed the task of sequencing the human genome. While this accomplishment—the work of many in the public and private sectors—is of historical significance, it is only the end of the beginning in a new era of our understanding of the biological sciences. Over your next eight years in office, you have an unprecedented opportunity to provide the personal leadership required to see to it that your Administration will be remembered by future historians as the beginning of the end for such deadly and debilitating diseases as cancer, Alzheimer's, and diabetes.

To accomplish this, all promising and proper avenues of research must be explored. Throughout my career I have been proud to have worked with patients and families struggling with the daily realities of disabling high prevalence illnesses such as cancer, diabetes, and heart disease. As author of the Orphan Drug Act, I also am proud that over 200 drugs have been approved since this law was enacted in 1984 for such small population, but devastating diseases, as Hemophilia, Cystic Fibrosis, and ALS. In my 25 years of working to sustain and build America's formidable biomedical research enterprise, I have rarely, if ever, observed such genuine excitement for the prospects of future progress than is presented by embryonic stem cell research.

Mr. President, once you have considered the complexities of the questions at hand, I hope you will conclude, as other pro-life, pro-family Republicans such as Strom Thurmond, Gordon Smith, Connie Mack, and I, that the best course of action is to lead the way for this vital research.

Sincerely,

ORRIN G. HATCH,
United States Senator.

U.S. SENATE,
Washington, DC, June 13, 2001.

Hon. TOMMY G. THOMPSON,
*Secretary of Health and Human Services,
Washington, DC.*

DEAR MR. SECRETARY: I am writing to express my views regarding federal funding of biomedical research involving human pluripotent embryonic stem cells. After carefully considering the issues presented, I am persuaded that such research is legally permissible, scientifically promising, and ethically proper. Therefore, at this time, I support the use of federal funds to conduct research involving human pluripotent stem cells derived from embryos produced through the in vitro fertilization process. My support is, of course, conditioned upon such research being conducted in strict accordance with the relevant statutes and the protections set forth in the applicable regulations and guidelines, including those issued by the National Institutes of Health (NIH).

I am mindful that this is a matter over which reasonable, fair-minded persons may ultimately disagree. Despite this likely outcome, I believe it constructive for public dialogue to take place over this issue. For that reason, I recommend that you convene the National Institutes of Health Human Pluripotent Stem Cell Review Group (HPSCRG) or a similar expert advisory body to help bring resolution to this matter. The HPSCRG, to be chaired by Dr. James Kushner of the University of Utah, can become a key forum to provide information and advice for policymakers.

At the outset, let me be clear about one of my key perspectives as a legislator: I am pro-family and pro-life. I abhor abortion and strongly oppose this practice except in the limited cases of rape, incest, and to protect the life of the mother. While I respect those who hold a pro-choice view, I have always opposed any governmental sanctioning of a general abortion on demand policy. In my view, the adoption of the Hyde Amendment wisely restricts taxpayer financed abortions. Moreover, because of my deep reservations about the Supreme Court's decision in *Roe v. Wade*, I proposed—albeit unsuccessfully—an amendment to the Constitution in 1981 that would have granted to the states and Congress the power to restrict or even outright prohibit abortion.

In 1992, I led the Senate opposition to fetal tissue research that relied upon cells from induced abortions. I feared that such research would be used to justify abortion or

lead to additional abortions. It was my understanding that tissue from spontaneous abortions and ectopic pregnancies could provide a sufficient and suitable supply of cells. Unfortunately, experts did not find these sources of cells as adequate for their research needs. Subsequently, the 1993 NIH reauthorization legislation changed the legal landscape on this issue.

Because of my strong pro-life beliefs, I am a co-sponsor of the Unborn Victims of Violence legislation that makes it a separate criminal offense to cause death of or bodily injury to unborn children. I also support the Child Custody Protection Act that addresses the problem of minors crossing state lines to obtain abortions in avoidance of home state parental consent or notification requirements. I have also helped lead the effort to outlaw partial birth abortion, a procedure I find to be particularly repugnant. I hope that the 107th Congress will succeed in adopting, and transmitting for the President's signature, legislation that will end late term abortions unless necessary to save the life of the mother.

I am proud of my strong pro-life, anti-abortion record. I commend the Bush Administration for its strong pro-life, pro-family philosophy. In my view research, on stem cells derived from embryos first created for, but ultimately not used in, the process of in vitro fertilization, raises questions and considerations fundamentally different from issues attendant to abortion. As I evaluate all these factors, I conclude that this research is consistent with bedrock pro-life, pro-family values. I note that our pro-life, pro-family Republican colleagues, Senators Strom Thurmond and Gordon Smith, as well as former Senator Connie Mack, support federal funding of embryonic stem cell research. It is my hope that once you have analyzed the issues, you will agree with us that this research should proceed.

THE LEGAL FRAMEWORK

After reviewing the relevant statutes and regulations, I conclude that there is no mandatory legal barrier under federal law to federal funding of research on human pluripotent embryonic stem cells. On January 15, 1999, the then-General Counsel of the Department of Health and Human Services, Harriet Raab, issued a legal opinion regarding federal funding for research involving human pluripotent stem cells. This opinion summarized the applicable law as follows:

"The statutory prohibition on the use of funds appropriated to HHS for human embryo research would not apply to research utilizing human pluripotent stem cells because such cells are not within the statutory definition. To the extent human pluripotent stem cells are considered human fetal tissue by law, they are subject to the statutory prohibition on sale for valuable consideration, the restrictions on fetal tissue transplantation research that is conducted or funded by HHS, as well as to the federal criminal prohibition on the directed donation of fetal tissue. Research involving human pluripotent stem cells excised from a non-living fetus may be conducted only in accordance with any applicable state or local law. Finally, the Presidential Directive banning federal funding of human cloning would apply to pluripotent stem cells, only if they were to be used for that purpose."

While some take exception to this reading of the law, I believe that it sets forth a permissible interpretation of the current state of the law with respect to research on human pluripotent stem cells. I would also note that while subsequent to the issuance of the HHS Legal Opinion in January, 1999 attempts have been and are being made to change the law, Congress has not passed a bill that has

altered the legal status quo. For example, Senator Brownback and others have attempted to change the law to prohibit flatly such research on fetal and embryonic stem cells. On the other hand, Senator Specter and others have supported legislation that would expand the range of permissible federally funded research activities to include derivation of pluripotent stem cells from totipotent stem cells. The considerable disagreement over what the law in this area should be stands in contrast to the common understanding of how the law has been interpreted by the Department.

It is worth noting that NIH has a carefully crafted network of regulations and guidelines that govern stem cell research. These guidelines, finalized in the Federal Register, on August 25, 2000 (65 FR 51976) were the subject of over 50,000 public comments. Among the key provisions of these requirements are:

NIH funds may only be used for research on human pluripotent stem cells derived from embryos, if such cells were derived from frozen embryos that were produced for the purpose of procreation but subsequently were not intended to be used for that purpose.

No financial or other inducements, including any promises of future remuneration from downstream commercialization activities, may be used to coerce the donation of the embryo.

A comprehensive informed consent must be obtained that includes recognition that the donated embryo will be used to derive human pluripotent stem cells for research that may include transplantation research; that derived cells may be stored and used for many years; that the research is not intended to provide direct medical benefit solely to a donor and that the donated embryo will not survive the derivation process; and, there must be a distinct separation between the fertility treatment and the decision to donate the embryos for research.

The donation may not be conditioned on any restrictions or directions regarding the individual who may receive the cells derived from the human pluripotent stem cells.

All recipients of NIH funds to conduct stem cell research must comply with guidelines and all laws and regulations governing institutional review boards.

NIH funds may not be used to: clone a human being; derive pluripotent stem cells from human embryos; conduct research using pluripotent stem cells derived from a human embryo created solely for research purposes; conduct research that creates or uses pluripotent stem cells derived from somatic cell nuclear transfer; or, combine human pluripotent stem cells with an animal embryo.

If there is a need to further strengthen the applicable guidelines and regulations, this should be done. But let us recognize that there already exists a thorough and thoughtful regulatory framework to build upon. It should also be noted that these guidelines build upon an extensive body of earlier work of the National Bioethics Advisory Committee, the Advisory Committee to the Director, NIH, and a special Human Embryo Research Panel convened by your predecessor. At this juncture, it appears that NIH is developing its stem cell research policies in an informed fashion within an area of its expertise, and is operating within a statutory environment such that, once finalized, the agency's actions will likely survive legal challenge due to the deference the courts grant these types of decisions.

THE SCIENTIFIC OPPORTUNITIES

Scientific experts believe that stem cells have tremendous potential in benefiting human health. Stem cells are thought to be a unique biological resource because these cells apparently have the potential to develop into most of the specialized cells and

tissues of the body, including muscle cells, nerve cells, and blood cells. As the American Association for the Advancement of Science has characterized the promise of stem cell research: "Research on these cells could result in treatments or cures for the millions of Americans suffering from many of humanity's most devastating illnesses, including Alzheimer's disease, diabetes, spinal cord injury, and heart disease." Potentially, stem cell research can help virtually every American family. It has been estimated that over 28 million Americans are afflicted with conditions that may benefit from embryonic stem cell research.

It is also worth noting in the pro-family context that stem cell research is of particular interest to pediatricians. Consider the views of Dr. Edward B. Clark, Chairman of the Department of Pediatrics, University of Utah School of Medicine:

"... I can assure you that the scientific promise of stem cell research is extraordinary.

"In pediatrics, stem cell research offers therapy, and indeed possibly a cure, for a wide variety of childhood diseases, including neurologic disease, spinal cord injuries, and heart disease . . .

"I can think of nothing that will provide as much meaningful therapy for children and children's problems than the promise offered by stem cell research."

"We citizens of Utah are proud to be home of the Huntsman Cancer Institute at the University of Utah. The medical director of the Huntsman Cancer Institute, Dr. Stephen Prescott, advises me that in his expert opinion stem cells research 'is an incredibly promising area that has potential application in many different fields of medicine. One of these is in the treatment of cancer, particularly as a way to control the side effects following standard treatments.'"

I am also aware that some believe, including highly-respected scientists and many of my friends and colleagues in the Right to Life community, that adult stem cells actually hold greater promise than embryonic stem cells and that research on adult stem cells should be pursued to the exclusion of fetal or embryonic stem cells. It is my understanding that, at the present time, the view that adult stem cell research is sufficient or even scientifically preferable to embryonic stem cell research is not the predominant view within the biomedical research community.

While I have great admiration for, confidence in, and strongly support America's biomedical research enterprise, and I believe that our policy should be made on the best science available, I am hardly one who invariably follows the lead of what some may term "the science establishment." With Senator Harkin, I authored the legislation that created the Center for Complementary and Alternative Medicine (CCAM) at NIH and believe there is great benefit in encouraging challenges to scientific orthodoxy. Similarly, I authored the Dietary Supplement Health and Education Act that set parameters on how the Food and Drug Administration may regulate dietary supplements as well as establishing the Office of Dietary Supplements (ODS) at NIH. To be sure, the creation of CCAM and ODS had their fair share of critics at NIH and among mainstream scientists. So be it.

