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Senate

Statement of Senator Dianne Feinstein

“In Support of the Stem Cell Research Enhancement Act”

Mrs. FEINSTEIN. Mr. President, I rise to support the Stem Cell Research Enhancement Act. Passage of this legislation will finally allow scientists to fully pursue the promise of stem cell research. It will offer hope to millions of our people.

Mr. President, we have waited a long time for this day. Earlier, Senator Harkin spoke to the fact that it was in 1998 when he and Senator Specter introduced the first bill dealing with stem cell research. I recall that year I introduced one of the first bills dealing with ethical standards surrounding stem cell research. So it has been 8 years.

Now, finally, the House of Representatives overwhelmingly approved bipartisan legislation. In the intervening time, we have all heard from patients, survivors, and scientists who are desperate to pursue this research that one day could lead to treatments and cures for diabetes, cancer and, yes, even spinal cord injury. Forty Nobel laureates have weighed in with their support,

as did former First Lady Nancy Reagan.

While we were waiting, we lost Christopher and Dana Reeve, tireless advocates of stem cell research, and an inspiration for all of us. Millions more American families experienced firsthand the devastation wrought by catastrophic illnesses.

My colleagues and I, Senators Specter, Harkin, Kennedy, Hatch, and Smith, worked tirelessly to bring this to a vote. We pushed privately, we wrote letters, we gave speeches, and we held press conferences to highlight the plight of patients who are living with illnesses day in and day out.

Finally, after all of this pleading and delay, the Senate is acting.

I thank my colleagues for their longstanding leadership on this issue, and I am also very grateful to the majority leader, Senator Frist, for his support for stem cell research and his work with his caucus to reach this agreement that has made this debate possible. For all of the

controversy that it is generating, the Castle-DeGette Stem Cell Research Enhancement Act is remarkably simple. It reverses the failed policy announced by President Bush in 2001 when he restricted Federal funding to stem cell lines already in existence.

At the time, the President himself recognized the great promise of stem cell research. He sought to find middle ground, announcing a policy that provided Federal funding for more than 60 preexisting genetically diverse stem cell lines. This was morally acceptable, he said, because the life-or-death decision for these stem cell lines had already been made.

Unfortunately, the policy did not work out as promised. These available lines are all contaminated with mouse feeder cells and, therefore, are useless for human research purposes. They don't have the diverse genetic makeup that may be necessary to find cures to benefit all Americans. Researchers cannot use them to examine rare and deadly genetic diseases.

Castle-DeGette states that embryos to be discarded from in vitro fertilization clinics may be used in federally funded stem cell research no matter when they were created.

While opponents have suggested that this bill will lead us down a slippery slope, the parameters created by the bill are actually numerous and they are very strict:

- The embryos must be left over following fertility treatment.
- It must be clear that the embryos will be discarded.
- The people donating the embryos must provide written consent.
- These donors may not be compensated for their donation.

These restrictions mean that over 400,000 embryos could become available, all while ensuring that researchers meet the highest of ethical standards.

Let us be clear. We are talking about embryos that will be destroyed whether or not this bill becomes law. It is an indisputable fact that these embryos have no future.

We should not confuse the research permitted under this bill with the activities described under the two other bills currently before us. I am going to support these bills. Yet it is important to realize that their passage will do nothing to change the status quo.

The Fetus Farming Prohibition Act bans activities that occur in horror movies, not

in our research labs. We should not allow these farfetched and frightening techniques, which no respected scientist anywhere endorses, to distract from the plight of millions of Americans seeking cures from devastating diseases.

This debate is also not about the myriad research approaches envisioned in the Alternative Pluripotent Stem Cell Therapies Enhancement Act, as introduced by my colleagues, Senators Specter and Santorum. This research can already be funded with Federal dollars. Respected scientists are examining a variety of ways to create these multipurpose cells and, of course, this work should continue.

We simply don't know which research approaches will prove fruitful and which will fail. Alternative techniques may lead eventually to cures for serious afflictions, or they may not. Scientists, not Senators, should determine what research to pursue.

Supporting only the Specter-Santorum alternative is not an endorsement of stem cell research. It is an affirmation of a policy that is leaving American researchers far behind in one of the most important fields of scientific discovery, and I want to spend a moment on that.

Because of President Bush's restrictions, some of our best and brightest scientists are leaving the United States to work overseas in countries that have embraced the promise of comprehensive stem cell

research. This brain drain has hit my State particularly hard. Let me give you a few examples.

