
Committee Meeting

of

ASSEMBLY HEALTH AND HUMAN SERVICES COMMITTEE

Assembly Bill No. 2840

(Permits human stem cell research in New Jersey)

LOCATION: Committee Room 16
State House Annex
Trenton, New Jersey

DATE: February 3, 2003
10:30 a.m.

MEMBERS OF COMMITTEE PRESENT:

Assemblywoman Loretta Weinberg, Chairwoman
Assemblyman Herb C. Conaway, Vice-Chairman
Assemblyman Jerry Green
Assemblyman Reed Gusciora
Assemblyman Gordon M. Johnson
Assemblywoman Joan M. Quigley
Assemblyman Samuel D. Thompson
Assemblywoman Charlotte Vandervalk



ALSO PRESENT:

David Price
*Office of Legislative Services
Committee Aide*

Wali Abdul-Salaam
*Assembly Majority
Committee Aide*

Tasha M. Kersey
*Assembly Republican
Committee Aide*

Meeting Recorded and Transcribed by
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ASSEMBLYWOMAN LORETTA WEINBERG (Chairwoman):

Good morning, everyone. The Health and Human Services Committee is now in session.

Would you call the roll?

Would somebody mind closing that door back there, please?

Thank you.

MR. PRICE (Committee Aide): Roll call for attendance.

Assemblywoman Vandervalk.

ASSEMBLYWOMAN VANDERVALK: Here.

MR. PRICE: Assemblyman Thompson.

ASSEMBLYMAN THOMPSON: Here.

ASSEMBLYMAN JOHNSON: Here.

ASSEMBLYWOMAN WEINBERG: Thompson, that was.

ASSEMBLYMAN JOHNSON: Oh, Thompson? Sorry. (laughter)

MR. PRICE: Assemblywoman Quigley.

ASSEMBLYWOMAN QUIGLEY: Here.

MR. PRICE: Assemblyman Green.

ASSEMBLYMAN GREEN: Here.

MR. PRICE: Assemblyman Johnson.

ASSEMBLYMAN JOHNSON: Here.

MR. PRICE: And Assemblywoman Weinberg.

ASSEMBLYWOMAN WEINBERG: Here.

(At which time, the Committee heard testimony on Assembly Bill Nos. 3157 and 587)

Okay, the next bill, that I assume most of this audience is waiting for, is the Assembly Bill 2840, Cohen, McKeon, Hackett, Quigley; and Senate Bill 1909, which is a Richard Codey, Barbara Buono bill that has passed the Senate and come over to us. And we're waiting for the Assembly prime sponsor, who is making his way through the audience, and that is Assemblyman Neil Cohen.

Assemblyman.

A S S E M B L Y M A N N E I L M. C O H E N: Good morning, Madam Chair and members of the Committee.

The bill that you have before you, perhaps, may be the most significant piece of legislation that the Legislature may do, not just necessarily in a two-year term, but it may be the most significant that we may do in this century.

The stem cell research is an exciting concept, something that has been evolving for many years, although not necessarily in the newspapers. What we have found in our research and our discussions with the biotech field, the medical field, the health professional field is that stem cells may well have the ability and may well be, in a shorter period of time than we think, be able to cure nerve damage, Parkinson's disease, cornea damage, diabetes, multiple sclerosis, and any other number of diseases that, number one, become a tragedy on the individual, a tragedy for the family. And all of us have had members of our family, to one extent or another, who have suffered from some of these diseases. Some are life threatening, some life disabling, and some which have caused deaths.

As I indicated at the press conference that we attended at Children's Specialized Hospital in Mountainside, in my county, is that-- I indicated that someday I would like to remember the press conference when I'm 90 years old, God willing. Stem cell research transplants may well permit me to do that, as well as remember today.

A number of years ago, we did the -- took me five years. I had some help, both on the Democratic and Republican side, and we did the bone marrow cancer treatment law. And in that law, we included a provision that allowed for the insurance companies to cover stem cells that were already in the body. Because I was told in 1990-1991 that that type of transplantation would be helpful in the future, we decided to just add to the law to have that provided. Sure enough, bone marrow transplantation, brain stem cells, have been part of this process of bone marrow cancer treatment.

Low and behold, three years ago I'm on the Internet looking at the law that I did, with help from Assemblywoman Vandervalk and Doc Colburn, and a number of other people, and I find out that the bone marrow treatment and stem cell treatment is now being used for sickle-cell as a primary treatment mechanism.

So science evolves. Sometimes it seems we haven't moved from the dark ages, but in this area -- this is so critical to health care in the future, because, ultimately, even though it may have some kind of controversy associated with it -- not from a medical perspective, but from other philosophical perspectives-- Ultimately, if stem cell research is what we think it is, and what scientists think it may be, the cost of health care in 15, 20, 25 years is going to dramatically drop.

In all of our lives, we see how science has remarkably gone through an evolution. I guess it's the first time -- similar when Edison invented the light bulb -- incandescent light -- what people may have thought about it back then and what it has evolved through. I mean, can you imagine that instead of massive doses of medication, constant nursing care, and what families go through with patients who may have MS or Parkinson's or Alzheimer's -- perhaps in 10, 15 years, maybe sooner -- being able to inject the stem cells into the area of damage and having that area of damage healed. People at 90 years old can now -- will then be able to speak to their grandchildren and understand what they're saying to them. I mean, the potential is enormous. It's terribly exciting. And I would hope that the Committee would support this effort.

Madam Chair, I want to thank you for having the courage to post this bill.

ASSEMBLYWOMAN WEINBERG: Will you be able to stay with us, as some of this testimony--

ASSEMBLYMAN COHEN: Certainly, Madam Chair.

ASSEMBLYWOMAN WEINBERG: Okay.

I think this is an important bill, and I know that it evokes strong passion on both sides of this issue, and we're going to hear some of it this morning. So we appreciate your attendance, as long as you can, to answer any questions that might arise.

Assemblyman Green.

ASSEMBLYMAN GREEN: Yes, first of all, I'd like to congratulate the Assemblyman. I think this is moving in the right direction. My question

would probably be a question on the minds of a lot of individuals. Probably we can ask those questions before they come to the mike.

You shared with us the upside. Like anything else in life, when you move in the right direction and you do something new, there's always a downside. I would like for you just to share with me what concerns have been brought to your attention, in terms of the negative aspect of what's being said publicly.

I support it. I think that it's great. But I think the negative that I received in my office are the kinds of questions that -- it's a lack of education and lack of knowledge, in terms of what this particular issue is going to mean to society. So if you could just share some of those things with me, I'd appreciate it.

ASSEMBLYMAN COHEN: I think that there has been-- To some extent, some of the objection has been within the theological philosophies of some groups who have-- It's always difficult to debate religion, and that's probably why the drafters of our constitution said there should be a separation of church and state.

The information and the philosophies, I can't debate. I mean, I can debate it, but--

ASSEMBLYWOMAN WEINBERG: Please don't.

ASSEMBLYMAN COHEN: I would rather keep it in an area where this belongs, in terms of science and technology and curing people. I mean, you can have your philosophical diverging opinions, but everything points to the fact that stem cell research, and what can be produced, can literally cure people. And I would hate to have anyone -- it's their choice,

obviously -- stand in the front and cut off someone's ability -- or someone's future ability -- to make their life better, free from pain, better enjoyment of their life. And that's a great goal that this bill has.

I think most of the problems have been more of a philosophical, as opposed to any other, type of issue. The bill provides for a ban on cloning, which is in the bill on the Senate side and which is going to, hopefully, remain in this bill, although I'm sure there will be more debate on that at some time in the future, 15, 20, 30 years from now. By then, my district will have changed, and hopefully I will be somewhere else, still alive. I think the medical downside has been extremely limited. It has been more of a philosophical, theological debate.

ASSEMBLYWOMAN WEINBERG: Assemblywoman Quigley.

ASSEMBLYWOMAN QUIGLEY: Thank you, Madam Chair.

When you were saying that this might be the greatest piece of legislation that we would undertake in this century, I flashed back to some medical history that I had been reading recently. And it was a little more than 100 years ago when the churches and others banned autopsies. And we had to resort to grave robbing in order to find out what caused peoples' deaths and to do some organ removal to find out what could prevent problems with surgery. Do you relate that issue in the dark ages to what we might be facing today?

ASSEMBLYMAN COHEN: That's a good analogy. And I think you can-- (laughter)

I was at the press conference at the Childrens' Specialized Hospital, and it was like what would have happened if you had been at the

press conference for the Salk vaccine. It's that kind of moment in medical and scientific history that we're at. That's exciting, and that something, perhaps so simple as a cell, can have such a dramatic impact on someone's life to give them life, to protect their life, to protect the quality of their life, to let others enjoy that person's life in the future, rather than having the financial burden, the emotional burden, the pain that is visited on the individual and families as someone goes through a devastating and tragic disease.

I don't know anyone who could honestly, from a scientific standpoint, oppose this legislation or oppose the other -- this type of process going forward. That, by the way, is a concurrence. (referring to crying child)

ASSEMBLYWOMAN WEINBERG: Okay, we do have a lot of testimony, so we will be hearing more, hopefully, of the scientific side of this.

And I would like to call on Dr. Peter Donovan.

ASSEMBLYMAN COHEN: Thank you, Madam Chair.

ASSEMBLYWOMAN WEINBERG: Thank you, Assemblyman Cohen.

ASSEMBLYWOMAN WEINBERG: Dr. Donovan, whom I have been led to understand, is a pioneer in this field.

And, Neil, if you're staying, feel free to sit there or you can come up here if you'd like.

Dr. Donovan.

PETER J. DONOVAN, Ph.D.: Madam Chairwoman, members of the Committee, thank you for letting me come and talk to you this morning on this issue.

I support this bill supporting stem cell research for a number of scientific reasons. I'd like to briefly tell you about those, because I think you know a lot about the cells, and you hear about those from the other speakers.

I'm a resident of this state, and I'm an Associate Professor at Thomas Jefferson University, in Philadelphia. And about 10 or 11 years ago, my laboratory developed techniques for making stem cells from embryos. And subsequently, with John Gearheart's lab at Johns Hopkins, we developed some of those first stem cells from human embryos.