In parallel to funding research on human pluripotent embryonic stem cells, I believe it is essential to carry out significant research on adult stem cells. I strongly urge the Administration to continue to provide sufficient resources to investigate fully the utility of adult stem cells as well cells derived from adipose tissue.

Policymakers should also consider another advantage of public funding of stem cell re-

search as opposed to leaving this work beyond the reach of important federal controls. Federal funding will encourage adherence to all of the safeguards outlined above by entities conducting such research even when a particular research project is conducted solely with private dollars.

I also think it important to recognize explicitly that the knowledge gained through biomedical research can be harnessed for critical pro-life, pro-family purposes. When one of our loved ones is stricken by illness, the whole family shares in the suffering. The quality of life for America's families can improve as strides are made in biomedical research. This is why we are making good on the bipartisan commitment to double the funding of the NIH research program by 2003. I commend the Administration for its leadership in allocating resources for this worthy pro-life, pro-family purpose.

ETHICAL APPROPRIATENESS

While society must take into account the potential benefits of a given technological advance, neither scientific promise nor legal permissibility can ever be wholly sufficient to justify proceeding down a new path. In our pluralistic society, before the government commits taxpayer dollars or otherwise sanctions the pursuit of a field of research, it is imperative that we carefully examine the ethical dimensions before moving, or not moving, forward.

I would hope there is general agreement that modern techniques of in vitro fertilization are ethical and benefits society in profound ways. I have been blessed to be the father of six children and the grandfather of nineteen grandchildren. Let me just say that whatever success I have had as a legislator pales in comparison to the joy I have experienced from my family in my roles of husband, father, and grandfather. Through my church work, I have counseled several young couples who were having difficulty in conceiving children. I know that IVF clinics literally perform miracles every day. It is my understanding that in the United States over 100,000 children to date have been born through the efforts of IVF clinics.

Intrinsic with the current practice of IVF-aided pregnancies is the production of more embryos than will actually be implanted in hopeful mothers-to-be. The question arises as to whether these totipotent embryonic cells, now routinely and legally discarded—amid, I might add, no great public clamor—should be permitted to be derived into pluripotent cells with non-federal funds and then be made available for research by federal or federally-supported scientists?

Cancer survivor and former Senator, Connie Mack, recently explained his perspective on the morality of stem cell research in a Washington Post op-ed piece:

"It is the stem cells from surplus IVF embryos, donated with the informed consent of couples, that could give researchers the chance to move embryonic stem cell research forward. I believe it would be wrong not to use them to potentially save the lives of people. I know that several members of Congress who consider themselves to be pro-life have also come to this conclusion."

Senator Mack's views reflect those of many across our country and this perspective must be weighed before you decide.

Among those opposing this position is Senator Brownback, who has forcefully expressed his opinion:

"The central question in this debate is simple: Is the embryo a person, or a piece of property? If you believe that life begins at conception and that the human embryo is a person fully deserving of dignity and the protection of our laws, then you believe that we must protect this innocent life from harm and destruction."

While I generally agree with my friend from Kansas on pro-life, pro-family issues, I disagree with him in this instance. First off, I must comment on the irony that stem cell research—which under Senator Brownback's construction threatens to become a charged issue in the abortion debate—is so closely linked to an activity, in vitro fertilization, that is inherently and unambiguously pro-life and pro-family.

I recognize and respect that some hold the view that human life begins when an egg is fertilized to produce an embryo, even if this occurs in vitro and the resulting embryo is frozen and never implanted in utero. To those with this perspective, embryonic stem cell research is, or amounts to, a form of abortion. Yet this view contrasts with statutes, such as Utah's, which require the implantation at a fertilized egg before an abortion can occur.

Query whether a frozen embryo stored in a refrigerator in a clinic is really equivalent to an embryo or fetus developing in a mother's womb? To me, a frozen embryo is more akin to a frozen unfertilized egg or frozen sperm than to a fetus naturally developing in the body of a mother. In the case of in vitro fertilization, extraordinary human action is required to initiate a successful pregnancy while in the case of an elective abortion an intentional human act is required to terminate pregnancy. These are polar opposites. The purpose of in vitro fertilization is to facilitate life while abortion denies life. Moreover, as Dr. Louis Guenin has argued: "If we spurn [embryonic stem cell research] not one more baby is likely to be born." I find the practice of attempting to bring a child into the world through in vitro fertilization to be both ethical and laudable and distinguish between elective abortion and the discarding of frozen embryos no longer needed in the in vitro fertilization process.

In evaluating this issue, it is significant to point out that no member of the United States Supreme Court has ever taken the position that fetuses, let alone embryos, are constitutionally protected persons. To do so would be to thrust the courts and other governmental institutions into the midst of some of the most private of personal decisions. For example, the use of contraceptive devices that impede fertilized eggs from attaching onto the uterine wall could be considered a criminal act. Similarly, the routine act of discarding "spare" frozen embryos could be transformed into an act of murder.

As much as I oppose, partial birth abortion, I simply can not equate this offensive abortion practice with the act of disposing of a frozen embryo in the case where the embryo will never complete the journey toward birth. Nor, for example, can I imagine Congress or the courts somehow attempting to order every "spare" embryo through a full term pregnancy.

Mr. Secretary, I greatly appreciate your consideration of my views on this important subject. I only hope that when all relevant factors are weighed both you and President Bush will decide that the best course of action for America's families is to lead the way to a possible new era in medicine and health by ordering that this vital and appropriately regulated research proceed.

Sincerely,

ORRIN G. HATCH,
United States Senator.

Mr. HATCH. Mr. President, although at one time it appeared that as many as 78 stem cell lines might qualify under the President's policy, as many had feared, the number of lines that might be practically accessed today is no more than around a dozen at best. Moreover, all of these cell lines were

grown with so-called mouse feeder cells so could never pass muster with the FDA for use to make products for humans. Thus for the President's initial goals to be accomplished, new embryonic stem cell lines must be made available.

It has been over a year since the House has taken its historic action of passing H.R. 810 by a bipartisan 235-to-189 vote. I commend the leadership of Representatives MIKE CASTLE and DIANA DEGETTE for moving the bill through the House.

I must pay special respects to Senator ARLEN SPECTER and Senator TOM HARKIN for their dogged determination in conducting a series of some 15 oversight hearings on the issue of stem cell research since this breakthrough science was first reported in 1998. In fact, it was the work of the Specter-Harkin Labor-HHS Appropriations Subcommittee that developed the factual basis and legal analysis that resulted in the legislation that became H.R. 810.

At long last, today the Senate will finally vote on this important legislation.

I hope that it will pass and if it does, I will strenuously urge President to reconsider his position and sign this bill into law.

Mr. President, I yield the floor.

The PRESIDING OFFICER. The Senator from Oregon.

Mr. SMITH. I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. HARKIN. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. HARKIN. Mr. President, I am awaiting the arrival shortly of Senator LAUTENBERG on our side, but in the meantime I thank Senator HATCH for the eloquent statement he made, to thank him for his long-time support of this endeavor to open more stem cell lines for research. It shows clearly, as I said earlier today, this is not a partisan issue. I see no real partisan cleavage lines anywhere. It was passed with a bipartisan majority in the House. The leader in the House was Congressman MIKE CASTLE, a Republican from Delaware. The Democrat was Congresswoman DIANA DEGETTE from Colorado. Our leader here is Senator SPECTER, leader on the bill, and I am his counterpart on the Democrat side. We have had great support from both sides of the aisle on this legislation. I don't cast it in any type of partisan terms.

There are those who obviously spoke yesterday very eloquently about their moral objections to using embryos. But, again, I point out this bill does not create any new embryos. All we are talking about is using the leftover embryos from in vitro fertilization and only if (a) the donors give their writ-

ten, informed consent; (b) that no money changes hands; and (c) that the embryo will never be implanted in a uterus and will be discarded.

Fifty thousand healthy babies were born last year to couples who went to fertility clinics. Obviously, there are some embryos left over after that. They are frozen. After the parents have the children they want to have, they call the clinic or the clinic calls them and asks, do you want to continue to pay to keep these embryos frozen; and they say, no, we have our family. The clinic will then discard them. That is all we are talking about. Those embryos are going to be discarded, and with the donor's written, informed consent. They can say, no, I don't want them used for that, and then we wouldn't. You cannot induce anyone to do that by saying we will pay you for it. This clearly has to be kept in mind, that this is what we are talking about in this legislation.

Senator LAUTENBERG of New Jersey is here. I yield 5 minutes to the Senator from New Jersey.

Mr. LAUTENBERG. Mr. President, I thank the Senator from Iowa. I ask I be notified when 4 minutes 30 seconds has passed.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. LAUTENBERG. Mr. President, this is one of those debates that makes the American people scratch their heads and ask, what are those people in Washington thinking about? From the perspective of everyday people, this should not even be a debate. Of course we should fully fund research with embryonic stem cells because it has the potential to save lives and alleviate the suffering of millions of Americans. It is common sense.

But our President is a captive of ideologues and extremists of his political party. Nearly 5 years ago President Bush enacted a policy that made no scientific contribution, only political fodder for another election. He put a stop to the development of new stem cell lines for research. It was a devastating blow to Americans suffering from diabetes, cancer, Parkinson's, Alzheimer's, multiple sclerosis, and other injuries and diseases.

For many years, I have met with children stricken with juvenile diabetes. We have established friendships, their parents and I, and the children and I. These children ask their parents, brothers, sisters, and me why the President won't allow research to move forward so their disease can be cured. There is no decent answer I can give them.

When I ask them what the worst thing about living with diabetes is, they respond plaintively, begging for help, so they can stop drawing blood from their finger six times a day. They are pleading to live their lives like other kids. One child said he is forbidden something so simple—to sleep at other friends' houses—because of the fear that he will go into insulin shock.

I promised these kids I would do everything I possibly could to get the message to the President of the United States, to help us find the cure for them. Today we have an opportunity, finally, to help these children.

It has been over 1 year since the House passed this bill. Why the delay? There is no comprehensible reason. All we know is that people wanted to obstruct this discussion today. We can only wonder how many people have had their hopes dashed and their spirits broken during that wasted year.

Americans in large majorities support stem cell research. I don't understand this "fiddling while Rome burns" policy. Seventy-two percent of Americans register support for embryonic cell research, a 3-to-1 margin over opposition. One of the most outspoken supporters of stem cell research is former First Lady Nancy Reagan. She spent 10 years watching her husband's memory fade from life, probably not even recognizing her. I have friends whose parents do not know who they are.