Roger Peterson, a renowned scientist, left the University of California Medical Center in San Francisco in 2001, citing the unfriendly research climate in the United States. He is now conducting human stem cell research at Cambridge University in the United Kingdom. He and his UK team are exploring the biology behind pluripotent, or multipurpose stem cells, and are looking for ways to use them for treatment. He would not have had Federal funding to do this work in the United States, so he left.

Dr. Judith Swain, from the University of California San Diego, will leave for Singapore in September, where she will work at Singapore's state-funded research institute called Biopolis. Her husband, Dr. Edward Holmes, also of the University of California at San Diego, is a ranking official in California's stem cell agency. He is also leaving for Singapore.

NIH researchers, Neal Copeland and Nancy Jenkins, turned down offers to join Stanford University's stem cell department. They, too, are moving to Singapore. Copeland has said that he selected Singapore because of its "unfettered support of human embryonic stem cell research."

These are but a few examples of the costs of this President's policy.

Researchers are attracted by the federal funding provided in at least 10 other nations -- Germany, Finland, France, Sweden, United Kingdom, South Korea, Singapore, Israel, China, and Australia. These investments total hundreds of millions of dollars that are already producing tangible progress.

Sweden funds, with federal funds, 400 researchers today. South Korea and China are each funding an additional 300. Australia has pledged \$90 million through 2011. This investment has already paid off, as Australian researchers have discovered a way to manipulate stem cells into lung cells. This technology could one day be used to treat cystic fibrosis.

Scientists from around the world have come to Singapore's Institute of Bioengineering and Nanotechnology. There, they are using stem cells to produce artificial kidneys. This could one day free people from the burden of kidney dialysis.

Researchers in other countries now author an increasing proportion of stem cell papers than those in the United States. Foreign researchers have derived almost three-quarters of the world's new stem cell lines, moving quickly ahead of our country, the United States.

Other nations have the money, the researchers, the facilities, and the new stem cell lines they need to move forward. They are learning more about stem cells every day

and laying the foundation for groundbreaking cures.

American scientists, on the other hand, cannot obtain Federal funding to do this work. These Federal funding restrictions have a real world impact on ongoing research.

American scientists are making great strides with work on mouse stem cells. They are showing what could be possible if there is Federal funding to extend this work into humans.

Researchers at Stanford University have recently turned cells derived from mouse embryos into one of the building blocks of blood vessels. This advance means they may eventually be able to grow entirely new blood vessels, offering great promise to patients suffering from heart disease. But without Federal funds, it is unlikely they can get the stem cell lines to be able to do the human research.

A research team at Johns Hopkins used cells from mouse embryos to regenerate nerves in paralyzed rats. After treatment, many of the rats regained enough strength to walk and bear weight on their previously paralyzed hind legs.

Mr. President, do you know what this means? This means it might -- just might -- be possible to do something science said could never be done, and that is to regenerate a severed spinal column, to regenerate the nerves which scientists always thought never again could be regenerated.

We would never have thought discoveries such as this were possible even a few years ago. So think of what it means for every paraplegic or quadriplegic to know that there is hope out there, that the first rat tests have shown it works? The next step is the human stem cell lines, to be able to carry out that research on humans, and that is exactly what we are talking about today.

Scientists now must work to translate these promising advances into cures for humans. Such a feat will almost certainly require access to viable lines of human stem cells, and unless we pass Castle-DeGette and unless the President signs Castle-DeGette, these lines will not be available in the United States to regenerate a severed spinal column, to regenerate blood vessels, or to do anything else.

Mike Armstrong, an old friend and chairman of the Johns Hopkins board of trustees, made this very point in a letter he wrote stating news of this advance. Here is what he said:

“Treatments not only for paralysis, but for ALS, for 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.”

It will depend on the availability of Federal funding, and that is what is at stake in this debate.

He goes on to say:

“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.”

Could never be used in clinical trials for humans.

I am particularly proud of the commitment demonstrated by California scientists and activists in the face of these restrictions. In 2004, California voters approved a proposition, proposition 71. That proposition created and funded the California Institute of Regenerative Medicine. It funded it with \$3 billion of taxpayers' dollars over 10 years, and it supported promising research conducted in my State. This work will be done with careful ethical oversight. It also bans human reproductive cloning, something we all agree is immoral and unethical.

This investment, hopefully, once it gets past the court tests, will make California a leader in this industry and in finding cures that will change the lives of suffering patients.