Those cells really are very remarkable cells and can produce any cell type in the human body. And as such, they represent an incredible resource for treating human disease. As you heard, they can be used to treat a variety of diseases: Parkinson's, stroke, Alzheimer's, diabetes, heart disease, and so on. And so the benefits of working on these cells, developing those cells is in terms of being able to treat human disease and treat it in a cost-effective way.

I'd like to, perhaps, deal with some important questions that I think are worth bringing to your attention. Why do we need embryonic stem cells if we already know about adult stem cells and adult stems are being developed? In fact, the research on adult stem cells and researchers that work on it are deeply divided about the abilities of those cells to differentiate into a lot of cell types and their usefulness for transplantation.

Notably, Dr. Irving Weissman, of Stanford University, who has spent much of his career developing stem cells from the blood system, has been a strong proponent of making embryonic stem cell lines. And I think it's

telling that someone of his stature has been so supportive of work on embryonic stem cells. I think that's a very significant fact.

Surely, some treatments for human disease will come from using adult stem cells, as they already do. But some treatments will only come from using embryonic stem cells, and so that's why I, and other scientists, believe we should use those cells.

But I think we must be careful about what we promise to patients and their families. We're not promising that if this bill is passed, treatments will come over night. In fact, a lot of work needs to be done in order for those cells to be taken to the clinic. But the sooner we start, the sooner the doctor's will have new stem cell based therapies available to alleviate the suffering.

Scientists favor legislation, not because treatments will come tomorrow, but rather to enable the work necessary for developing treatments to begin in earnest. And I think that one of the things that's important here is that New Jersey, with its strength in universities and in biotech and pharmaceutical industries, could play an important role in that. And the passage of this bill would send an important signal that New Jersey is ready to do some excellent work in that area.

If we already have embryonic stem cell lines, why do we need more? There are two reasons. One is that there are very few cell lines available. For scientists to really understand what they can do, we need to develop more of them. The second reason is that we're all very different, genetically. And so if you want to put cells back into individuals, you need cells that genetically match those individuals. And I'm sure that many in this room are familiar with treatments for leukemia and lymphoma, where patients

have to search for matched bone marrow donors. And sometimes they just don't find them, and sometimes they do find them. But those donated stem cells then attack the patient and kill the patient, the dreadful disease called graft-versus-host disease.

One of the techniques that can be used to develop stem cells that are identical to the patient is to use the technique somatic cell nuclear transfer, or therapeutic cloning, to produce stem cells that are identical to that individual. So, again, there's a very practical reason for wanting to do that.

Obviously, in the process of making those balls of cells, you create an embryo. And an important question is, is that ball of cells a living human being. Neither the egg that is for that process, or the somatic cell that is derived from the patient, is capable of making a human being. Together, they can, at a very low frequency, be developed into an embryo, but in most cases they won't, even in normal fertile women.

ASSEMBLYWOMAN WEINBERG: Doctor, would you just go over that last sentence again so that we all understand that, because I know that is going to be part of the discussion this morning?

DR. DONOVAN: So in the process of somatic cell nuclear transfer, also sometimes called therapeutic cloning, you isolate an egg from the ovary of the woman, and you remove its genetic information. And you then take a cell from the patient, and remove the genetic information from that contained in the nucleus, and put it into the egg cytoplasm. And that cell then would develop and, essentially, replicate the DNA that came from the patient. That's a way, essentially, of replicating the genetic material from the patient and making stem cells from that patient. The egg itself isn't capable of making

a human being unless it's fertilized. It has half of the genetic information that you and I have. The somatic cell from the patient can't make a human being either. So in the laboratory, when you put them together, you can, in some very low frequency, get them to develop to term. And that's a frequency, in some studies, less than 1 percent. So those balls of cells, in most cases, will not make a living human being.

And I think one of the important questions is, should we consider those little balls of cells equivalent to a human being that's suffering from a stroke or Alzheimer's and heart disease, or is that just a little ball of cells that can grow in a laboratory?

So I think that's an answer that society has to make. Science can't make that answer. That's something for all of us in society to express our opinion about and debate and make a decision about. But currently, many human embryos in IVF clinics will lie frozen, indefinitely, and never be used. And so I think one of the important questions is, should we go to extraordinary lengths to protect those little balls of cells, or could they be used to treat many patients suffering from, really, some dreadful diseases?

So in conclusion, I'd like to say that the science suggests that there is a good reason to support work on making and using embryonic stem cells, that that technology will be used to treat a wide variety of human diseases, that adult stem cells can't support that type of work. We think that you should go on with that work, but I think there are good reasons to support work on embryonic stem cells, as well.

One of the things that occurs to me, in listening to the testimony on other bills before, is that if this technology is developed elsewhere, then the

residents of this state will just have to pay for it, and we could well see more legislation like we've just seen to cut health care costs if the residents of this state are having to buy that type of technology from outside of the state or outside the country.

So I'd like to say that I support this bill and I encourage you to pass it.

Thank you very much.

ASSEMBLYWOMAN WEINBERG: Thank you very much, doctor.

Just a point. Assemblyman Reed Gusciora has joined us to replace Assemblyman Edwards. Thank you and welcome.

Assemblyman Thompson. And remember, we've got lots of speakers, so if you have a question, question and not -- so that we can get through this.

Thank you.

ASSEMBLYMAN THOMPSON: Doctor, you indicated that more stem cell labs are necessary, because you need to have stem cells that are genetically compatible with the individual that is to receive it. Since we are talking primarily about ova that come about through infertility treatments, and the probability that the ova that's going to be utilized is directly related to the individual who's going to be the recipient, ultimately, the stem cells is highly -- pretty small.

You indicate that in the process, you remove the genetic info from the ova, and then you utilize genetic info from the individual that is to be, ultimately, the recipient.

DR. DONOVAN: Correct.

ASSEMBLYMAN THOMPSON: Thus, this is the only genetic info that is, ultimately, in the stem cells, you're saying?

DR. DONOVAN: That's correct.

ASSEMBLYMAN THOMPSON: What is the-- At this point, it doesn't make any difference where the ova came from that's going to produce the stem cells you're suggesting.

DR. DONOVAN: Except that it should be a human ovum.

ASSEMBLYMAN THOMPSON: Well, obviously.

DR. DONOVAN: I say that, because people have used -- done a lot of studies on nonhuman primates and other mammals. But in this case, it's important that it's a human ovum.

ASSEMBLYMAN THOMPSON: But if all genetic information is removed from the ova, then what difference does it make what stem cell line you're utilizing here? You had indicated that some would not be compatible with the individual who's going to be the recipient. But, again, as I say, if you remove all genetic information, the only information the stem cells have comes from the ultimate recipient, then why are some incompatible?

DR. DONOVAN: Because the existing stem cell lines that were made were made by taking embryos from people who donated them from IVF clinics. So, currently, there are 64 human embryonic stem cell lines on the President's approved list for research funding from the National Institutes of Health. So that represents a, really, very small sample size when you compare it to the human population.

ASSEMBLYMAN THOMPSON: I realize that, but that still doesn't explain why, if you remove all the genetic information, one stem cell line is not compatible with anybody else, why you have to have different lines to be compatible.

DR. DONOVAN: Sir, the existing stem cell lines were made not by therapeutic cloning, but by taking a pre-implantation embryo, a little blastocyst, putting it into the culture, and letting those cells grow. Those cells grew from whatever donor they came from. The reason why, if you take a somatic nucleus and put it into an ovum, as you said -- why you need to make lots of those is that because we're all so very different, we're all genetically very, very different. So I could not take a cell from you and make a stem cell line from it and transplant it into myself or into many other people. Probably only your very close relatives would be helped by those cells. And that's typically true now of donors for adult stem cells.

ASSEMBLYMAN THOMPSON: No, no. Again, getting back-- The ova is the starting point.

DR. DONOVAN: Yes.

ASSEMBLYMAN THOMPSON: So would you need an ova from somebody that's closely related to me or so in other words?

DR. DONOVAN: No, because the genetic material is removed from that ovum.

ASSEMBLYMAN THOMPSON: Right. I remain a little confused on this issue.

Thank you.

DR. DONOVAN: I'm sorry. I'm, maybe, not answering your question clearly enough, but I'm trying.

ASSEMBLYWOMAN WEINBERG: Well, this is hardly my area of expertise, but are you saying that the ova, or the egg -- you must have that as a receptacle?

DR. DONOVAN: Yes.

ASSEMBLYWOMAN WEINBERG: You can't just use some other material.

DR. DONOVAN: But you can get that ovum, essentially, from any woman, because the genetic material is removed from it.

ASSEMBLYWOMAN WEINBERG: But it has to be a combination of those two.

DR. DONOVAN: Yes.

ASSEMBLYWOMAN WEINBERG: Gee, I never thought I'd be able to clear up some scientific issue for you, Assemblyman Thompson.

Assemblywoman.

ASSEMBLYWOMAN VANDERVALK: I have to share the cloud that Assemblyman Thompson has focused on. If you're removing all the genetic material from the ovum, and you're going to the individual to add genetic material, why do you need more than 64 stem cell lines?

DR. DONOVAN: Because that stem cell line that's produced from that individual will be compatible with that individual but not with many other people. I could not take--

I'm sorry, I'm not-- Maybe one of the other scientists can explain it a different way.

But you could not take tissue from yourself and give it to someone else, very readily, unless they were a very, very close relative. And even then, maybe not.

ASSEMBLYWOMAN WEINBERG: Assemblywoman Quigley, go ahead.

ASSEMBLYWOMAN QUIGLEY: Maybe if I ask you, Doctor, the question in a different way. I think I may know where they're coming from. I may not. But they were asking why are these embryonic stem cells not sufficient. But you are saying these have already been combined with other DNA. Is that what you're saying? And what we need is those that are totally pure.

DR. DONOVAN: That's, in essence, correct. Yes.

ASSEMBLYMAN THOMPSON: Well, I guess as one follow-up, then-- In essence, the stem cells that are out there and available -- the lines and so on -- really cannot be used to determine if you can successfully utilize these to cure all these maladies that we're speaking of, unless they are implanted in people closely related to people it came from. Is that correct?

DR. DONOVAN: That's correct. They will be a good start. They will allow us to do tests in laboratory animals. They'll allow us to test certain theories about how the cells can be used. But they're closest match is to -- from the individuals they came from or very close relatives.

ASSEMBLYMAN THOMPSON: That's the only individuals, under your line here, that they could be utilized to cure Alzheimer's or to cure any of the other things that we've spoke of, only on those individuals.