Virtually every major medical, scientific, and patient group supports embryonic stem cell research. In my home State of New Jersey, support for stem cell research is overwhelming. We were the second State after California to authorize embryonic stem cell research. Unfortunately, President Bush has cut off Federal funding for those projects.

My colleague Senator MENENDEZ and I recently visited the Coriell Institute in Camden, NJ. They are not well known, but they were founded in 1953 and hold the world's largest collection of human cells for research. Coriell has everything in place to find cures and help millions of people. But there is one problem: President Bush is undermining their efforts with his irrational policy on stem cell research.

Because of the scarcity of embryonic stem cell lines caused by his Executive Order, the Coriell Institute in New Jersey had to go overseas to the Technion Institute in Israel to get access to an embryonic stem cell line so they could continue their research.

The President denies hope to millions of people based on his standard of "ethics and morality." But what is ethical about denying a cure to children suffering from diabetes? What is moral about denying paralyzed people the chance to walk again?

Any real, ethical issues are addressed by this bill. New stem cell lines will come from embryos donated by fertility parents under strict guidelines. There will not be embryos created for research.

What we are talking about in this bill are embryos that would otherwise be disposed of—thrown away.

I believe compassion and common sense must prevail over rigid ideology.

If we pass this bill, I understand that the President intends to veto it. That would be a terrible and tragic mistake.

President Bush has never vetoed a bill. In the nearly 6 years of his Presidency—not one veto.

What would it saw to the American people if his first veto was of a bill that could save millions of lives?

And I say to the American people: don't be fooled by the sleight of hand we are seeing today. There are three bills being considered but only one of them matters.

The other two bills are part of a shell game. They are there to give President Bush something to sign.

But will those two bills do much to help the American with a shaky hand from being cured of Parkinson's disease?

Will those two bills make real strides toward relieving a child with diabetes from the constant shots of insulin? I don't think so.

Only one bill can do that—the House stem cell bill. Let's vote to approve it.

The PRESIDING OFFICER. The Senator's time has expired.

Mr. LAUTENBERG. Mr. President, I hope our colleagues will look in the faces of their children and their grandchildren and say: We do not want them to be sick. And if they get sick, we want to help them. I hope this bill will pass overwhelmingly.

Mr. HARKIN. Mr. President, I yield 9 minutes to the Senator from Maryland.

The PRESIDING OFFICER. The Senator from Maryland.

Ms. MIKULSKI. Mr. President, thank you very much. And I thank the Senator from Iowa for his real leadership on this issue.

This Stem Cell Research Enhancement Act debate is one of the most important debates the Senate will have in this year and in this decade. I believe this is such a great opportunity to be able to save lives. I believe it is like when we announced the endeavor to map the human genome, like when we announced the national war against cancer. That is how important this issue is.

I am a firm, unabashed supporter of stem cell research. It is a cornucopia of opportunity for new breakthroughs for some of the diseases that are the most devastating and costly conditions facing thousands of Americans, including Alzheimer's disease, from which my father died, diabetes, of which our family faces an inherent propensity, spinal cord injuries, which we see through accidents like Christopher Reeve had, and spina bifida, from which little children suffer.

Stem cell research has the potential for saving lives, and we need to be able to pursue it. I also would urge that this research be done in the sunshine. One of the reasons we need a national framework is so it will not be done in dark corners of the world without the United States of America participating.

We need a national framework to establish bioethical standards based on sound science and ethical principles. I fear that without national standards and national legislation, this could be conducted outside of the public eye, without national and international

scrutiny, where dark and ghoulish things could occur.

One of the reasons I came to the Senate was to help save lives. In my home State, we are the home to the National Institutes of Health, the Federal Drug Administration, the University of Maryland, and also Johns Hopkins University. I, every day, know that in my own home State they are working on new ideas for new cures. Whether it is to ensure that women have accurate mammograms to diagnose breast cancer, streamlining the drug approval process so that lifesaving drugs can reach patients more quickly, or fighting to double the budget at NIH, we have consistently fought to improve the lives and health of the American people.

This is why I am such an advocate of stem cell research. It holds the potential to prevent, diagnose, and treat diseases, such as Alzheimer's disease, Parkinson's disease, heart disease, all those autoimmune diseases, such as MS and spinal cord injuries.

Just imagine if scientists could find a cure or the cognitive stretchout ability for Alzheimer's. Even giving individuals with a disease a longer mental capacity would be a big breakthrough. Eighty percent of Medicaid costs go to paying for long-term care for seniors. Eighty percent is primarily spent on Alzheimer's and Parkinson's. Think of just the financial savings we could have, let alone dealing with the tragedy in lives.

I, along with Senator BOND, am the lead sponsor of the Ronald Reagan breakthrough legislation to sponsor breakthroughs. We have spoken personally with Nancy Reagan, and she has endorsed this legislation, just as Senator LAUTENBERG has talked about. We need this opportunity to pursue the opportunity.

If we do not have national legislation, we are going to do it one State at a time. California has done it. My own home State of Maryland has done it. But do you know what. There is \$30 million here and \$30 million there, but we do not have national standards, which means, can we replicate the research? Can we have international cooperation?

For too long, this Federal health research has been operating with one hand tied behind its back. Scientists have been prohibited from doing embryonic stem cell research.

Five years ago, President Bush restricted Federal funding for embryonic stem cells. He said: Oh, we have these little lines, these little stem cell lines.

Those little stem cell lines did not turn out very well. The result is, federally funded research was almost halted. Stem cell research is conducted by private entities, and there are no national Federal bioethical standards.

I want bioethical standards. I want to ban human cloning. I want to make sure the ghoulish is not done in laboratories.

I support the other legislation. We should not turn this into financial op-

portunity. We should sign it into pure opportunity.

What I like about this legislation is that it removes the restrictions imposed by the Bush administration, but it does provide for an ethical and medical framework and allows for sound science and sound ethics to be able to proceed. This ensures transparency and public accountability. But most of all, it ensures opportunity.

When my father was in that nursing home and he could no longer recognize me or the woman to whom he had been married for 50 years, it did not matter that I was a Senator. There was no cure for Alzheimer's. It did not matter that I could get five Nobel Prize winners on the phone because they did not have the answer.

My father, when he passed away, was a modest man. He would not have wanted big, lavish testimonials. What he would have liked to have had was the fact that I cared enough to look out that no family would go through what we went through. And whether you were the First Lady of the United States, like Nancy Reagan, and the first caregiver, or my mother, who was by my father's bed when he passed away, we watched what that disease did. And now I will not stand patiently by and watch the opportunity to find a cure pass by.

So let's remember President Reagan. Let's remember the little guys like Mr. Willy, who ran a grocery store in Highlandtown, and who looked out for his neighbors and for his girls, as he called his daughters. Let's look out for the American people and pass stem cell research.

Mr. President, I yield the floor.

The PRESIDING OFFICER. The Senator from Iowa.

Mr. HARKIN. Mr. President, how much time do we have remaining?

The PRESIDING OFFICER. Ten minutes.

Mr. HARKIN. Mr. President, I yield the remainder of the time to the Senator from New York.

The PRESIDING OFFICER. The Senator from New York.

Mrs. CLINTON. Mr. President, I welcome this vote on such an important piece of legislation, the Stem Cell Research Enhancement Act. As we have heard eloquently from my colleagues on both sides of the aisle, stem cell research holds the promise of new cures and treatments for countless diseases and millions of Americans with chronic, incurable conditions.

The wide range of applications for stem cells may lead to unparalleled achievements on behalf of research concerning Alzheimer's disease, as my friend and colleague, Senator MIKULSKI, so passionately described with respect to her own family and her own experience; spinal cord injuries, like my dear friend Christopher Reeve; diabetes, and other conditions.

For example, in my State of New York, research at Memorial Sloan-Kettering Cancer Center has shown real

promise for the use of stem cell research in bone, cartilage, and muscle replacement therapies. At Columbia University researchers have shown that stem cells can develop into neurons, special nervous system cells that would allow us to actually treat vision loss. Other scientists at Columbia University and at the University of Rochester Medical Center are working to cultivate stem cells into spinal cells that control motor function as possible treatments for ALS, otherwise known as Lou Gehrig's disease.

And researchers from Rockefeller University, also in New York City, have explored ways in which stem cells can be used to develop dopamine-producing cells which could help Americans living with Parkinson's disease who experience a decline in these types of important cells.

A broad consensus in New York and across our country has brought us to this debate and vote. There has been an upsurge of demand. It has crossed every line we can imagine, certainly partisan lines, ethnic, racial, geographic lines. People in every corner of our Nation are demanding that we in Washington open the doors to this promising science.

It is long overdue, but finally we are at this point. My friends, Christopher and Dana Reeve, whom we have lost in the last several years, were eloquent, passionate advocates for this research. Christopher, from his wheelchair, performed his greatest role. He may have been Superman in the movies, but he was a super human being after his accident which paralyzed him, consigned him to a wheelchair to help with his breathing and respiratory functions. But he never gave up.

He launched his greatest battle to try to bring our Nation to the point where we would take advantage of the science that is there. He worked and struggled on behalf of all who might benefit from stem cell research and other scientific breakthroughs.

His brave, beautiful wife Dana, who passed away just this past March, showed a devotion to her husband and her son that was just inspirational. She, too, continued Christopher's work through the Reeve Foundation. And I know that both of them are looking down upon this debate and so pleased and relieved that this day has come.

As I travel around New York, I run into constituents who speak to me about this issue. They are living with type I diabetes or their children are. They are suffering from Parkinson's. They have a relative who is struggling with Alzheimer's. They are paralyzed from an accident, as Christopher was. And they believe that this holds promise for their lives, for their futures, and if not for them in their lifetimes, certainly for their children and their grandchildren.

Yet we know that the work of researchers in New York and across our country has been stymied, has been held back by the ban on certain kinds

of scientific research. In 2001, when President Bush put a stop to all Federal funding for this type of research, it was limited to using already existing stem lines, which has proven to be a barrier to scientific advancement. We only have 20 lines, not 70 as was advertised, that scientists can use. And the utility of these lines has been outstripped by the scientific advances made in the past 5 years.

But the ban still stands, and we have to pass this legislation. The House already did. We are now joining with the House. We need to have additional stem cell lines in order to pursue the promising avenues for research. I am worried the President has signaled he intends to veto this legislation, the first veto he will use since he has been President.

This research is not standing still around the world. We are looking at other countries putting billions of dollars into supporting stem cell science. They are creating establishments of all kinds, centers of research, special clinical centers because they know they can attract scientists from the United States who will come to pursue this research. We are losing ground instead of doing what Americans do best, leading the world in innovation, ingenuity, new ideas.

We can send this legislation to the President's desk, as I anticipate us doing after our vote this afternoon. And then the President has a decision to make: Will he support the scientific community at this moment of unequaled optimism and discovery or will he set us back?

I am going to support the other two bills that are going to be before us as well because I think we have to clearly put an ethical fence around this research, send a very clear message about what is permitted and what is not.