Other States are making similar investments. Connecticut, Illinois, New Jersey, Maryland, and others are considering after 5 years of delay because of the restriction on Federal funding -- they are taking steps to move this

important work forward on a State basis. But -- and here is the but -- a patchwork, State-by-State approach is no way to run science policy. States have many other responsibilities, such as funding education, building infrastructure, and so on, and we shouldn't expect them to solely carry the burden of funding one of the most promising fields of science.

There is a reason we invest so much in the National Institutes of Health and the biomedical research they conduct. The NIH can then set national standards and ensure that research is not being duplicated and to see that it is carried out under ethical standards. This is something everyone should want. You should want that Federal oversight of NIH over all research funding that is funded with Federal dollars.

It is also important to remember that this debate is about real people whose lives are impacted by illness every single day, day in, day out. I have heard from so many Californians who have been personally impacted by diseases that could one day be cured with stem cell research. I want to tell a few of those stories.

Leslie Bishop Franco from Oakland, CA, wrote to me to say she supports stem cell research because her mother was diagnosed with Alzheimer's at the age of 57. Her mother quickly became unable to work and then unable to care for herself. Leslie and her sisters and brothers cared not only for their own young children but

also for their mother. This is something many families know all too well.

Leslie writes that even if stem cell research does not “lead to a cure for Alzheimer's as it has the potential in other diseases like Parkinson's and diabetes, it will provide crucial insights into the disease and the usefulness of new drugs.”

Mark Siegel from Los Angeles has suffered from Parkinson's for 8 years. For over half the time he has been ill, the President's policies have slowed stem cell research. Mark was diagnosed when he was 36 years old. One of my relatives was just diagnosed, and he is 44 years old.

What happens is Parkinson's slowly erodes one's motor control. Mark Siegel's condition had forced him to change jobs, and he is afraid we are losing the race against time to find a cure and save his life.

Jennifer Heumann from Huntington Beach, CA, has been living with juvenile diabetes since she was 2 years old, and she is now 16. She says diabetes hasn't stopped her from playing varsity tennis or going to high school dances, but she knows her disease can cause serious complications. Without a cure, she has a 65-percent chance of dying from heart disease or stroke and a 60-percent chance of developing nervous system damage.

Jennifer writes: “These are the cold, hard facts, but I am not content to admit they are my destiny. I believe that a cure is

in sight, and that embryonic stem cell research may be the key to finding this cure. If this is the case, how can we justify passing up this opportunity? We all should ask that question.”

This impressive young woman is hard to argue with. She makes a very eloquent point, and until we know what kinds of research could lead to cures for these catastrophic diseases, we should support scientists and we should push ahead every possible lead.

These patients and family members represent only a few of the tens of thousands of Californians I have heard from who support stem cell research. As a matter of fact, by the latest poll, 72 percent of Americans support stem cell research.

We don't want to spread false hope. There is still much we don't understand about stem cells. Some of the cures may never come to fruition, but unless we allow our scientists to continue their work, we will never, ever know.

How can any of us tell a patient suffering from juvenile diabetes, a cancer victim, or a young man with heart disease, that the Senate decided not to allow researchers to pursue all the scientific leads that may one day offer them a cure? How can we say that? How can we say we know better? How can we say because of a small proportion of people's beliefs we are going to stop all Federal research in the United States of America?

Last week, Karl Rove declared that the President is emphatic about vetoing this legislation. I hope not. The President himself acknowledged the great promise of stem cells back in 2001, and with the health of millions of Americans at stake, it is my hope that if and when this bill tomorrow afternoon passes the Senate and if and when it goes to the President of the United States, he will reconsider his veto threat. Too many lives depend upon the advances which may well be possible.

Either you are for stem cell research or you are not. It is that simple.

True support for stem cells means lifting the restrictions from hampering some of the most promising research, and only Castle-DeGette, only H. R. 810 will do that. No matter what the President decides on other legislation we are considering today, rejecting H. R. 810 is a rejection of science. It is a rejection of the hopes of millions of patients. This vote and the President's reaction to it should not be about assuaging a small but vocal minority with views far from the mainstream of 72 percent of the American people. Patients and their families deserve more than the President's first veto. How would you like it if you were President of the United States and the first veto of your political career were a veto of the one thing that offers hope for millions of Americans suffering from catastrophic disease? The one thing out there.

I want to assure these patients that my colleagues and I will not stop fighting for this. We will continue to push in every way possible. Patients suffering from these catastrophic illnesses have already waited too long. American scientists have already fallen behind their international counterparts, and the time has come to finally pass Castle-DeGette on a sweeping bipartisan basis, just as the House of Representatives did 13 months ago.

Thank you very much. I yield the floor.