DR. DONOVAN: And that's why there's a need to make -- one of the reasons why there's a need to make more cell lines, the compatibility.

ASSEMBLYMAN THOMPSON: But even them, you can only use, again, in closely related individuals.

DR. DONOVAN: Correct.

ASSEMBLYWOMAN WEINBERG: Assemblyman Conaway.

ASSEMBLYMAN CONAWAY: When the genetic material is removed from the ovum, does it become something different? I mean, is it still an ovum, then, with the genetic material removed, is one question?

Two, you mentioned that there's potential, when you transplant or implant a new genetic material from a somatic cell, for instance, by itself or with the addition of some other growth from others -- whatever you do in the laboratory-- Do those cells-- After that transplantation, implementation occurs, do those cells begin to divide? I mean, can they be called-- If you remove the genetic material in the first place from the ovum, and you put some other genetic material in there, does that cell begin to divide in advance?

DR. DONOVAN: Yes.

ASSEMBLYMAN CONAWAY: In all cases.

DR. DONOVAN: Not in all cases, but in a small percentage of cases, it will begin to divide. And that's the point of it, too, to be able to replicate that genetic material that came from that individual.

ASSEMBLYMAN CONAWAY: And is it fair to say, or not, that that is an embryo that's started -- or something different than an embryo -- given the fact that you've taken out its nuclear material from the first patient --

from the ovum and now put in new material? Is calling it an embryo, I guess, appropriate even, given what was done prior to that?

DR. DONOVAN: Yes, it's appropriate to call it an embryo. It looks very much like an embryo. I think one of the differences is that unless it's transplanted back into a womb, it won't develop into an embryo. It will just die in culture unless it's cultured to make stem cells. And in a very small percentage of cases could that ball of cells be developed into an individual. It's less than 1 percent, based on studies in nonhuman primates and in mice.

ASSEMBLYMAN CONAWAY: And lastly, the-- After this embryonic growth -- you get this blastocyst -- you then have the ability to harvest or take stem cells from this ball of cells that's created. That's what you're looking to do.

DR. DONOVAN: Correct.

ASSEMBLYMAN CONAWAY: And apparently there's enough genetic material associated with those very early cells to make it very important to (indiscernible) -- that there's enough cytocompatibility proteins there to make it important to get people who are related together in order to, I guess, achieve the full potential of the therapeutics that may come from this process.

DR. DONOVAN: That's correct. And being able to do that means that if anyone is sick -- if we can use that technique, we can find a cell that's absolutely compatible with them.

ASSEMBLYMAN CONAWAY: Thank you.

ASSEMBLYWOMAN WEINBERG: Assemblyman Gusciora.

ASSEMBLYMAN GUSCIORA: Thank you, Madam Chair.

One of the reasons -- and I'm a bit confused, as well-- One of the reasons I became a lawyer is because I can't stand the sight of blood. Specifically, coming from layman's position, is it akin to taking, almost like, a chicken's egg and taking the yoke out?

DR. DONOVAN: Correct.

ASSEMBLYMAN GUSCIORA: So you're left with the white, fluffy stuff.

DR. DONOVAN: Correct.

ASSEMBLYMAN GUSCIORA: And then you're adding cells into it. And then that's what produces the whole stem line.

DR. DONOVAN: Correct.

ASSEMBLYMAN GUSCIORA: Okay.

ASSEMBLYWOMAN WEINBERG: Any other questions? (no response)

Thank you very much, Doctor. You've, hopefully, cleared up the scientific questions here. But we do have others to testify. So thank you.

Dr. Ira Black, from the Robert Wood Johnson Medical School.

And then I'm going to call Bill Bolan, Executive Director of the New Jersey Catholic Conference.

IRA BLACK, M.D.: Are you able to hear me? (affirmative response)

Thank you, Madam Chairwoman, for the opportunity to address this very important bill.

(PowerPoint presentation begins)

Now, unfortunately, I come with a little technological paraphernalia here. I thought that it might be useful to illustrate, very briefly,

certain aspects of our work, to illustrate the very importance of continuing and fostering human embryonic stem cell research.

Even if we begin with the very definition of stem cells, that is that they are self-renewing, they can reproduce themselves, but also are able to produce differentiated progenate, or daughter cells, it's important that we understand those capabilities, not only in adult stem cells, with which we work, but in embryonic stem cells, as well, since there's a highly likely probability that different stem cells may be most appropriate for very different diseases.

And as you know, there's an entire stem cell family -- from at the top -- if you want to regard it as such -- the fertilized egg, or zygote, down to recently discovered stem cells that are resident in adult organs, in many of the organs that we carry around.

And one question that was addressed in part by the previous speaker is whether or not these are equivalent. And the answer right now is that we simply don't know. We're in a very exciting and young field, and, particularly, an emancipating field, but there are many more questions than we have answers, so that we, for example, worked with bone marrow stem cells which, in the last five years, had been found to give rise to a variety of connective tissue: fat cells, muscle, tendon, cartilage, and bone. And through a series of manipulations -- which I'm afraid you can't really see very well here -- we were able to convert these cells into nerve cells, or neurons, hopefully for use in the future in Parkinson's, Alzheimer's, Lou Gehrig's disease, and spinal cord injury.

One question would be, however, are these nerve cells equivalent to those derived from embryos in the use of transplantation? A question for

which we really do not have an answer now. And that would require additional extensive experimentation, which would be completely dependent on accessibility of embryonic stem cell lines.

This just illustrates the nerve cells derived from bone marrow cells, in this instance, of rat. Even in the dish, they form networks that begin to communicate, and they activate genes that are important for function. How would we compare adult and embryonic stem cells in this regard? And this bill would allow us to investigate that in detail. This simply shows that human stem cells from the adult, from bone marrow, actually undergoes the same transformation into neurons as the rat adult cells. Once again, it's extremely important to compare the adult cells with the embryonic cells.

We can then take these adult cells, place them in the brain. This is the brain of a living rat, and we placed them in that area that's critical for memory. And it's one of the areas that's devastated in Alzheimer's disease. Once again, we don't know how embryonic cells compare to the adult cells. In the absence of that information, it would be hard to know what is the optimal treatment for a patient with deranged spacial memory that occurs all too frequently in Alzheimer's disease.

These are adult stem cells placed into the injured spinal cord of a rat. Similarly, we'd like to use the best stem cells for use in spinal cord injury with paraplegia, with quadriplegia, but once again, it is not clear what the optimal cells are in this instance. We can also transplant these adult stem cells into the brains of embryos in an effort to begin treating mental retardation and perinatal disfunction.

What we see here in the lower panel is the brain in red, if you will. That's the recipient. And the donor stem cells are pictured in that yellow-green color. So we know that using adult stem cells -- we can enter the brain. The cells migrate to different areas. They appear to integrate into the brain circuits. Can we approach autism, schizophrenia, and, perhaps, related disorders, with this particular methodology? We don't know yet. But we do know that we will have to use as many sources as possible to even contemplate approaching these disorders.

So that while we might cite some potential advantages of adult cells, these are really more questions than statements. So that we might be able, using adult cells, to use the patient's own cells and thereby eliminate immuno rejection-- How would that compare to a properly prepared embryonic cell? We don't know yet.

There's safe tissue access with bone marrow aspirates. It's a bedside procedure. Nevertheless, there also, under ideal circumstances, would be a vast reservoir for embryonic stem cells, as well. Both embryonic and adult cells can grow well in culture. What are the best approaches? We can only do this with comparative studies.

And finally, we've, at least, alluded to the ethical concerns that, I know, you'll be discussing. But until we have baseline comparative studies, it will be very difficult to consider these in that.

In summary, I would make a plea in favor of this bill. I think medicine faces an opportunity that's simply unprecedented at this point. To abort that, in any way, I think, could potentially be tragic.

Thank you very much.

ASSEMBLYWOMAN WEINBERG: Thank you, Dr. Black.

Any questions? (no response)

Thank you very much.

Bill Bolan, Executive Director of the New Jersey Catholic Conference.

WILLIAM F. BOLAN JR.: Good morning, members of the Committee.

I filed an extensive written statement with this Committee, and you will find the statement from the Catholic Bishops in your State House mailboxes today. So thus, I'm going to limit my remarks to two points in light of the great number of people you have here.

This bill says that cloning of a human being is a crime, but if you take a look at the definition of cloning, it says it's not a crime -- this is actually in the bill -- until the cell has been cultivated through the egg, embryo, fetal, and newborn, and I repeat newborn, stages. I would submit that this crime really has no teeth. To escape the crime after the child is born, one would have to kill the newborn which, of course, would then be murder. If the intention is to terminate the life of the fetus before the newborn stage, then I would submit that this bill is designed to create a market in fetal body parts.

The second point I want to emphasize is: those embryos that are currently resting in in vitro fertilization clinics. It's said by some that these have been abandoned or would be discarded by their parents anyway. I would submit that the implications of this philosophy are extremely troubling. I would ask, should we kill terminally ill patients for their organs since they will

die soon anyway? Should we take vital organs from death row prisoners since they will die soon anyway?

In conclusion, we do not want a world where human life is a commodity, manufactured and destroyed at will to serve others. Embryonic stem cells and cloning destroy human life. Adult stem cells do not, and thus, their use is ethical and moral, and research that everyone can live with.

Thank you.

ASSEMBLYWOMAN WEINBERG: Are there any questions for Mr. Bolan? (no response)

If I may, I do have a question. Does the Catholic Church, or do you personally, have any view on what should be done with the fertilized embryos that are not going to be used in in vitro fertilization?

MR. BOLAN: They should not be destroyed.

ASSEMBLYWOMAN WEINBERG: Well, not destroying them means doing what with them, keeping them in the laboratory?

MR. BOLAN: Well, we understand that there has been adoption of some of these.

ASSEMBLYWOMAN WEINBERG: Well, they could be donated if the parents so chose to donate them. But if they chose not to, what would be the next step? If we do not discard them, if we do not use them for research, then what is left?

MR. BOLAN: I don't have an answer to that question personally.

ASSEMBLYWOMAN WEINBERG: Thank you.

Any other questions? (no response)

Thank you very much, Mr. Bolan.

MR. BOLAN: Thank you.

ASSEMBLYWOMAN WEINBERG: David Beck, from the Coriell Institute.