Right now we have no Federal laws prohibiting the worst of some of this research. That is one of the results of the fact that we have an Executive order, but we don't have any legal prohibitions on some of the worst things people might decide to do. I think it is important that we have a strong ethical stand, a strong legal stand, strong prohibitions and penalties for people who don't pursue research in the way that we set forth.

But we cannot make the progress that we need to make for the sake of new treatments, new discoveries, and new hope for countless millions of people who are alive today and are suffering, for those born with diseases and conditions that could be ameliorated or even cured.

This is a delicate balancing act. I recognize that and acknowledge it. I respect my friends on the other side of the aisle who come to the floor with grave doubts and concerns. But I think we have struck the right balance with the legislation we will vote on this afternoon. I think we will make a serious mistake if the President vetoes

this measure and sets this research back.

Mr. President, I hope we will pass it with a large margin, and I hope that the President will allow it to become law so we can, once again, stand for those who need this help to face the suffering that they encounter while living day-to-day.

I yield the floor.

The PRESIDING OFFICER. The Senator from Oregon is recognized.

Mr. SMITH. Mr. President, the majority yields 10 minutes to the Senator from Louisiana, and the Senator from Kansas will follow him.

The PRESIDING OFFICER. The Senator from Louisiana is recognized.

Mr. VITTER. Mr. President, I rise to speak in opposition to H.R. 810, the Stem Cell Research Enhancement Act. First of all, I join with everyone in the Senate—in fact, everybody around the country—in saying that, of course, we want to further research and opportunity for the cure and the treatment of very serious illnesses. Of course, we want to do everything possible, within a strong ethical framework, to push for that scientific research and that progress. But at least I want to do that in a clear, certain, ethical framework. That is why I must oppose the details of the provisions of H.R. 810.

Mr. President, I oppose it on two significant grounds. First of all, because one of my solemn duties in the Senate, I believe, is to protect and defend all human life—every case of human life, the beauty, the sanctity, and the importance of the individual which God has created.

Secondly, I do this in particular focusing on the fact that we are talking about the use of taxpayer dollars. We are not merely talking about what is allowed and disallowed. We are talking about the use of taxpayer dollars for specific purposes, when some of these types of research are so utterly controversial in terms of the impact on individual human lives.

Mr. President, a human embryo is a human life. I believe that to the core of my being. It is at the initial stages of life and development, of course; but an embryo is a human life. Each and every one of us began as an embryo. Therefore, I firmly believe neither Congress nor independent researchers, nor any human being, for that matter, should be allowed to, in effect, play God by determining that one life is inherently more valuable than another, determining that one life should essentially be sacrificed for some other purpose, to advance the welfare of other separate human lives.

Of course, supporters of embryonic stem cell research argue that this research only kills embryos that would be discarded anyway. But there are many cases that prove otherwise, where embryos have been adopted while still embryos or donated to infertile couples by their parents.

We know that as many as 99 families have adopted and given birth to children from those very same frozen embryos. These kids are often referred to

as “snowflake babies.” They are beautiful, they are miracles. They remind us that, of course, we are talking about human life. How can we justify killing these tiny humans by saying that these embryos would be discarded anyway, when there is proof that, in some cases, they are not discarded, they are adopted. They grow up to be full, mature, healthy children, human beings.

Supporters of embryonic stem cell research argue that this research is essential to curing many diseases and federally funding it is our only hope for curing diseases. I point out that there are many other alternatives. In fact, those alternatives are more promising, in many ways, than the type of research we are debating today. The facts show that adult stem cells have been used to perform at least 69 successful treatments for human patients. So we have 69 treatments in human patients using adult stem cells which do not require the taking of human life. These were clinical applications, successful applications.

What is the experience in terms of embryonic stem cells? Zero successful treatments in human patients, zero direct clinical applications.

There have been 25 years of this research, and there are still no successful direct human clinical trials, and there have been many stops and starts and complications with regard to other research.

The following are some disorders and diseases with treatments from adult stem cell research that are worth noting: brain cancer, testicular cancer, ovarian cancer, skin cancer, acute heart damage, multiple sclerosis, rheumatoid arthritis, spinal cord injury, stroke damage, Parkinson’s disease, chronic liver failure, sickle cell anemia, end-stage bladder disease. Again, these were not just promising but successful in many cases—human clinical trials that directly focus on these very serious diseases.

So if one weighs all of these factors in the balance, I truly believe that the thing to do is to respect all human life, to respect the very heartfelt feelings of millions upon millions, tens of millions of Americans who have fundamental problems with this sort of research. Again, it is worth underscoring that we are not debating whether this research can happen. We are debating if we are going to use taxpayer dollars to fund it, if we are going to forcibly take money from those Americans who, like me, have fundamental moral reservations with the research and spend it on that very research.

I am happy to say that there is other legislation that we are considering today. I strongly support those two other bills. First of all, the Fetus Farming Prohibition Act, S. 3504, which prohibits the creation and gestation of human beings for the purpose of harvesting spare organs, body parts, and tissue. Many people think fetus farming sounds akin to something out of a science fiction movie, and it does.

But it is already being explored in animals. This is something that is advancing scientifically. Congress must prevent science from subjecting human beings to organ, body part, and tissue harvesting before it is too late.

The second bill which I proudly support today is the Alternative Pluripotent Stem Cell Therapies Enhancement Act, S. 2754. It requires that the NIH support research into alternative methods, other than destroying human embryos, of creating pluripotent stem cells. These pluripotent stem cells are valuable for treating diseases because they are capable of forming most or all of the tissues of the adult body.

So, again, this would forge a new path to make sure we explore other avenues to create these stem cells that do not involve the destruction of precious embryos, human beings, human life. I believe this alternative path is far more productive. I believe it is far more in keeping with upholding the values of our society, the very strongly held belief of tens of millions of Americans who, like myself, have fundamental moral reservations with the destruction of individual human life for these other purposes.

So I urge all of our Senate colleagues to join me and others in supporting those two bills about ethical alternatives but in opposing this underlying bill, H.R. 810, because it would involve the destruction of individual, precious embryos, human life.

Mr. President, I don’t come to this conclusion quickly or easily or rashly. Similar to virtually every American family, mine has been touched by very serious diseases to which this research pertains. My dad had Parkinson’s disease. He suffered with it for about 8 years. It was very debilitating and, of course, eventually, similar to most folks with Parkinson’s disease, he passed from that and complications of it. With that personal history, of course, I want to advance research in every ethical way possible. But we must do it, again, in a strong, moral framework. We must do it within clear, reasonable bounds, particularly when we are talking about taxpayer funding of research.

I believe that defeating H.R. 810—but also passing the two bills that set up alternative paths toward promising research—is the correct way to proceed. I urge all of my colleagues to join me in adopting that path.

With that, I yield back my time.

The PRESIDING OFFICER. The Senator from Kansas is recognized.

Mr. BROWNBACK. Mr. President, I ask the Chair to advise me when I have 2 minutes left. I want to start with a picture of Dennis Turner because this is a real-life case of Parkinson’s disease. The prior speaker, Senator VITTER, talked about his dad dying of Parkinson’s disease; it is a terrible disease. It is incredibly debilitating. I met with a friend of mine last week who has something similar. It is not Parkinson’s, but it is also debilitating.

Dennis Turner testified at a hearing we had in the Senate Commerce Committee. He had been cured of his symptoms for 5 years. We had difficulty getting him in because he was out doing fun things such as safaris. After a period of 5 years, the symptoms started to return. He had received an adult stem cell therapy, not embryonic stem cell therapy. His symptoms went away for 5 years, and then they started coming back. He needed to have another treatment; he could not get it. International doctors—to try to get their help and support, we need to fund that type of work, which is working, for people like Dennis Turner.

My colleagues say we need to do this with embryonic stem cell research, that that is going to cure Dennis, Dennis Turner will be cured that way. I want to remind some of my colleagues that they said this about fetal tissue research about 10 years ago in this debate. In 1993, this was a typical statement debate at that time:

There is substantial evidence that fetal tissue research—

Taking a human embryo, fetal tissue, and let’s work and mold and work with this and put it inside a person, and let’s deal with issues like Parkinson’s this way.

—will offer new hope of prolonged life, greater quality of life, perhaps one day even a cure for many of these diseases, and a tremendous economic and social cost-saving to the country.

So we funded fetal tissue research for a long period of time, like we are funding embryonic stem cell research, to the tune of half a billion dollars over the last 5 years in human and animal models.

We funded fetal tissue research. Now, this is tissue and cells that are further developed than embryonic cells. They are further differentiated and they are more stabilized, so they go off in fewer tangents. So if they are put in some particular area of the body, like they come from the brain, from the fetal tissue, and you put them back in the brain, they are more stable. We did this research. We funded this. We even tried it in humans, to disastrous results—disastrous results.

This is Parkinson’s research set back by failure of fetal cell implants. Disastrous side effects are the quotes from the people who did the testing. Absolutely devastating. It was tragic, catastrophic. It is a real nightmare. And we can’t selectively turn it off. My goodness, this is strong wording that is taking place, to be catastrophic for fetal cell implants. Catastrophic? What happened? These cells, the fetal cells, formed tumors, and in some cases these tumors, they were implanted in the brain, the fetal cells implanted in the brain, and these tumors ended up being fingernail or hair that was in the brain, and we can’t selectively turn it off.

Think about this just for a minute, if we could. Everybody is saying we want to cure people. I want to cure people. If we have a route that is working in 72 different disease areas with the adult

cord blood—and here is real research we funded. We tried it in humans even, with fetal cells. These are further developed cells than embryonic. They formed tumors, to disastrous results in Parkinson's patients.

Yesterday, I entered into the RECORD a series of six one-page—this is the front-page summary of peer-reviewed articles on the formation of tumors using embryonic stem cells, and these were all articles saying: OK, we use embryonic stem cells; they formed tumors.

Now, I am not a scientist, but it seems that if you got it in fetal tissue, which was further developed cells, and you found out that these are wild and they grow too fast and they form in other areas, and you back it up to embryonic stem cells and they are even younger, more malleable, and less formed, and we now have research saying they are forming tumors, you would look at that and say: Well, I don't think this is working particularly well.

Now, it is interesting science. We may learn something of how the cell works in this process. I don't deny that at all. But if I am looking for a cure for Dennis, and I have—I want a cure for Dennis. I want something that works for him, and he has had a treatment that has worked for 5 years in him, in the adult field, and I have research that says, in the embryonic field, it is going to form tumors, and I have research earlier in fetal tissue that says it did form tumors in humans, how am I going to cure Dennis in this case by putting more into embryonic stem cell lines, taking precious dollars from adult stem cell work and cord blood and putting it into a speculative field, the embryonic field, which is producing no results and, in fact, the results it is producing are producing tumors? That doesn't seem to make much sense to me as far as how we would invest these sorts of dollars.

People are talking about spinal cord injuries, and I think we should because we are going to deal with this area. I hope that in the next 10 years we are going to see for people, once they get a spinal cord injury, there is an immediate therapy they have and it starts to knit that spinal cord back together, so they are not waiting years and letting it further atrophy but immediately there is a therapy.

The therapy you see right here in Jacki Rabon—I have had her in to speak at a press conference. This was a spinal cord injury accident—paraplegic from the hips down. Now she has feeling in her spinal cord. She had to go overseas to get this treatment. It should have been done in America. It wasn't. Adult stem cells from the base of the nose—olfactory—taken, harvested, and put in. She is getting feeling. My guess is she is going to need several treatments.

Now, one of the greatest dismays we have is that a number of people are citing a rat model that has been shown on

television of embryonic stem cells helping a rat to walk again. And that is fine. I am glad people are showing it. But a lot more people know about this rat model than know about Jacki Rabon. It seems as if there has been a media blackout on the adult stem cell successes and treatments and cord blood, and this rat has gotten all the publicity, even though we know that if you do this in humans, you are going to form tumors. Why? Why wouldn't we embrace what is working and has no ethical problem?

I wish to close this section with a letter from a child. This is the first snowflake baby. This was a frozen embryo that was adopted—Hannah. She wrote this last year. It is her letter. She is a pioneer. She says: "We're kids. I love you." X's and O's—hugs and kisses. I love these letters. When my youngest daughter Jenna does them, they are absolutely precious. Then she draws three faces. This is her face as an embryo. She is happy. She got adopted. She is no longer frozen. Here is a sad face as an embryo that is still frozen, and her explanation of this letter is he is sitting there frozen, hoping somebody adopts him. Here is a third face with a straight line, and her explanation is this is a young embryo saying: What, you are going to kill me?

This is a child's explanation of a frozen embryo. A frozen embryo that is life, that is human life. If you destroy Hannah at this stage, you don't get any sweet letters from Hannah to her parents. And we have a lot of frozen embryos.

We are saying: Well, let's make some utility out of them. Isn't that against human dignity, to say, We will just research on this, when this could be this child? This is this child? We don't need to do it. Even the research we are funding in this area isn't working.

I ask my colleagues to vote against H.R. 810.

I yield the floor.

MR. SMITH. Mr. President, I yield 10 minutes to the Senator from Oklahoma.

The PRESIDING OFFICER. The Senator from Oklahoma is recognized.

MR. COBURN. Mr. President, I have listened to a lot of debate today, and I have heard a lot of statements. Let me just go through a few.

Cures are not around the corner; that is right. Embryonic stem cell groups are now starting to realize they have years upon years upon years to offer any hope of cure of any disease using embryonic stem cells.

Yesterday in the debate, I challenged those on the other side of this issue to deny the fact that the only way we will ever have a treatment will be that you will have to clone yourself to be able to get a treatment. Nobody has refuted that, and the reason they can't refute that is because that is the only way embryonic stem cells will ever be successfully used to treat a human condition. You will have to clone yourself. That raises all sorts of other ethical conditions.

The fact that cures are not around the corner with embryonic stem cells belies the fact that cures are here with adult stem cells, with cord blood stem cells, and it belies the fact that we are not recognizing the latest advance just available in the last 6 months, confirmed in Germany, of what is called germ cell pluripotent stem cells. They can make any type of cell, and it makes sense. What has been constant through the history of man that has survived? The ability to propagate and to repeat the species. And the unique thing about germ cell pluripotent stem cells is they come from both the testes and the ovaries of us, and we can capture from ourselves pluripotent stem cells that do all the things and have all the potential that an embryonic stem cell might have.

The real question before us is, If there was a way for us to establish this research and avoid any ethical questions, wouldn't we all want to go there? And what I am putting forward today is that way is here today. That way is here. The scientific community, in terms of their money-raising and fund-raising and grant-seeking, hasn't caught up with it. But mark my words: The real research in the pluripotent stem cells, those that can do anything and regenerate themselves and also have the advantage of not creating teratomas or tumors, are going to be the germ cell pluripotent stem cells. It is important for us to look at it.

Another quote: It won't involve cloned embryos. The only way a stem cell therapy from an embryonic stem cell can work for you is in one of two ways: you either clone yourself, and you will still have some problems with rejection, or you will get from multiple, multiple lines a close match.

I wanted to ask the leader yesterday—his biggest problem as a heart-lung transplant surgeon is the availability of organs, No. 1, and rejection, No. 2. The wonderful thing about adult stem cells is there is no rejection because you are giving yourself your own cells. The same thing will be true of germ cell pluripotent stem cells. There will be no rejection because you are giving identical DNA to yourself. All the other treatments with embryonic stem cells will have rejection as a component of their treatment. So is it a wonder that we want to research the miracles of life and look at this? No. It is great research that should be going forward.

But it is not true that there is not embryonic stem cell research going on in this country outside of the Government and around the world. The question is, Are we going to use taxpayer money to do additional research?

The other question that I raised is, Where is the money up to now going? The people who are investing outside of Government grants, where is the money going in terms of research? It is not going into embryonic stem cell research. It is going into every other type of research where they can actually see treatments.

Senator HATCH talked about heart disease. We now know that if you have had an infarct and you get a bypass and you are injected with your own stem cells, a good portion of your scar goes away and the generation of new blood vessels around the heart is accelerated and accentuated to the degree of about 70 percent more than your body would naturally do, if you are injected with your own stem cells at the time you get your bypass. We are curing heart failure with adult stem cells today. We are curing new vessels in the heart.

There is recent research in the last 6 months where we are treating lung disease—pulmonary fibrosis. CHARLIE NORWOOD, a Congressman from Georgia, has had pulmonary fibrosis and has had a lung transplant. In 5 years, somebody with pulmonary fibrosis will be cured with their own stem cells—not with embryonic stem cells, with their own stem cells—and they won't have a problem with rejection. Yet CHARLIE has to take drugs to keep from rejecting the lung transplant that he has.

Over time, we will recognize the value of what is really happening today in terms of treatments. We don't want the false promise. There is no question some great things will come out of embryonic stem cells. I don't deny that. But if we could do it a different way, if we could do it in a way where we didn't approach the ethical question, almost everybody would agree, let's do that. What I am saying is that is coming today.

Other quotes: Researchers have been prohibited from doing research on embryos. That is not true. That is not true. There is research ongoing today, with \$41 million of your money last year on embryos. We haven't prohibited the research. We have said it is going to be limited. This bill, H.R. 810, says: There is no limit. Whether you agree with it or not, your money is going to be used to go in this direction.

I have not approached the ethical issues on pro-life—I am pro-life, but I am not claiming that as a defense on this issue. I am claiming that the smart science will avoid it and look at where the benefits are. There is no question.

I wish to quote from Lord Winston, the most prominent fetal embryonic stem cell researcher in England: "I view the current wave of optimism about embryonic stem cells with growing suspicion."

He says we have overpromised. He is right. It is going to be decades before a response comes from embryonic stem cells. There is not one viable treatment with embryonic stem cells in an animal model today, let alone a human model. There are hundreds in animal models and there are 72 in humans. To me, this is an easy question which doesn't have anything to do with ethics. Put the money where the results are. The results are here. I will promise you, germ cell pluripotent stem cells will be the end-all for our ethical question. It is just a shame that the politics isn't up with the science.

With that, Mr. President, I yield back.

The PRESIDING OFFICER. Under the previous order, the majority still has 2 minutes remaining.

Mr. SMITH. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. HARKIN. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Under the previous order, the minority is in control of the next 30 minutes.

The Senator from Iowa.

Mr. HARKIN. Mr. President, I yield 5 minutes to the Senator from Wisconsin, Mr. KOHL.

The PRESIDING OFFICER. The Senator from Wisconsin.

Mr. KOHL. I thank the Senator.

I rise today in support of H.R. 810, the Stem Cell Research Enhancement Act of 2005, which is a bill that will expand the number of stem cell lines that are eligible for federally funded research ensuring that scientists at NIH and laboratories around the country have access to new, uncontaminated stem cell lines. America's best scientific minds have told us that harnessing the power of these cells could one day lead to a cure for a number of diseases that afflict families all across our country.

Nearly every family in America has experienced the tragedy of watching a loved one suffer through a deadly or debilitating illness. Diseases such as Parkinson's and Alzheimer's take a terrible toll on families' lives and livelihoods. While we have made great strides in biomedical research in recent years, we still do not have all the keys to unlock the secrets of disease.

Today the Senate has the opportunity to reach across partisan lines and touch the millions of individuals and families who suffer the ravages of diseases such as Parkinson's and Alzheimer's. We are not researchers, but today we can give our best researchers the material they need to understand these diseases. We are not doctors, but today we can give our best doctors the weapons to fight back for their dying patients. And we are not patients—at least not yet—but today we can give patients hope for not just relief but a cure.

The University of Wisconsin at Madison was the first to isolate the human embryonic stem cells that have the ability to develop into virtually any cell type in the human body. They have stated unequivocally that they need H.R. 810 in order to continue their groundbreaking work. Without H.R. 810, they fear America will fall behind the rest of the world in medical and biotechnical research.

We all understand that this research is not without controversy. I respect the concerns that some have about the

use of embryonic stem cells. We must closely monitor this research to ensure that it is done ethically, and our passage today of S. 3504 and S. 2754 demonstrates the unanimous bipartisan commitment to do just that.

We must step carefully, but we also must step forward, and that is what H.R. 810 is all about, opening new cell lines so we can move forward toward new understanding, new hope, and new cures.

Last year, the House took that step forward decisively and in a bipartisan manner, and so this year it is our turn. It would be unconscionable for our Government to turn its back to the discoveries that expanding stem cell research promises. Now more than ever it is important to grasp this opportunity in an ethical manner by making sure that potentially lifesaving research does not slow or stall.

We may not be in the laboratories where scientists are working around the clock to develop new vaccines, treatments, and cures. We may not be in the hospitals diagnosing and caring for the sick and the infirm. But today the Senate will openly decide to stand with the scientists, doctors, and patients. I urge my colleagues to look past the politics of this debate and embrace a promise of progress.

With that I yield the floor.

The PRESIDING OFFICER. Who yields time?

Mr. HARKIN. Mr. President, I yield 5 minutes to the Senator from Arkansas, Mrs. LINCOLN.

The PRESIDING OFFICER. The Senator from Arkansas.

Mrs. LINCOLN. I thank the Chair. I thank the Senator for yielding.

I, too, Mr. President, come to the floor today with tremendous respect for the sensitivity of this very critical issue that we in the Senate and in the Congress have worked so diligently to ensure—that we not only respect the sensitive nature but that we also look toward the possibilities of what we can do for the constituents we represent.

I am very pleased that the Senate is debating stem cell research, and particularly H.R. 810, the Stem Cell Research Enhancement Act, and I thank the majority leader, Senator FRIST, for scheduling a vote on this very important bill today.