DAVID P. BECK, Ph.D.: Chairwoman Weinberg, members of the Committee, thank you for the opportunity to testify before you today in enthusiastic support of A-2840, a well-conceived bill to assure New Jersey's position as a leader in cutting-edge biomedical research.

ASSEMBLYWOMAN WEINBERG: Is your red light on?
(referring to PA microphone)

DR. BECK: Now it's red.

On the grounds of free intellectual inquiry, and especially on the grounds of the enormous potential of stem cells for therapeutic advances in diseases that have long proven refractory to other approaches, I urge the Legislature to pass, and the Governor to sign, this proposed legislation.

I will not presume to give the Committee a scientific lecture about stem cells, as much as I enjoy talking about the subject, but I would like to make a few introductory points. These ideas are critical to my enthusiasm for this stem cell research bill.

There are two kinds of stem cells. There are embryonic stem cells, the primordial stem cells that can be harvested from a human embryo, and the second kind is the adult stem cells, the kind without which each of us, young and old, would not survive very long -- without a healthy supply of these cells.

Adult cells are the stem cells in our bone marrow that replenish many of the millions of cells that are lost from our blood supply every day, the cells lining our intestinal track that are continually being lost, and, indeed, the

kinds of cells that reside in our fatty tissue to build new fat cells as our diets demand.

Both embryonic and adult stem cells have certain properties in common.

ASSEMBLYWOMAN QUIGLEY: Can we get rid of those kind?
(laughter)

DR. BECK: I'm sorry?

ASSEMBLYWOMAN QUIGLEY: Could we get rid of those kind?

DR. BECK: We'll work on that.

ASSEMBLYWOMAN QUIGLEY: All right.

DR. BECK: There are specialized -- these adult stem cells are specialized to various -- adult and embryonic stem cells are specialized -- are unspecialized to various degrees, and they can give rise to the specialized tissues -- cells in our tissues such as muscles, nerves, and blood. Generally, adult stem cells give rise to the specialized tissue in which they reside, but I'll come back to this later.

Stem cells are capable of dividing and renewing themselves for long periods, but there may be some difference in how these stem cells function in the laboratory. In the body, embryonic stem cells rapidly become the tissues of the developing fetus. In the petri dish that is in the laboratory setting, embryonic stem cells may be cultured and, therefore, useful for a very long period of time, perhaps years. In the body, adult stem cells may renew themselves for a hundred years or more, fulfilling their function to the end of a person's life. In a petri dish, adult stem cells are very hard to grow and seem to want to change into the cells of their native tissue. But we're learning how

to culture these adult stem cells for longer periods and to regulate their developmental program.

The excitement of stem cell research comes from what we are learning and what we will learn about normal human development, about the origin of our tissues, how changes in the development process leads to illness. The excitement also comes from learning how to use this knowledge for therapeutic purposes, learning how to use stem cells to carry genes into tissues to repair genetic defects, how to regenerate damaged tissue to repair lost function, or how to give hope to patients with illnesses for which current therapy is either inadequate or nonexistent.

Let me just give you three examples, and there are, in fact, many, many more.

Every one of us knows a victim of diabetes. Not long ago, everyone knew a victim of polio. As President of the Coriell Institute for Medical Research, I must tell you that the Institute's founder, Lewis Coriell, cared for wards full of children with polio. All he could do for them was to put them in an iron lung, which would help them breath until they got better, or sometimes they didn't. The iron lung would not treat the disease, it only treated the symptoms. Dr. Coriell's work with the polio virus enabled Jonas Salk and Dr. Sabin to develop the vaccine, and the rest of that story is history. Today's treatment for diabetes is, in fact -- insulin shots is, in fact, no better than the polio therapy of 50 years ago. It does not treat the diabetes disease, it only treats its symptoms. The underlying disease continues to damage the body.

Work with stem cells has also already shown that it may be possible to grow new insulin-producing cells that may be transplanted into the bodies of diabetic patients, thus repairing the actual damage of the disease. Are we there yet? No, much more research needs to be done to learn how to grow the cells efficiently, how to direct their development into insulin-producing cells precisely, and to show that this can be used as a therapy in people, not just in mice.

Parkinson's disease is a terrible neurodegenerative disorder that affects 2 percent of the senior population. It is caused by the loss of certain neurons in a specific part of the brain. Since the exact kind of neuron that is damaged is known, it may be possible to transplant these cells into the damaged brain and induce them to develop into the correct neurons. This work is very promising in mice, but must now transplant this into humans. Imagine a bank of neuronal stem cells for ready treatment of Parkinson's patients. Are we there yet? No, and we can't get there without the ability to work freely with stem cells and explore their potential.

Who does not know someone with heart disease? Imagine using stem cells, whose program has been directed to turn them into cardiac muscle, to treat the damaged heart of a patient with a myocardial infarction. This is actually being done in mice. So are we going to have a lot of very healthy mice, or will we be able to bring these therapies and many more, perhaps more than we have yet even imagined, to people?

The Coriell Institute has a major focus in stem cell biology. In our case, these are all adult stem cell studies. We have programs in pancreatic, neuronal, hematopoietic -- or blood-forming -- stem cells, adipose or fat stem

cells, and muscle and cartilage stem cells. Imagine having one's own personal source of stem cells for a variety of therapeutic purposes. We all have enough fatty tissue to spare -- all of us -- most of us anyway -- to harvest adipose stem cells. When we learn how to manage the developmental program of these cells that normally produce fat tissue, we may find that we are actually carrying the raw materials for a perfectly matching transplant to repair our own heart attack and our own Parkinson's disease.

I do not believe, nor do I know, any reputable scientists who do believe that stem cells or the technique of nuclear transplantation, which is just one of many techniques being used to study stem cells -- that these techniques should be used for human reproductive purposes. This specter can be prohibited and is, in any case, too technically unlikely to be allowed to slow development of the promise of stem cell research.

That promise will not be possible without the freedom to explore the possibilities. A-2840 assures that responsible freedom. It also assures New Jersey's scientific leadership in the long-term. At a time when senior scientists are leaving the United States to find more hospitable scientific environments for stem cell research in countries abroad, we must take significant steps to assure this important work and to assure that it can be done in New Jersey.

I thank you very much for the opportunity to speak to you today.

ASSEMBLYWOMAN WEINBERG: Thank you very much. Is it Dr. Beck?

DR. BECK: Yes.

ASSEMBLYWOMAN WEINBERG: Dr. Beck.

Assemblyman Thompson.

ASSEMBLYMAN THOMPSON: I gather from your testimony that Coriell is currently doing extensive stem cell research.

DR. BECK: That's correct.

ASSEMBLYMAN THOMPSON: So, in essence, what this bill would permit wouldn't really expand your research but would simply provide you with additional stem cell lines.

DR. BECK: It happens, in our case, that we are working only with adult stem cells, as you heard from Dr. Black. However, we don't-- We are in a situation right now -- the state of knowledge about stem cells is that we really don't even know what we don't know. That is, our ignorance is so great that we have no idea what the potential is, what the therapeutic opportunities are. And without exploring all aspects of stem cells and stem cell biology, including stem cells from a much earlier state than adult stem cells, the so-called embryonic stem cells, we won't really know what the potentials are. We won't know whether we're missing some opportunity, or, indeed, the cells will do exactly what we want without going in some untoward direction. So we need to study all kinds of stem cells.

ASSEMBLYMAN THOMPSON: But, again, you say you're currently doing research. You're using adult stem cells. There are embryonic stem cell lines available elsewhere, which you could obtain, if you want. Consequently, again, as I see it, this bill would simply allow you to expand what stem cell lines you might utilize. Is that a simple summary of it or not?

DR. BECK: Almost. It turns out that there -- I think there are something like 64 or 70 approved stem cell lines. It turns out that very few of them are really available. Many are tied up in for-profit concerns. Many of

them don't grow well. Some are very poorly characterized. So the actual number of stem cells that are really available to the research community is, actually, very small. And that may not be very representative of stem cell lines. And certainly, in any case, for therapeutic purposes, those stem cell lines would not be useful for anybody other than the original people from whom they came, the original genetically matched donor.

ASSEMBLYWOMAN WEINBERG: Assemblywoman Vandervalk.

ASSEMBLYWOMAN VANDERVALK: Thank you.

My memory of the Coriell Institute is that we do a lot of work in cord blood.

DR. BECK: Exactly.

ASSEMBLYWOMAN VANDERVALK: And I was surprised to find out that cord blood is considered -- they're adult stem cells.

DR. BECK: That's correct.

ASSEMBLYWOMAN VANDERVALK: And yet they're from newborn babies.

DR. BECK: That's correct.

ASSEMBLYWOMAN VANDERVALK: So my question is, when does an embryonic stem cell become an adult stem cell?

DR. BECK: An embryonic stem cell quickly becomes differentiated as the embryo, and then the fetus, begins to develop. Those stem cells quickly take on the characteristics -- increasingly more specialized as the embryo develops. Primitive functions remain for a fairly long period of

time, and I can't tell you exactly. I'm not truly an embryologist myself. But these changes happen very rapidly in the course of days or months.

ASSEMBLYWOMAN VANDERVALK: So when we're--

DR. BECK: But by the time a baby is born, those cells that we harvest from blood have the equivalent function of adult stem cells, just like the ones that you and I have in our bone marrow at this very moment.

ASSEMBLYWOMAN VANDERVALK: So basically, we're talking about babies prior to being born, when we're talking about embryonic stem cells.

DR. BECK: You're talking about embryonic-- Embryonic stem cells are from a much -- a very earlier -- very much earlier state, generally from cells of the age of about five days after fertilization -- would be the time when those stem cells would normally be harvested if they were harvested from a fertilized embryo.

ASSEMBLYWOMAN VANDERVALK: Thank you.

ASSEMBLYWOMAN WEINBERG: Assemblyman Conaway.

ASSEMBLYMAN CONAWAY: Thank you, Madam Chair.

Of course, I want to thank the Coriell Institute, because my son had stem cells there, I guess, for almost three years now. And I will say that my own view is that we -- you mentioned the state of knowledge unknown. I mean, I think there is nothing that we should not attempt to know, understand, in the natural world.

My question is, these cells, as they are in the embryonic stage -- blastocyst stage -- when you use them, do you take individual cells from this group of 10 or 20 cells and develop them, or do you generally use the entire --

all of the material and culture that -- or do you take individual cells and try to move on from there?