I am a proud cosponsor of the Senate companion bill, S. 471, because it offers new hope for patients, for grandmothers and grandfathers, children, daughters, mothers, fathers, and for their families who love them so dearly.

Four years ago I watched my mother give her utmost of devotion to the man she had loved—and still loves—and shared her life with for more than 52 years. She had pledged to care for him and to honor his life until he departed this world, even if he no longer remembered her name or could recognize her face. My sweet father suffered from Alzheimer's disease. My sisters and my brother had been by his side helplessly for years watching as, first, he lost the

most precious of all things, his memory, his ability to see his family and to remember the cherished moments that we had spent as family, and then, unfortunately, also, the dignity of life, in his ability to care for himself. My mother's commitment to my father during his long illness remains a tremendous source of inspiration to me and to the rest of our family.

Unfortunately, my family's experience with the ravages of Alzheimer's is not unique. Millions of victims and their families are suffering from debilitating diseases such as Alzheimer's, Parkinson's disease, diabetes, heart disease, multiple sclerosis, burns, and spinal cord injuries. Fortunately, we have within our power the potential to relieve their suffering and the possibility of cure.

I believe embryonic stem cell research conducted ethically and under Government supervision holds the potential to offer lifesaving treatments for many diseases that have frustrated the medical community for ages. I also believe that whenever we have the power to heal the sick we have the responsibility to do so. It is a commandment as old as the Scriptures themselves.

In 2001, President Bush made the decision to use Federal dollars to fund embryonic stem cell research. By allowing embryonic stem cell research to move forward, the President signaled that he believed this was both a morally acceptable and potentially lifesaving form of research. Since the President's decision, we have discovered that in order for embryonic stem cell research to reach its fullest potential and for science to be accurate, it is essential to expand the number of stem cell lines that are eligible for federally funded research. H.R. 810 will allow Federal funding for research on an expanded number of embryonic stem cell lines according to strict ethical requirements. The bill would restrict Federal funding to only those stem cells from embryos that would otherwise be discarded. In addition, the bill requires that any individuals wanting to donate embryos do so with written consent and not receive any financial inducement.

Also, the bill does nothing to change the current law banning the use of Federal money to destroy human embryos. H.R. 810 gives us the opportunity to expand lifesaving research with proper ethical safeguards. Furthermore, it will be a step forward in helping us to fulfill our moral obligation to heal the sick. And in the end, that obligation is one that we must keep.

I thank the Chair. I yield my time back to Senator HARKIN.

The PRESIDING OFFICER. Who seeks time?

Mr. HARKIN. I thank the Senator from Arkansas.

Mr. President, how much time do we have remaining?

The PRESIDING OFFICER. The minority has 20 minutes.

Mr. HARKIN. I yield 10 minutes to the Senator from Delaware, Mr. CARPER.

The PRESIDING OFFICER. The Senator from Delaware.

Mr. CARPER. I thank my colleague for yielding. I am moved by the comments of Senator LINCOLN, and I suspect we could go throughout the Senate Chamber from desk to desk, from Member to Member, and each of us could tell a personal story from our own family as moving as I found her description of the life of her father.

In my own family, my grandfather, a wonderful role model as a butcher from West Virginia, had Parkinson's disease. He got up every morning and drove through the mountain roads to the butcher shop to cut meat. Every day I would watch him leave the House, his hands shaking, fingers shaking, wondering if he was going to chop one off, and he never did in all the years that he ran that butcher shop.

I think of the time, looking at Senator HARKIN and myself and some others in the Chamber who served in the House, we served with Mo Udall. I remember riding back and forth on the subway between the House buildings, the Rayburn Building, riding over to the Senate Chamber with Mo Udall and watching his body slowly deteriorate. I think of Ford King, my brother in law, now deceased, who was controlled by ALS over a decade or so ago and watching his life slowly fade away as ALS took its toll on him. I think of Alzheimer's and my own mom who passed away last year, her mom who was a victim of Alzheimer's, and the millions of others who die from that disease in our country.

I think of my own healthy sons, thank God, 16 and 18 years of age, and I think of their friends having to prick their bodies or their fingers several times a day, as much as 10 times a day, to take insulin shots and know that is the way they are going to have to live for the rest of their life.

Today is a day of tremendous opportunity. It is an opportunity to push for the kind of medical research that will make a difference in the lives of the people—not the people I just mentioned, unfortunately, for the most part, but in the lives of their children and their grandchildren. It is an opportunity to help find treatment for diseases such as the ones I mentioned, Parkinson's disease and juvenile diabetes and autoimmune disorders and heart disease and even, if we are lucky, cancer.

We know that stem cells hold great promise. Already stem cells have been used to help paralyzed rats regain the ability to move. Stem cells have been converted into motor neurons which could help treat spinal cord injuries or Lou Gehrig's disease—ALS.

Stem cells have also been coaxed into becoming brain cells to one day help patients with Parkinson's disease, such as my own grandfather, such as our old colleague, Mo Udall.

Today, though, is about more than just curing diseases. It is also about keeping America's research centers competitive and relevant. Stem cell research is likely to be an important area of science and medicine for a long time to come. Instead of treading water, as we have done under President Bush's stem cell policy, America should be leading the way and making other countries play catchup, instead of us playing catchup to them.

We have done this in the past. The United States has always been a valuable contributor to the prevention and treatment of illness. We have developed vaccines and antibiotics that have saved literally millions of lives. We have made tremendous advances in the areas of biotechnology and pharmaceutical research.

Now we have an opportunity to make a national commitment to expand the frontiers of medical research once again.

If we focus our resources and attention today to find cures, we will save lives, and we will save money in the long run.

H.R. 810, the Stem Cell Research Enhancement Act which is before us today, was introduced in the House of Representatives by my own Congressman, MIKE CASTLE. Here in the Senate, it has been shepherded by two of our finest colleagues, Senator SPECTER and TOM HARKIN of Iowa. This bill would greatly expand our ability to take the next steps in stem cell research by expanding the number of stem lines eligible for Federal funding. It would also strengthen the ethical rules that govern stem cell research.

Under the administration's current policy, the number of stem cell lines available for federally funded research has continued to shrink. There are now, I am told, only 22 lines available. What is more, many of those current lines are contaminated or have reached the end of their useful life.

The Castle bill would allow new lines to be derived from excess in vitro fertilization embryos that would otherwise be thrown away. The choice seems clear, at least to me and I know to a lot of people in my State. Rather than allow these embryos to be discarded and thrown away, with the consent of the couple who want to donate those embryos, with their permission, we can use those embryos to further lifesaving research.

These new stem cell lines will dramatically expand our ability to study and find treatments for a wide range of illnesses. The benefits will come not only from having more stem cell lines but from having better lines. By expanding our research policy, we can create stem cell lines that help us study specific diseases or create specific treatments.

I urge all our colleagues to support H.R. 810. I know there are a couple on the brink, who are undecided. They know who they are. I encourage them to listen to the folks from their own

States and their own families whose lives could have been enhanced, been lengthened—or in the future will be. Let's vote today to expand stem cell research so we, our children, our grandchildren, and a whole lot of people beyond them can benefit in the future.

Mr. HARKIN. Mr. President, I yield the remainder of our time to the Senator from Massachusetts, Senator KERRY.

The PRESIDING OFFICER. The Senator from Massachusetts.

Mr. KERRY. Mr. President, I want to begin by thanking the Senator from Iowa, Senator HARKIN, for his long leadership on this and other issues of importance to research and to people with disabilities.

For each of us, and for millions of Americans, this is a very personal issue. It is impossible to separate it from our own experiences. I have heard colleagues on the floor talking about grandparents and other members of their family and the experiences they have had. I will never forget, personally, almost 2 years ago standing in an amphitheater in Denver, talking to many people—many of them in wheelchairs, many who had lost loved ones to disease, many who knew a cure would never come in time for them—who held out hope, nevertheless, that stem cell research might save a loved one, might save someone else in similar circumstances.

What they wanted, above all, was leadership. They wanted someone back in Washington to fight for them. I promised them that I would do all that I could, and I will never forget the look of yearning and hope in their eyes, the pleading, if you will, that people would come to a place of common sense. They placed enormous hope in all of us in the Congress.

When I think about them and I think about people all over the country who are so personally invested in this issue, I am deeply troubled to see that today we find ourselves in a place of division, where we could have been united. We are divided principally by the promise of President Bush to veto a bipartisan bill that funds stem cell research.

In more than 5 years, President Bush has not vetoed a single bill—not one. He signed 1,129 bills into law, without raising his pen to veto one—not a bill that overspent, not a bill that moved in any other direction that he disagreed with. Now he wants to use the first veto of his Presidency to stomp on the hopes of millions of Americans suffering from devastating illnesses.

A veto now would send a profound message to all Americans that, on crucial issues, our differences are greater than our shared convictions. It would also tell the world that America no longer wants to be the country that leads the world in scientific knowledge and discovery.

The bipartisan legislation before Congress shows that Congress has found a way to take the politics out of the debate on stem cell research. It is

time that the White House does the same.

Our current policy is eroding America's national advantage on stem cell research. We are tying our scientists' hands. We are holding back our doctors. We need a policy that is not driven by a narrow view but, rather a broader, consensus-driven approach to life and to science itself. We need a Federal policy that builds on the advances being made in our States, in our universities, in our private foundations, and research centers. I believe that Senate passage of H.R. 810, with vetoproof majorities, can put us on that path.

What a tragedy it would be if the first veto of the Bush Presidency were used as a political wedge. This is something that Washington and the rest of America overwhelmingly supports, regardless of political party. It is a promise that offers hope to millions and could put America on the path to leading the world in the discovery of cures. This is not a wedge issue. This is about common sense and about people's lives.

For all of us, the issue of stem cell research is personal, as I mentioned. Yes, it does raise profound moral questions and nobody should skip by those questions. I am not seeking to. But I do believe that any legitimate examination of conscience and any legitimate examination of the moral questions about life that are at stake can be resolved in a way that respects life and that properly puts morality on the side of the decision we are making.

When it comes to stem cell research—and all scientific research—we ought to demand no less than that kind of effort. I acknowledge, yes, there are those moral and ethical issues. But I believe the legislation that was passed by the House of Representatives with bipartisan support does provide strong ethical guidelines, strong ethical safeguards, and it limits what this research would do in a way that does respect those moral questions that are at issue.

First of all, federally funded research with respect to embryos would only go to, or be limited to, those that are donated by in vitro fertilization clinics, so you don't create some new business or create some disrespectful effort that is outside the effort of reproduction and of life itself.

Second, they would only be permissible when created specifically for fertility treatment—which is going to occur anyway, which does occur anyway—and which is in keeping with our efforts to respect life.

In addition, we live in a situation today where those embryos that are created in the context of in vitro fertilization are either going to be used for the purpose of creating life or those numbers that are in excess are going to be discarded. That is the fact. That is what is going to happen. So this legislation limits the use of those embryos only that are donated by treatment-seeking individuals who provided writ-

ten and informed consent and who were not offered financial inducements in order to do so.

As the Los Angeles Times editorialized 2 years ago:

The moral decision is between putting those few so-called embryos in the trash or using them to possibly bring back lost memory, keep people out of wheelchairs or free them from the life of insulin injections. It is not a simple decision, but it is also not a close call.

Growing numbers of conservatives, from JOHN MCCAIN, BILL FRIST, and ORRIN HATCH to Nancy Reagan, have looked carefully at the scientific facts and searched their own consciences and arrived at the same conclusion: Opposing stem cell research, with the restrictions and the appropriate ethical guidelines that have been put in place, is the opposite of a pro-life policy. In the Senate and across the country, Americans are approaching an ethical consensus that bans human cloning while protecting stem cell research.

The stakes could not be higher. More than 100 million Americans suffer from illnesses that one day might be cured with stem cell therapy. Stem cells could replace damaged heart cells or cells destroyed by cancer. They could offer a new lease on life to those with a diagnosis that once came as a death sentence. Research has the potential to slow the loss of a grandmother's memory, calm the hand of an uncle with Parkinson's, save a child from a lifetime of daily insulin shots or permanently lift a best friend or a colleague from a wheelchair.

There is a young woman on the floor of the Senate who shares this hope. Her name is Beth Kolbe. She is a summer intern in my office, and she has followed the stem cell research debate very closely over the years and especially this week. Beth has spent the last 2 days watching the debate on the Senate floor, and her presence now is a silent, powerful reminder of what is at stake.

At the age of 14, Beth was in a car accident and suffered a terrible spinal cord injury. In that instant, she was paralyzed from the chest down. After two neck surgeries, 2 weeks in intensive care, 2 months as an inpatient in a rehab hospital and 2 years as an outpatient in physical therapy, she is now living a very full life. She just told me that she is in the Paralympics as a swimmer, and she lives her life and loves her life as a junior at Harvard, studying biology and health care, navigating the campus in her wheelchair. But she told me also that it would be a lie to say that there are not challenges that she would like to have overcome.

She wants more, not just for her but for others. Here is what she said:

Since that day 6 years ago, my family and I have been following stem cell research because it can help so many people. I'm just one of the millions who can be helped. As a person in the disability community, I've met so many people whose main goal is just to get better, and stem cell research is their one opportunity to find a cure. I hope to be

a face that the Senators can see, so that they can see what they are voting for.

Beth is here because she wants to see the Senate vote for hope. Some of the most pioneering treatments and miraculous cures could be at our fingertips, right around the next corner, but because of politics they could remain beyond reach. Every day we wait, more than 3,000 Americans die from diseases that might someday be treatable because of the discoveries made through stem cell research.

Americans have been presented with a false choice between the sanctity of human life and the scientific knowledge that can save it.

The President's veto rests on the false assumption that we have to choose between our dreams and our principles. I believe we can have both and we can protect both.

We can support our scientists, help the sick, and ensure that our legal and ethical boundaries continue to reflect our unshakable sense of human dignity and the value of human life.

If we get votes from 72 out of 100 Senators—then we can send the President a vetoproof message. Stop tying our scientists' hands, put down your veto pen, stop being part of the problem and become a part of the solution.

The American people believe in stem cell research for many of the same reasons as a remarkable woman I met at a town hall meeting on stem cell research.

She stood up in the back of the room. I will never forget it. Her body was shaking. She was petrified, but her body was also shaking because of the disease she had. She pleaded, with tears, for her government to embrace stem cell research.

It was the moral clarity of her message that will stay with me forever. Many Americans know a woman like her—maybe it's a grandparent with Alzheimer's or a friend in a wheelchair. "It's too late for me," she said, "but we need to do this for those who still have hope."

It's too late for my and TOM HARKIN's friend, Christopher Reeve, who passed away in 2004. But it's not too late for this President to change his mind before tying the hands of doctors, scientists, and ethicists with a preemptive veto. Chris would agree that it's not too late to give millions of Americans what they want most of all, which is hope.

And in closing, I want to share one more story. It's from Lauren Stanford of Plymouth, MA. She is 14 years old and has suffered from juvenile diabetes for 9 years. She and her mother, Moira McCarthy, came down to Washington, DC each year as citizen lobbyists in support of stem cell research and finding a cure for diabetes.

I want to read you a few passages from an essay she wrote as follows:

For as long as I can remember, I've had to take a lot of leaps of faith. I've had to believe my parents when they told me taking four or five shots a day and pricking my finger eight

or more times a day was just "a new kind of normal."

I've had to smile at the world and say I really don't mind wearing the insulin pump that's now connected to my body 24 hours a day, seven days a week.

Yes, in my nine years of life with Type 1 diabetes, I've learned to accept a lot of it is and the way it things as "just the way it is and the way it has to be."

But when I watched, with my parents, President Bush's decision on Stem Cell research in the summer of 2001—and his vows now to veto the bill—I just could not accept it.

You see the one thing that has helped me accept all I've had to accept these years is the presence of hope.

When I feel like I might just scream if I have to live another day fighting this endless disease, I think about all the researchers out there working to help me be cured. Now, it might seem corny to think of a teenage girl dreaming about researchers in labs, but that's what kids who have incurable diseases do.

Stem cell research could mean I can go to college without a machine attached to my belly keeping me alive. It could mean I can have children just like anyone else; not with teams of doctors working with me daily just to make it happen. . . . It might mean my children won't even know what diabetes was.

President Bush talks about protecting the innocent. I wonder, what about me? I am truly innocent in this situation. I did nothing to bring my diabetes on. . . . How, I ask my parents, is it more important to throw discarded embryos into the trash than it is to let them be used to hopefully save my life—and to give me back a life where I don't have to accept a constant, almost insane level of hourly medical intervention as "normal?" How could my nation do this to me?

Her hopes are here today, and I hope the Senate will do the right thing.

The PRESIDING OFFICER. Under the previous order, the majority is recognized for 15 minutes.

Mr. SMITH. Thank you, Mr. President. I am very grateful the Senate is considering the issue of stem cell research today. This debate marks the culmination of years of work by many of my colleagues and certainly by myself, and a host of dedicated advocates.

I thank Senators SPECTER and HARKIN for their leadership on this issue, as well as Senators HATCH, FEINSTEIN, and KENNEDY. The work the six of us have done since the House considered embryonic stem cell research last May has helped keep the issue alive in the Senate.

I also would also like to recognize Senator FRIST, who helped negotiate the package of bills before us. His willingness to take up this important, yet divisive issue is very much appreciated.

While all three bills are important to the advancement of ethical stem cell research, there is one that stands apart from the others. That is H.R. 810, the Stem Cell Research Enhancement Act. Simply, this bill would allow federal dollars to support research on stem cells derived from human embryos.

The tension surrounding this issue, I believe, pits the benefits that all can see and the potential that may be derived against the ethical uncertainties or the religious convictions our col-

leagues have. I think it is very important to respect both perspectives—and I certainly do. But I believe their reservations are misplaced when a full understanding is made of this very important area of research.

I think it is also important to point out as a show of respect for the differences of opinion that everyone in the Senate supports the bill's intent of furthering medical research—research that could possibly lead to a cure for a number of chronic diseases and debilitating health conditions.

The promise of embryonic stem cell research is very real. But I think we must emphasize and admit it is but a promise. It has yet to be fully realized because of the current restrictions which we have placed on it. While I appreciate the President allowing research to move forward on existing stem cell lines, over time these lines have become degraded and we are in desperate need of new, uncontaminated lines.

Stem cell science has the potential to cure dreadful illnesses such as Parkinson's, Alzheimer's, diabetes, cardiovascular disease, and many cancers. But we can't expect scientists to make progress in developing treatments if we limit them to yesterday's science.

I believe the Federal Government has a vital but a moral role to play in the development of stem cell science to ensure that the appropriate ethical guidelines are followed. To leave this to the private sector, with insufficient funding and no moral boundaries—we don't know where we will windup. But I do know the Federal Government can guide it in the right direction. I believe we will run into very serious problems if we do not as a Federal Government show up to work on this issue.

The real issue that is troubling to so many of us in this Chamber is questions of morality. I am pro life and throughout my political career I have supported policies that respect the sanctity of all human beings. I realize that many pro-life advocates oppose embryonic stem cell research on the ground that it destroys a human life. But as I have consulted with scientists and reflected upon my own conscience, I have come to a different conclusion. I feel that embryonic stem cell research is a pro-life policy. The key question that looms over this debate is, When does life begin? For me it begins with mother, with the implantation of an embryo. I believe the Scriptures provide ample support showing that flesh and spirit become one with the mother. This is one of womankind's supernal gifts. I find these verses in the Old and the New Testaments—in Jeremiah, the Psalmist, Job, Matthew, Mark, Luke, John, and in the letters of Paul. All of these things lead me to feel comfortable with an ethical conclusion that life begins when flesh and spirit are united and not before.

The embryos created as part of the in vitro fertilization process were intended to provide infertile couples the

gift of life. Those embryos that go unused in fertility treatments should still have the opportunity to give the gift of life either by later implantation or to those living with debilitating diseases through this dramatic medical research.

Without being implanted in a mother's womb, an IVF embryo is a group of cells growing in a petri dish. But if those cells are left there for thousands of years, they have no possibility of developing into anything. They remain a group of cells, the dust of the Earth, one of the building blocks leading to life. It is the act of implantation within the mother that gives them life. So instead of storing or discarding unused embryos, we have the opportunity to allow them to be used to derive stem cell lines to advance much needed medical research.

I believe it would be a tremendous loss to science and to all humanity if we choose to hold back the key to unlocking the mysteries that have long puzzled scientists and physicians. That is why it is so important that my colleagues cast a vote in favor of H.R. 810, a very pro-life vote.

Some of the bill's opponents may claim that you can equally support stem cell research by voting for Senator SANTORUM's bill which authorizes a number of research alternatives. I support Senator SANTORUM's bill and plan to vote for it today, but it is by no means a substitute for H.R. 810.

Alternative forms of stem cell research are in their very early stages—just like embryonic stem cell research. Considering the enormous medical benefits that may come from these emerging fields of science, we cannot afford to promote some methods while restricting others.

After years of reflecting on this issue, it has become increasingly clear to me that being pro life requires protecting both the sanctity and the quality of life. By allowing research on stem cell lines derived from unused IVF embryos, we could forge a path that would one day lead to cures for some of mankind's most dreadful medical maladies.

If only one life-improving application of stem cell science comes from this vote—from my vote—then I believe I have done my job and done it correctly, for on this issue I choose to err on the side of hope, healing, and health.