I ask the question, because I wonder whether or not, in all cases, the use of this material for research involves the use of all of the material or just certain -- some cells of the material -- even the (indiscernible) material there. As I recall, these cells-- You could move a cell from an embryo at the earliest stage, and probably not affect what happens as the development of this tissue continues forward. Am I wrong about that?

DR. BECK: No, you're absolutely correct. In case-- Just to answer the last part first, it is possible to pluck a cell from an early embryo, for example, in case you wanted to do some kind of genetic diagnosis with it, without harming the entire embryo, but that still must be done at a very early stage.

The cells that we would normally harvest, if one were harvesting them at, say, a 5-day-old stage from an embryo -- when you would get that little set of cells that are called embryonic stem cells-- One of the beauties of embryonic stem cells is that they can be grown in the laboratory, in the petri dish, for a long period of time, and you can make many, many more of them for when you have a healthy -- you have a healthy stem cell culture, embryonic stem cell culture. So they can be studied for a long period of time, and you can grow many more of them.

The problem with adult stem cells is that they're very difficult to grow, and so while we do a lot of work with cord blood stem cells -- the blood-forming stem cells that one gets from a baby just after the baby's born; they're harvested from the umbilical cord and the placenta, which is normally thrown

away -- those cells have a very limited potential, of reproductive proliferated potential, and we have to continue to harvest more cord blood from different new births to have enough to work with.

ASSEMBLYMAN CONAWAY: And lastly, I'd just like to emphasize your statement that, in fact, these cell lines -- 65 or 70 of them -- are really not available very broadly.

DR. BECK: Very poorly available. They're expensive to get a hold of. They're very difficult to get a hold of. There are actually very few that are really, truly available to the broad research community.

ASSEMBLYWOMAN WEINBERG: Thank you very much, Dr. Beck.

DR. BECK: Thank you.

ASSEMBLYWOMAN WEINBERG: Paul Byrne. Mr. Byrne is representing himself, and has come from the far environs of Jersey City.

PAUL BYRNE: Madam Chairwoman, members of the Committee, I'm delighted to be here today.

Is Neil Cohen still here?

ASSEMBLYWOMAN WEINBERG: No, I think he stepped out of the room.

MR. BYRNE: First, let me introduce my sister. If I don't introduce her, she won't take me home tonight. (laughter)

The Honorable Barbara Donnelly, the County Register of Hudson County, and the top vote-getter in the history of the county. She beat Governor McGreevey the last time. (laughter)

ASSEMBLYWOMAN WEINBERG: Welcome, Honorable Donnelly.

She rolled her eyes when you made that statement about her, Paul.
(laughter)

MR. BYRNE: I'm a Type 2 diabetic. Two years ago, I was healthy, I had great vision, and I was very active. I've had three operations, and nothing works.

But I'm not here to talk about myself. I am damn upset about this. One person has caused these hearings to be held, and that's the President. He has tied the hands of the medical researchers throughout the nation. We have tens of thousands of scientists, dedicated doctors, professors, willing to work diligently to find cures, and he stopped it.

I've been wandering these halls for some 30 years. And you'll look around and you'll see portraits of former governors, former speakers, former presidents of the Senate. You ask yourself a question: Who are they, and what did they do? And you know what? You really can't remember if they did anything.

I agree with Neil Cohen. Today is a very important day. You folks up there on that Committee have the power to vote for hope. Even if it doesn't work, you've got to tell people throughout this state that are sick that you care about them.

What we're talking about is discarded stem cells. They're washed down a toilet or a basin. There are no religious services when they throw them away. You're not going to find any bishop in New Jersey running away from his defense team to lay hands on these things.

There are people throughout the state-- I go to IV wards.

By the way, I have to-- Joan Quigley works with Christ Hospital. It's a fine hospital. They have an IV ward, and they hold about 24 people. And they're of every age, ethnic group, even some Republicans. And all these folks are sick, and they have something different wrong with them. We all sit there, and we take these IVs, and we ask each other, "Well, what's wrong with you?" It's everything. It's Parkinson's, it's diabetes, it's heart disease, it's sickle cell. I forget the Jewish disease. There's only one Jew there.

ASSEMBLYWOMAN WEINBERG: Tay-Sachs.

MR. BYRNE: Tay-Sachs. I'm sorry, I apologize.

But all these folks -- all they talk about is, "Why don't we have hope? Why is the elected body denying this?"

I called Governor McGreevey, and I asked him to put it into the State of the State. I want Governor McGreevey to do what JFK did for space exploration. I want New Jersey to be the equivalent of the Silicon Valley when it comes to health care. We have to be aggressive. We have to lead the nation in doing this. You can't just sit here and not say there's hope.

Anyhow, thank you very much for hearing me.

ASSEMBLYWOMAN WEINBERG: Thank you very much, Mr. Byrne.

Any questions at all? (no response)

Thank you for coming down here. You might not be feeling a hundred percent, but you sure can talk.

MR. BYRNE: Well, some sick people have to show up here.

ASSEMBLYWOMAN WEINBERG: Thank you.

Dr. Don Brancato, who is all the way from St. Louis, Missouri.

D O N B R A N C A T O, M.D.: Thank you for allowing me the opportunity to speak here.

I'm here representing--

ASSEMBLYWOMAN WEINBERG: Is your red light on, Dr. Brancato? (referring to PA microphone)

DR. BRANCATO: I'm sorry.

I'm here representing the spectrum of people you've probably just heard from. I'm here representing more of the academic community, the cutting edge of what you're talking about.

I'm here, basically, opposing the politicization of the advancement of science diverting funds for valid scientific research to the special interests that have, basically, been represented in this bill. I'm also here representing those unfortunate persons, such as you just heard, suffering from the various ubiquitous diseases that you mention in section one of your bill. It is those people trusting, without recourse, the Congress and legislatures of America to assist science in seeking answers for their afflictions, but that are most harmed by this type of interference.

There is absolutely no valid or credible scientific evidence that human embryonic stem cell research, or any human cell research for that matter, will provide any useful information not more readily and economically available from other mammalian cell research. Seeking knowledge of cell differentiation and control, funds to that end must be directed to the most cost-effective and expeditious scientific efforts.

Actions such as this one, whether here in New Jersey, in Congress, or by any government, corporate or public, are explicitly counter to that purpose. In this presentation, I would hope to specifically and objectively be able to make that clearly understood.

I was asked to speak here by some who are aware of the fact that I, along with others assisting me, have developed the only 100 percent successful human clinical application of stem cell research that I know of. My doctorate is from Northwestern University, and my current teaching appointment is at the Washington University School of Medicine.

In terms used currently in this particular area of scientific endeavor, what we are about is called *tissue engineering*. What we try to achieve is a function or a product that the immutable laws of nature have already, most efficiently and effectively, provided to the more fortunate majority who are unafflicted. We have never been, and probably never will be, able to duplicate that overwhelmingly complex series of time dependent, interactive chemical cascades of events that are also environmentally critical and sensitive. It is that complexity that directly addresses how, where, and to what end our relatively minuscule efforts must be focused. Those who invoke the unknowledgeable and unwitting to assist in their propaganda efforts to deceive and defraud the public, the potential investors for their nefarious schemes, and you, our representatives in this democratic republic, can be stopped if, in essence, the truth is heard. And that, succinctly, is my intention here today.

Just to put you at the cutting edge of research, I'll ask you to pass this around.

ASSEMBLYWOMAN WEINBERG: Excuse me, if you have anything, you can give it to our--

DR. BRANCATO: I can't leave this with you, so you'll have to pass it around.

ASSEMBLYWOMAN WEINBERG: Well, just hand it to our staff person, and they will--

DR. BRANCATO: This is a--

ASSEMBLYWOMAN WEINBERG: And if you want to be on record, you have to be speaking into the microphones.

DR. BRANCATO: Well, what you have before you, just as an example, is a synthetic cruciate ligament. That is a ligament that is formed from a stem cell populating a scaffold.

The term *stem cells*, though recently coming into vogue, has been around a very long time. Very early on in my own research, we still primarily used the term *precursor cells*. Initially, in developing the synthetic cruciate ligament, understanding that we were never going to be fully able to replicate that whole complexity of intrauterine growth and development, we sought to isolate a cell far enough along its differentiation pathway that would produce the desired chemical end product. Then that cell, if able to reproduce, would provide other cells that would populate our synthetic scaffold and, hopefully -- the natural order assisting in the right chemical and mechanical environment -- the host would, in essence, grow a new tissue. I have been involved in stem cell research since before it was even called that.

Generically, our research described above is relevant to your bill and other bills now before the Congress, in that it exposes the lies and

deceptions that the special interest depend on. In attempting to specifically enumerate those, I will try to explain why, based on fact, bills such as this are not only impeding science and ignoring the scientific method, but are, additionally, neither cost- nor time effective. And I have them enumerated, and I will be glad to provide you all with copies. It's probably critical, because I've heard the validity of some of the questions that have been asked.

At present, with our current knowledge of cellular differentiation and control, we are unable to detect any specific differences in the chemical mediators or events, exclusive of time, involved in the cellular replication and growth between any species.

And the relevance of that is that cheap, readily commercially available cell sources of specific type optimize research. And human cells, stem cells or otherwise, fit none of these criteria.

Number two, when our state of knowledge increases to where we can discern cellular differences between species in laboratory animals, we can easily look at other species such as humans.

And the relevance of that is that cellular and molecular biology has not progressed -- and you've heard this repeated -- has not progressed to the point that we have more than a rudimentary understanding of the, literally, thousands of chemicals, usually extremely complex themselves, that must interact in a time- and concentration-dependent manner to bring about even the simplest cellular event. That information can best and most economically be gained from the various hybrid cell lines specifically engineered for that purpose.

Number three, with our current knowledge, true scientists are exploring cellular differentiation and control along four primary paths. These are cellular reproduction and apoptosis, which is cell death; inter-cellular signaling and communication and control; cellular metabolism; intra-cellular signaling and control -- that's intra-cellular signaling and control -- and genetic engineering.

The relevance is that currently available commercial cell lines more than adequately satisfy research needs for the far foreseeable future in the most cost-effective manner. Now, and into the distant future, unless some revelation of the magnitude of Einstein's Theory of Relativity intervenes, human cells afford no advantage to aid or advance scientific knowledge. These special interests are trying to dupe our representatives in government at all levels, Federal, State, and corporate, in order to get funding under the guise of new technology. The real tragedy is that they have stooped to dangling false hope and totally unrealistic promises, you've heard very clearly expressed, as bait.

Apart from true scientists, proceeding meticulously and painfully slowly, always limited by the immense complexity and overlapping variables, according to and bound by the scientific method, along the four paths I just mentioned, others are using lies and deceptions to enlist public support.

The relevance is that every attempt to short-circuit or bypass the natural order, realizing that we can never alter the natural laws themselves, is always rewarded with failures and inefficiency. Can one genetically defective sheep, out of something like 697 attempts, stand any test for pragmatism and economy? Even when so infrequently successful, as you've just heard, the

cloned embryo was carried in a normal sheep uterus. It is most efficient and conserving of time and money to build on established and accepted scientific fact, rather than to reinvent the wheel. The ability to engineer a better wheel is, certainly, within the realm of the human domain, but to create something to replace the wheel defies the laws of physics.

To date, the real promise and achievements with clinical application and relevance to the human condition have been in genetic engineering. In that area, and in the area of tissue engineering, there is real hope to address the selected diseases.

ASSEMBLYWOMAN WEINBERG: Dr. Brancato, I hope you're summing up. You've been here for almost 15 minutes now.

DR. BRANCATO: Yes, ma'am.

ASSEMBLYWOMAN WEINBERG: Well, we do have many other people to testify, and I'm hoping that everybody can keep their remarks under 10 minutes.

DR. BRANCATO: Yes, ma'am. I will try to go--

ASSEMBLYWOMAN WEINBERG: Give us a summary. Don't read those last three long pages.

DR. BRANCATO: All right. I will be glad to.

If you would like, I would be glad to provide these for your perusal.

ASSEMBLYWOMAN WEINBERG: Please do, and then they will become part of the record.

DR. BRANCATO: Basically, in summary, what we have before this Committee is, as you're aware and as you've heard, a, sort of, extrapolation

of fact to justify a proposal that is not scientifically needed at this stage. To apply it to the human environment, we can -- unable to really determine a difference at the genetic and molecular biological level between the mammalian cells of any species--

We have actually tried, and some of the researches at Washington University have implanted diabetics' cells -- which the gentleman -- just was afflicted with -- we cannot get them to, first of all, replicate or reproduce. The successes have been in the area that I just told you. We've been able to use a stem cell, put it in the right environment, on an appropriate scaffold, and make that occur.

And succinctly, I would be glad to answer any directed questions, but science is not about the human and emotional appeal. Science proceeds along a scientific method. And this bill doesn't recognize that.

ASSEMBLYWOMAN WEINBERG: Dr. Brancato, thank you.

May I ask, because you didn't fill it out on your form, who are you representing, officially?

DR. BRANCATO: I belong -- I was asked to be here. I'm not sure exactly who they represent, but I am involved with a group called the Committee for the Constitution. And we are a group of scientists that are interested in the preservation of the scientific method, exclusive of the political process.

ASSEMBLYWOMAN WEINBERG: But you mentioned Northwestern University. You're not representing them.

DR. BRANCATO: No, ma'am. I'm a researcher at the Washington University School of Medicine.

ASSEMBLYWOMAN WEINBERG: Which school, I'm sorry?

DR. BRANCATO: Washington University School of Medicine.

ASSEMBLYWOMAN WEINBERG: Washington University.

Thank you.

Any questions for the doctor? (no response)

Thank you very much.

Debbie Hart, Biotechnology Council of New Jersey.

DEBBIE HART: Good morning, Chairwoman Weinberg and members of the Committee.

ASSEMBLYWOMAN WEINBERG: It's good afternoon now.

(laughter)

MS. HART: Oh, it is. Oh, okay. I've been here longer than I thought. I will make my remarks brief. I've given the aides longer versions of my testimony, but I'll be happy to shorten it up.

I'm Debbie Hart, the President of the Biotechnology Council of New Jersey. It's the trade organization that represents the biotechnology and life sciences industry here in the state.

Our members wholeheartedly endorse this legislation and commend the bill's sponsors for their support of this cutting edge area of scientific research and their thoughtfulness in addressing the ethical concerns associated with it.

There are approximately 120 biotech companies in the state engaged in all types of research and development. The BCNJ and the companies we represent want to ensure that the promise of new therapies and cures from research using stem cells is realized in a responsible and ethical way,

and that every avenue of promising research can be responsibly explored to improve the health of individuals living with currently intractable diseases. This legislation does just that.

In addition to all the scientific and health-care cost reasons, which you've heard eloquently explained by Doctors Beck, Black, and Donovan, it communicates -- the bill -- the capacity of this bill would communicate to the world that New Jersey is open for new and novel types of research and development. And coupled with the tremendous assets that this State has to offer -- the biotechnology and pharmaceutical companies -- this helps set the stage for the continued growth of industry here in our backyard.

Finally, and perhaps one of the most -- one of the strongest reasons for the passage of this bill is that it is budget neutral. As we face the reality of budget cuts that will affect some of the most important programs that we have to offer, here in New Jersey, to biotech companies interested in coming to the state, and the ones that are currently here, a bill such as this could serve to counteract some of the impact of those dramatic cuts.

I thank you for your time, and I appreciate the opportunity.

ASSEMBLYWOMAN WEINBERG: Thank you, Ms. Hart. Any questions? (no response)

Can you tell us who makes up the Biotechnology Council of New Jersey?

MS. HART: The trade and professional organization that represents the biotech companies here in the state such as Celgene, Medarex, Enzon, Alteon, and others, the large and the small. We also have numbers of big pharma, and a lot of the universities are members, as well.

ASSEMBLYWOMAN WEINBERG: Thank you.

MS. HART: Okay, thank you.

ASSEMBLYWOMAN WEINBERG: Linda Kramer, Bioethics Advisory Committee.

You're a registered nurse, Ms. Kramer. Could you tell us who the Bioethics Advisory Committee serves as an advisor to?

L I N D A S. K R A M E R, R.N.: It serves for the Council on the American Family.

Yes, I am an R.N. I have my bachelors of science degree in nursing.

Thank you, Madam Chair, for this opportunity.

This bill permitting stem cell research promotes experimentation on humans at the earliest stage of life, a stage each one of us passed through after conception.

Scientific discoveries have made it clear that biologically, human life starts at conception, because the fertilized egg is a living organism which begins growing at this point and needs only time and nutrition to become a fully developed human baby. In fact, frozen embryos in fertility clinics have actually been adopted. John and Marlene Strege adopted their daughter Hannah as a left-over embryo. She was implanted into her adopted mother's womb, and now they have a healthy little girl.

The terrible experiments of the Nazis during World War II emphasized the need for strong adherence to universal principles regarding experimentation on humans. The Nuremberg Code requires that human subjects give their voluntary consent. If human subjects are unable to give

consent, they must not be used for experimentation unless they could benefit or, at the very least, not be harmed.

The human embryos used in stem cell research are destroyed in the process of obtaining stem cells. If we ignore this principle of doing no harm to human life, we start down a path of ruthlessness that puts all of us at risk, especially those with disabilities. Curing disease and alleviating suffering is a worthy goal. My own family includes those with chronic and debilitating diseases such as multiple sclerosis and diabetes.

Adult stem cells can be obtained from many parts of the human body such as the umbilical cord, bone marrow, or fat tissue, and no harm is done to the individual in the process. These adult stem cells have already been proven to be more adaptable than originally thought, and there are no problems with tissue rejection if you can use the person's own stem cells. They have been successfully used in humans to treat a wide range of conditions, including gangrene, spinal cord injuries, heart disease, leukemia, and Parkinson's disease.

In July 1999, Nathan Sally (phonetic spelling) joined the ranks of those who have been cured through the use of adult stem cells. A donation of stem cells from the umbilical cord of a baby in Spain was successful in treating myeloid leukemia, even though his disease was advanced.

Embryonic stem cells, however, have generally not been successful, even in animal trials. According to Dr. David Weldon, their tendency to duplicate and differentiate quickly has shown them to be unstable. They have produced cancer-like tumors in many animals during research. There have

been no successful human clinical trials using embryonic stem cells to this point, and even animal trials using them have been unsuccessful.

The sources of embryos used for research also lead to distressing problems. Asking a couple, who is already struggling emotionally because of infertility, if they would donate embryos that would be destroyed, is callous.

An alternate source of embryos is somatic cell nuclear transplantation, commonly known as cloning. This procedure requires using donated human eggs, and could lead to the exploitation of women whose eggs are desired by research cloning corporations. Ads have already run in college newspapers in this country offering money in return for eggs donated to research.

Even from a physical standpoint, cloned animals tend to have serious birth defects, many of which may not be visible at first, which render embryonic stem cells an unreliable source for healthy stem cells. According to U.S. Senate Majority Leader, Bill Frist, a transplant surgeon, embryonic cloning is also plagued with problems of tissue rejection.

Furthermore, a ban on reproductive cloning, which still allows for research cloning, is unenforceable. Once laboratories have produced cloned embryos, it would be impossible to prevent a doctor and surrogate mother from performing implantation in the privacy of a doctor's office.

Destroying human embryos to obtain stem cells is both unethical and immoral. It is also unnecessary, since adult stem cells have already been used to successfully treat humans with a variety of conditions over the past 20 years -- all the more reason to continue the progress made with adult stem cell research, not the highly unstable embryonic stem cell research. As a civilized

society, we must not promote a ruthlessness that would destroy human life at the earliest stage, with the utilitarian notion of harvesting living humans for spare parts. We strongly advise this ill-conceived and highly dangerous bill never be released from Committee.

Thank you for your thoughtful consideration of the conclusions of the Bioethics Advisory Committee of the Council on the American Family.

Thank you very much.

ASSEMBLYWOMAN WEINBERG: Thank you.

Are there any questions for Ms. Kramer? (no response)

Thank you very much.

David Lowell, from the New Jersey Spinal Cord Commission.

Thank you, Mr. Lowell. Make sure that your red light is on, please.

DAVID C. LOWELL: Yes, it's on. I hope you can hear me.

Thank you for this opportunity.

I did put on my sheet that I'm with the New Jersey Spinal Cord Commission. I happen to have been one of the original members of the -- selected to the Commission. My term has expired, so I am here as a public citizen.