I encourage all of my colleagues—even those who have some ethical reservations or religious feelings on this issue—to do the same.

I heard on the radio last night a radio commentator describing embryonic stem cell research as a conflict between science and religion. I do not believe that religion and science are in conflict on this issue. I believe one of the great gifts of the United States—the best example of the United States to the world—is our pluralism, religious pluralism. It is something we see an absence of, tragically, in too many places of the world. You see blood run-

ning in the gutters of the Middle East as we speak because of sectarian views which are held to the point of murdering those with divergent views. Therefore, I do not believe we serve the public well by taking the narrowest theological position and trying to impose it on public policy. We should be open enough to include other considerations of ethical ideas, scriptural interpretations, and scientific hope.

For me, as I consider issues of life and death, I often turn to the Good Book to try to discern wisdom that I do not have myself. What I find in the earliest pages of the Torah—or the Old Testament—is this statement. And I quote:

The Lord God formed man of the dust of the ground and breathed into his nostrils the breath of life, and man became a living soul.

I am not a scientist, and I am not a theologian. But as I use my agency to interpret this early description of the sanctity of mankind's life, what I read is that we are made of dust. We ourselves are dust. Unto dust we will return.

Then you come to the conjunction in this verse, the conjunction "and." "And breathed with his nostrils the breath of life." Then you come to another conjunction, "and man became a living soul."

I believe that pluripotent stem cells are one of the building blocks of life. Clearly they are. Even if you leave them in a petri dish for an eternity, they will remain cells, the dust of the Earth. I believe we are missing the understanding of the importance of the spirit, the breath of life—the spirit of mankind—as the essential ingredient as to when life begins.

I do not find that religion and science are in conflict in the Senate today. I believe they are in harmony. I believe we should have a broad enough view to include the many views that comprise American pluralism.

I urge President Bush not to veto H.R. 810. I believe it offers hope. It offers promise. We can't overpromise. But it opens the key to the future, to unlocking mysteries of science, to improve the quality of life now. What could be more pro life than that?

Finally, my position is formed by my family history. My mother's name was Jessica Udall. I watched my grandmother, Lela Lee Udall, die of Parkinson's. I watched my uncle, Addison Udall, die of Parkinson's. I watched my cousin, former Democratic Presidential candidate and Arizona Congressman Morris K. Udall, die of Parkinson's. To watch people die of such a malady is to instill in one's heart a desire to err on the side of health, hope, and healing, to find the cure if a cure can be found. We will all die but no one should have to die as they died.

I appeal to my friend President Bush in the memory of my Udall ancestry, please, do not veto this bill. Do not deny them, people such as the Udalls, the hope that can come from this research. I believe this is an important

debate. If this bill is vetoed, another election will occur, another chapter of American democracy will be opened, and ultimately the will of the American people will be reflected in our policy. I believe the sooner, the better. So, to my pro-life friend, President Bush, I urge in the name of life to let this bill become law.

I yield the floor.

The PRESIDING OFFICER. Under the previous order, the majority still controls 1 minute 45 seconds.

Mr. SMITH. I yield back the remainder of that time.

The PRESIDING OFFICER. Under the previous order, the minority is recognized for 15 minutes.

Mr. HARKIN. I will soon yield 7 minutes each to Senators FEINGOLD and SCHUMER, in that order.

First, I had a meeting I was supposed to go to at noon. I am sorry I missed the meeting; people are waiting for me. I am not sorry that I was here to hear the profound statement made by my friend Senator SMITH. It was one of the more touching, more profound, and more insightful statements made during these 2 days of debate. I thank the Senator for that.

I yield 7 minutes to Senator FEINGOLD, and at the end of 7 minutes, to the Senator from New York, Mr. SCHUMER.

The PRESIDING OFFICER. The Senator from Wisconsin is recognized for 7 minutes.

Mr. FEINGOLD. Mr. President, as we debate this important legislation regarding stem cell research, we are reminded of the millions of patients and families across America who await treatment and cures for our most deadly and tragic diseases. As of Friday afternoon, over 92,000 Americans were on waiting lists for organ transplant. Seventeen of these people will die every day waiting for a vital organ. Scientists believe that over half of Americans over 85 may suffer from Alzheimer's disease, and at least half a million Americans currently have Parkinson's disease. As we all know, these kinds of serious diagnoses affect not only the patient, but that patient's family, friends, and community. Illness is a burden we all share.

Fortunately, over the past century, science has turned many of our worst medical fears into manageable chronic conditions, sometimes into mere nuisances, and, in some instances, has erased them entirely.

Today we stand at the threshold of a new era of scientific achievement. Stem cell research has vast potential for curing diseases and saving lives. We must recognize the enormous potential of this research for discovering new cures and therapies for disease such as diabetes, Parkinson's disease, and spinal cord injuries. Millions of patients and their families across the Nation

cannot afford to wait any longer for enactment of this urgently needed legislation.

I am a strong supporter and proud co-sponsor of the Stem Cell Research Enhancement Act. I have heard from many of my constituents in Wisconsin in support of this legislation, and I am glad that the Senate is addressing this today and responding to the requests of millions across the country. As the Senator from Oregon eloquently said a few minutes ago, for many people this is a deeply personal issue. When an individual or loved one suffers from an incurable disease or medical condition, it can be devastating. Everyone knows someone who has suffered from diabetes, Alzheimer's Parkinson's, or another debilitating disease, and we all know the physical and emotional pain inflicted as a result. It is vitally important that we move this legislation into law as expeditiously as possible and provide the resources that scientists need to develop treatments and cures for these diseases.

Researchers can unlock enormous potential in stem cell research if Congress will only give them the key. At the University of Wisconsin in 1998, Dr. James Thomson became the first scientist to break into this new frontier by isolating human embryonic stem cells. Since then, researchers at the university have been able to coax embryonic stem cells to develop into mature blood cells, which could provide treatments and cures for people with a range of currently incurable diseases. By further examining the potential of stem cells, scientists at the University of Wisconsin have also successfully developed neural cells, and they have even transferred these cells successfully into mice, where the cells continued to thrive. The possibilities here are clear: If technology such as this is able to expand, those with neurological disorders and bleak prognoses may now have hope.

Despite its incredible promise, this research has unfortunately been limited by the President since 2001. It is time for Congress to take the necessary action to provide more stem cell lines to scientists so that this research can go forward, without the Federal Government standing in the way.

The Stem Cell Research Enhancement Act would allow federally funded research to be conducted on stem cell lines derived from excess embryos created for in vitro fertilization, IVF, that are no longer needed and are donated by couples for research. It is estimated that there are more than 400,000 embryos that were created for fertility treatments and are likely to be destroyed.

There is much work that needs to be done to further understand the role that embryonic stem cells can play in providing answers to some of the most troubling medical diseases and conditions that affect so many Americans. The Stem Cell Research Enhancement Act will help our Nation's researchers

get closer to unlocking what this research holds by increasing the quantity and quality of stem cell lines available for research.

Embryonic stem cell research is very important to me and to Wisconsin. I am proud that the University of Wisconsin has played a prominent role in stem cell research in this country. I know that my constituents, and Americans across the country, are eagerly awaiting the benefits that this research will provide.

I hope my colleagues will join me in supporting this incredibly important science which would expand our research horizons and bring hope to so many people.

The PRESIDING OFFICER. The Senator from New York is recognized for 7 minutes.

Mr. SCHUMER. Mr. President, I rise today in support of H.R. 810, the Stem Cell Research Enhancement Act. Any one of us who has met people who have petitioned us for this act has to be moved. I have looked into the eyes of a mother who brought her beautiful 4-year-old daughter to my office and said, Senator, please allow this research to go forward because I am worried my daughter will be blind at the age of 20 without it.

I have met families whose patriarch is suffering from ALS, Lou Gehrig's disease. Again, they have pleaded with us, allow the research to go forward so maybe that person or his children, who might get the disease, will be able to be cured.

I have met with so many people my age whose parents are suffering from Alzheimer's or Parkinson's. Again, they plead with us, allow stem cell research to move forward so that maybe my parent or other parents such as mine could be cured.

Americans struggle with diseases every day. The confounding and amazing thing is, when scientists are on the edge of a breakthrough, the President stops them. Scientists are on the cusp of making incredible progress through stem cell research, a process that has the potential to cure diseases as widespread as diabetes and heart disease, but progress came to a grinding halt in 2001 when President Bush limited federally funded stem cell research to only 19 sources. With that Executive Order, President Bush shut the door on hope for millions of American families. With that one action, the President not only stopped current research in its tracks, he sent a message to future scientists that they should not pursue this line of work. As they see a limited funding stream for the work they do, fewer and fewer graduates are specializing in this kind of work. We need the best minds there.

Substantively, there is no doubt this is the right thing to do. But I put it in a broader context. There is a group of people in America of deep faith. I respect that faith. I have been in enough inner-city Black churches, working-class Catholic parishes, rural Meth-

odist houses of worship, and small Jewish synagogues, to understand that faith is a gift. The trouble with this group, which I call the theocrats, is they want that faith to dictate what our Government does. That, in a word, is un-American. It is exactly the reason the Founding Fathers put down their plows and took up muskets to fight.

If you do not like stem cell research, don't use it for yourself or your family, but don't tell millions of Americans who may not share your faith that they cannot use it, as well.

We have seen this repeatedly with Schiavo, or the required teaching of creationism in the schools, and now with stem cell research. Unfortunately, the President and too many in this Chamber and too many in the other Chamber have gone along and said that faith, wonderful and noble as it is, should determine what our Government does.

This administration is not pursuing what most Americans want, but following the dictates of the narrow few. Fortunately, we live in a democracy. In a democracy these issues are debated.

I assure everyone in this Chamber, this issue will be debated and debated strongly in November. Those who have stood in the way of scientific progress and research, those who have told that wonderful mother that her child cannot get the research she needs so she might not be blind, will be held accountable. This will be one of the largest issues that will face us in November, and it should. That is what democracy is all about. All of those, including the President, who have tried to hide their actions with false promises or bills that accomplish nothing, will be held accountable.

Thank God we have a democracy. Thank God that a narrow band of people, few in number, deep in conviction, cannot dictate what our Government does. The fact that H.R. 810 has come to the Senate, the fact that it will get a large majority of votes here as it did in the House, and the fact that the President and some of his allies in this Chamber and others have stood in the way of saving lives and of scientific progress because they believe their faith should dictate what the rest of us do—again, they will be held accountable for that.

I hope this measure passes. It would be a miracle, a miracle that could save lives if it got a veto-proof majority in this Senate. I doubt that will happen. But one can always hope, because the hopes, the futures, of millions of Americans, born and unborn, rest on us pursuing this research, doing what science tells us it needs to do to enhance and preserve life, and not be blocked by a small group that wishes to impose its views on everyone else.

I yield the floor.

RECESS

The PRESIDING OFFICER. Under the previous order, the Senate will now