I did put together a presentation that I can leave with you. I've heard a lot of testimony this morning. I don't know if I've learned a lot, but it does help put certain things in perspective.

Now, my background is that I was injured four years ago in the back of a limousine going to the airport. My driver fell asleep, and that has left me a paraplegic. I feel a little bit remiss because this injury is nothing

compared to what I've seen when you have quadriplegia or other disabilities. Not being able to walk is mute.

One of the things that you should recognize is that I would give up every monetary asset I have to recover from this injury, but I would have a hard time giving up the experience that I've learned from this injury. I mean, I've been put into a society of people that are 10 times worse than I am, and they are -- they live every day hoping for some type of a cure. And, honestly, I believe that cure is out there, and I believe that stem cell research is one of those steps. I do not think stem cell research is the cure-all, but I think it will be a bridge to a successful cure.

Now, my presentation-- I was going to give you some background on stem cell research. You probably don't need it, because you've heard it from the experts. There's a very good primer in the National Institutes' -- it's about 10 pages, and it will be very clear. So what I would like to quickly cover is-- The long-term potential for stem cell research includes Parkinson's, diabetes, heart disease, spinal cord. I am one of the 12,000 people that are injured yearly. It's a very small number. Stroke is about 167,000 people annually.

What are the public concerns with stem cells? I talked to some Senators who initially sponsored or approved the bill in the Senate. One of the major things is they're not knowledgeable. The public's not knowledgeable of what stem cell research is. But honestly, there's no strong feelings against stem cells. There is a misconception with the public, with stem cells and cloning. And as the legislation has written, this is not a cloning issue. The legislation is specifically for therapeutic.

What is the potential benefit? It's a powerful new method for screening and testing new drugs, the potential for significant quality of life improvement. That is important, because most people have a misconception. If I was to ask the people in this room, what would be my number one priority with my injury, I would get the wrong answer, I think, at least 50 percent of the time. That answer, if somebody looked and said to somebody like me -- my goal would be to walk. It's not to walk. My number one goal would be bowel and bladder. It's things that the public doesn't see. When they see you in a wheelchair, they think you can't walk. Well, there's much more issues than that. And, again, I feel terrible in saying that, because I'm in good shape. This is a minor injury, when you compare it to some of the other life threatening diseases that people have.

The economic improvement for individuals suffering from disease-- Fortunately, I was almost 50 years old when I was injured. Most of them -- for spinal cord -- are injured between 16 and 23, which, kind of, excludes them to society, because they don't have the education and the opportunities to go forward.

I'll sum up a couple more -- two more items. The economic improvement for individuals suffering from disease and acute injuries-- The social safety nets that are out there right now -- they're already overtaxed. And society can't continue to support the long-term medical needs, so we do have to strive for a cure, or going forward.

And the last item is that within New Jersey-- Now, this was reported at a seminar at Johnson & Johnson back in the fall -- that 70 cents of every dollar spent on medicines is reflective of New Jersey based industry,

which is our pharmaceutical industry. So we're a state with the backbone of being pharmaceutical. And I think we need to support that industry, particularly when I see no downside. I'm hearing-- This isn't about abortion. This is about cells that would be thrown away. So I see no downside to this.

The issues of whether it's economically feasible, that's not for us to decide, because society will decide if it's economical or not. And if there are other cells that are more viable, meaning adult stem cells, that will drive itself. But to not support all technology in this, I think, is wrong.

So I support this bill. I strongly recommend that you evaluate all the issues here and, hopefully, support this bill. Thank you.

ASSEMBLYWOMAN WEINBERG: Thank you very much, Mr. Lowell. If you want to leave the testimony, somebody will get that from you.

Do you have any questions? (no response)

Bill Thomson, from the New Jersey Christian Coalition.

BILL THOMSON: Thank you, Madam Chairwoman.

I'm here this morning on behalf of our membership, which is 17,000 members statewide, of Protestant, Roman Catholic, and Jewish religions. I've heard some of the testimony this morning, and from a personal standpoint, I have to tell you that my mother died of diabetes, and a sister that I buried a little more than a year ago of diabetes. I have to tell you that they were not bitter, and I believe they were not bitter because of their Christian faith, that in passing from this earth, it was not the end for them.

I hear-- And the first time I met Governor McGreevey, one of the first things he told me was that he wanted to open this state up to the science industry. He wanted to attract scientists to the State of New Jersey, because

he felt it was good for the economy. And, certainly, I see this bill today as that sign, *open for business*, and I believe that it is driven by more of an economics issue, here in the State of New Jersey, in its rush to be number one. I think if we waited a week, if we waited a month, if we waited a year, we would still be number one. I don't see anybody else rushing into an area to clone embryos.

We are very much against this bill because of the fact -- for everything that the people who had testified in favor of the bill said. The answers are not there. They admitted to you that they did not know the answers as to what they would find. They don't even know the answers as to what they have right now. They have not exhausted their efforts in adult stem cells.

I thought it was very interesting -- the question Assemblywoman Vandervalk asked, about when does a baby stem cell, or an embryonic stem cell, become an adult stem cell. And to learn that it is done somewhere around the five-day period of time--

There is a money issue that is here, that is driving all of the arguments and all of the debate on this issue. And I believe that the science industry-- And I've listened to some of these doctors this morning, and they are very good salesmen. I'm sure they're very good doctors. But they're very good salesmen, selling a shiny new product, and all the things that might happen, but I can't tell you for sure that it will.

"This is an exciting, cutting-edge industry that we're working in today. And if you allow me to do this, I think that we might have cures for all of these things, but I can't guarantee you."

Perhaps you can help me with the author. You could win the world, but lose your soul in the process. And then what have you gained? I don't understand, for all of the blessings that we have received -- and we should be well-reminded of those blessings -- in the events of 9/11 in our area -- why we are going to rape and harvest -- or rape and pillage the harvest of embryos that come from the creator of life. I don't believe that you can insult that creator too many times without some very bad things happening.

I think that there is a choice here. I think there are other choices for our economy than opening up the doors for science that may, in fact, stretch a barrier way too far in pushing the envelope.

I think there are many people that would like to work with the Governor, as far as helping the budget process. I think there are many people that would like to help in pushing the medical field to an area where they might be able to understand what they have in adult stem cells. But I'm not sure that there are too many, who understand where we are going today and the reasons why we're going there, who would be in favor of this bill.

I am obligated as the Chairman of this organization -- at least a personal obligation, I believe -- to tell you that we have been tracking votes, and we are certainly known for our voter guides in Federal races for the U.S. Senate and the presidential races. We are doing a state voter's guide this year, which is not to sway your vote, but it is not to surprise you and say, nobody ever told me. We will be recording the vote on this bill

I thank you very much.

ASSEMBLYWOMAN QUIGLEY: Thank you very much.

Is is Mr. or Reverend?

MR. THOMSON: It is Mr.

ASSEMBLYWOMAN QUIGLEY: Are there any questions?

ASSEMBLYMAN GREEN: Joan.

ASSEMBLYWOMAN QUIGLEY: Assemblyman Green.

ASSEMBLYMAN GREEN: Yes, any time you talk about the man above, it makes me nervous. (laughter)

MR. THOMSON: Maybe rightly so. It makes me nervous sometimes, too.

ASSEMBLYMAN GREEN: So I just want to be very, very careful how I respond to some of your concerns, because of the fact that I have a real serious problem when you talk about New Jersey is open for business, when you talk about the economic aspect of it. And I just listened to the other speaker, who was in a wheelchair, who basically said, "If I had an opportunity to change the dollars for my health, in a heartbeat, I would want my health." To sit there and be able to have gone through what he's gone through, and still going through the rest of his life, and still come up championing a cause that he felt would make life a lot easier for everyone--

I would just like to start off with the economic aspect of it. I, for one, when I cast my vote, am not looking at it from the economic point of view. I'm looking at it from the point of view of what can we do to help society in the future. If anyone can tell me that this issue is being used for financial reasons, then I will be the first one to join your cause.

I look at it as an opportunity to save lives. And anytime you can save a life or you can, basically, cure an individual who won't become a burden on society, then that's the direction I'd like to feel that this particular issue is

moving. If it was something that God -- I'd like to feel -- couldn't support because of the fact that we're taking a life, we're doing something inhuman-- But anytime we can take an issue to make people a lot better, and make society a lot better -- and I like to look at it in that vein.

So I'm not here to challenge your testimony, but I'd like to feel, for the record, that I am not involved in this issue because I think this is going to help the budget. I'm involved in the issue because I like to feel what the young man said earlier.

And by the way, 50 -- that's not old. I'm in that category.

When I listen to individuals who are experiencing what he's going through, then that doesn't put me in the position where I'm going to side with the doctors or side with the Governor. I want to be on the side of society. If you can show me, or prove to me, that this is not an area--

Like you said earlier, in life, we've all experienced -- the computer, whatever you might want to talk about -- what science has done to make life a lot better for all of us. If you don't try, you will never know.

But if I'm taking an issue and trying it, I'm doing something that God above would feel I'm wrong in doing or my mankind feels I'm doing -- which would hurt anyone -- then I would have to change my position.

But I'd like to feel, for the record-- I believe in what's right. If we can save a life, let's try it. If we're destroying something that God would look at us all in a wrong way, I would have a problem with it. If we're doing it for economic reasons and you can prove it, I also would say that I cannot support it.

So, again, I'd just like to, for the record-- I believe in what you're saying. I'm not here to look at this particular issue in terms of what is good for the budget of the State of New Jersey.

MR. THOMSON: I appreciate that, Assemblyman.

And I'm not saying that each individual that votes is going to vote specifically for that reason. And I appreciate you pointing out that that is not your reason. But I do believe that that was-- And, in fact, it was what the Governor expressed to me when we met almost a year ago at this time -- and that one of the reasons why he wanted to bring the science field to this state-- And I still believe that this is an economic issue and part of pushing this bill -- and not, perhaps, on some of the people who are voting for the bill.

ASSEMBLYWOMAN QUIGLEY: Thank you, Mr. Thomson. I think we do understand your position. I just have so many more envelopes to go through.

MR. THOMSON: No, I'm just here to answer questions.

ASSEMBLYWOMAN QUIGLEY: Assemblyman.

ASSEMBLYMAN THOMPSON: I do have my own problems with this bill. But I would reiterate what Assemblyman Green said. I don't think there would be a single member of this panel that will vote one way or the other on this bill as related to what economic impacts it may have. There are those that will probably support the bill, and that will be based on what they think the potential it has for people who are hurt and suffering. There are people that will vote in opposition to this bill, in all probability, because of concern regarding the embryonic stages you were going through, etc. But economics, I think, will play, essentially, no part in anybody's vote on this bill.

In fact, you can get into economics-- There's one point here that isn't even being touched on. And it impacts on the hope that people may have with regards to this. I'm concerned that even if all the researchers were successful and they were able to take stem cells and develop new hearts or cure spinal cord injuries, etc.-- I see, ultimately, if this process is developed, it's going to be an exceedingly expensive process, and one, when you're working on a cure for a given individual, a lengthy process. Certainly, I don't think they can start growing a heart in a petri dish and get it done in a week. I mean, these are going to be long, expensive processes. And if they're ever successful, economics is going to have to be looked at, but not from the side you're talking about, but from the side of what it would cost to implement such a cure for a given individual.

MR. THOMSON: Somebody is going to gain, somebody is going to pay. Certainly, it's a matter of economics, Assemblyman.

ASSEMBLYMAN THOMPSON: I'm suggesting everybody that might need it may not be able to get it.

MR. THOMSON: That is true, too.

ASSEMBLYWOMAN QUIGLEY: Thank you very much.

Thank you, Mr. Thomson.

MR. THOMSON: Thank you very much.

ASSEMBLYWOMAN QUIGLEY: Pastor Jose Tabares.

UNIDENTIFIED SPEAKER FROM AUDIENCE: He stepped out for a minute. I'll get him.

ASSEMBLYWOMAN QUIGLEY: I'll put someone else up then. Take your time.

Robert Lang.

Mr. Lang, you represent Lifenet Incorporated. Will you please tell us, when you start out, what that is?

ROBERT A. LANG: Thank you.

Lifenet is a pro-life organization, educational organization, based in the Morristown area of New Jersey. We work throughout the State of New Jersey and nearby states, as well as down into Florida, educating people on all life-related subjects, including the stem cell and cloning.

I have a brief statement I'd like to read, and then a few short comments, and then I'll move on from there.

The proposed bill, 2840, mentions the word *human* in reference to embryonic stem cells and somatic cell nuclear transplantation, or cloning. There appears to be clear knowledge that the cells mentioned above are the beginning of human life. The use of human embryonic stem cells for experimentation, as well as those derived from somatic cell nuclear transplantation, or cloning, is, in my opinion, a form of slavery -- the use of human beings, in their earliest form, for experimentation against their will. Each embryo, from our basic knowledge of the normal fertilization and growth process, is a unique human being made up of elements of their parents. A cloned embryo, in some ways, fits that description, as well. This bill suggests that these unique human, early stage, beings be used and/or destroyed in a process other than the normal growth into a fully formed person. At best, in my opinion, this is barbaric.

Cloning is an unnatural means of producing life with an unknown potential for disaster, producing human life with the possibility of

imperfections not found in the usual forming of egg and sperm processes. This opens up the potential for failure because of its very means of inception. Many of the animals formed by cloning are imperfect and have high failure rates. That information is available, of course, on the Internet.

There is a better way of accomplishing what, basically, this bill intends, and that is in the area of adult stem cell research. A primer -- a National Institute of Health Primer was mentioned a few minutes ago. And just to quote Page 7, it says, "Research on adult stem cells has recently generated a great deal of excitement. Scientists have found adult stem cells in many more tissues than they once thought was possible." The paper goes on to say, "Certain kinds of adult stem cells seem to have the ability to differentiate into a number of different cell types, given the right conditions. If this differentiation of adult stem cells can be controlled in the laboratory, these cells may become the basis of therapies for many serious common diseases." I'll leave a copy of the primer, as well. Page 7 is where that information is.

Final comments: This bill will take a class of humans, human embryos, and make them subhuman by designating them as experiments, not creating life, but taking life that belongs to others and manipulating it and, in some cases, destroying it. The same thing goes for cloning. It's an unnatural way of producing a human being with the potential for great damage and disease.

I fear that this type of human experimentation will eventually lead to using babies just before birth for their parts -- spare parts. I find this make-

a-life and take-a-life attitude very disturbing. If this bill is passed, I would be, for the first time, ashamed of the State of New Jersey.

ASSEMBLYWOMAN QUIGLEY: Thank you very much, Mr. Lang.

Are there any questions? (no response)

Oh, I see I'm alone up here. I guess there are no questions.

Thank you very much.

We've just counted, and we have more than two dozen speakers, all of whom are opposed. May I ask you, please, to limit your remarks, to keep them brief? We understand that there are many strong opinions. We have heard anti-opinions on the basis of science, theology, economy, and slavery so far. So if you could summarize them, unless you have something new to bring to us, we would appreciate it.

And now, if Pastor Tabares is with us--

PASTOR CAROLYN McCOMBS: Pastor Tabares is not here. He asked me to read his statement.

ASSEMBLYWOMAN QUIGLEY: Please do.

Thank you to the Committee. I am speaking on behalf of Pastor Jose Tabares, who, unfortunately, had to leave. But he did leave a brief statement.

ASSEMBLYWOMAN QUIGLEY: Would you please tell us who you are.

PASTOR McCOMBS: Oh, my name is Pastor Carolyn McCombs. I'm with the Paterson Pastors' Workshop in Passaic County.

ASSEMBLYWOMAN QUIGLEY: Thank you very much.

PASTOR McCOMBS: And his statement reads: “Madam Chair, and Committee, I am here as a representative of the Hispanic Clergy Association of Elizabeth and a board member of two networks that cover Union County and Essex County, Metro Ministry, and Union County Pastors for Revival.

And I will ask the Committee not to pass this bill, because I feel that this bill violates the sanctity of human life, because we would be destroying a human life at conception.”

That’s it.

ASSEMBLYWOMAN QUIGLEY: Thank you.

Are there any questions? (no response)

Thank you.

We’ll welcome back the Chairwoman.

ASSEMBLYWOMAN WEINBERG: Thank you.

I know Assemblywoman Quigley did ask that people shorten their testimony. We do have to be out of this room for another committee meeting at 2:00.

Dr. Alieta Eck. Did I pronounce that right?

ALIETA ECK, M.D.: That’s right.

ASSEMBLYWOMAN WEINBERG: Good handwriting.

DR. ECK: I’m Dr. Alieta Eck, and I’m an internist from Piscataway, New Jersey. And I would like to oppose this bill coming out of Committee.

If you listen to the expert testimony, it was very interesting. All you heard was hope and promise and maybe, and absolutely no evidence that we need to use little embryos in order to get good stem cells.

And on the other hand, we heard excellent testimony that bone marrow stem cells are probably even better. The slides that you saw up there showed that you would have less chance of rejection, and it would make more sense. And actually, it's been proven that these bone marrow stem cells have been useful in generating nerve cells, which can be used to repair the damage done by a spinal cord injury. I don't even understand why there is this pressure to use the embryonic stem cells, since there really is no evidence that there would be an improvement.

We're already making great strides in the treatment of spinal cord injury. Professor Wise Young of Rutgers University just spoke at a conference in Australia. He's one of the foremost experts on spinal cord injury. And at that time, he has pioneered work in different kinds of medicines to be used, and in hyperbaric oxygen. And he has been working with bone marrow stem cells, as well. Again, there's just no reason we need to go any further.

Talk about economics-- Why don't we use the funds that would be going into this unknown area and, instead, concentrate them on bone marrow stem cells.

ASSEMBLYWOMAN WEINBERG: Let's, sort of, keep it on this bill.

DR. ECK: Right.

ASSEMBLYWOMAN WEINBERG: Maybe you can sum up. I hate to give short shrift to those of you who just happen to fall on the later list.

DR. ECK: That's okay.

I guess my final statement would be that policies that promote embryonic stem cell research and human cloning reflect ominously on the state of a society. The English poet Alexander Pope said, in the 18th century, that "Fools rush in where angels fear to tread." Why should we be rushing into something that is just so nebulous and just gives a false hope?

Thank you.

ASSEMBLYWOMAN WEINBERG: Thank you, Dr. Eck.

Anybody who has written testimony that you would like to summarize, you can-- If you leave us with the written testimony, that does go into the entire transcript.

Carl Crowe, from the American Family Association of New Jersey.

C A R L K. C R O W E: Good morning.

My comments will be brief. I'll just read them directly.

I'm Carl Crowe. I'm the State Director of the American Family Association of New Jersey.

Dear Committee members, the American Family Association of New Jersey stands firmly in opposition of this bill. This bill clearly advances human cloning, which is clearly rejected by the majority of American citizens and, at least, 24 foreign countries. Those are by recent polls last November. The creation and then destruction of human embryos is ethically and morally unconscionable.

ASSEMBLYWOMAN WEINBERG: May I interrupt you, then, because I have a question to ask? How do you feel about in vitro fertilization?

MR. CROWE: I'm in favor of that.

ASSEMBLYWOMAN WEINBERG: Well, then you have created a human embryo in that particular case.

MR. CROWE: But that embryo wasn't destroyed, it was brought to fruition. I have a nephew, who I'm very, very proud of, who is a product of in vitro.

To give you some new information: As you know, the U.S. House of Representatives has already passed a human cloning ban bill, and the U.S. Senate is now poised to also pass a complete ban on human cloning. Question: Would it not be prudent for the New Jersey Legislature to hold off a short time until the U.S. Congress completes its work?

Attached to this write-up, you'll see an E-mail from the Family Research Council that I just received yesterday. That E-mail, summarized, says that on January 30, 2003, Senator Sam Brownback convened a hearing on the bill to ban all cloning of human beings. During this hearing, Representative David Weldon, a physician, testified that dozens of peer-reviewed medical studies are available proving the current therapeutic benefits of treatments using adult stem cells and umbilical cord cells. Representative Weldon also testified that not a single patient is currently being treated with embryonic stem cells and that miracle cures from cloned embryos are very much inflated. Also, Senate Majority Leader Bill Frist is also a physician. He also opposes this experimental use of cloned human embryos.

In closing, great progress in adult and umbilical stem cord treatment is now evident and, in our opinion, negates the need to cross the lucid moral boundaries into destructive, therapeutic embryonic cloning. Please vote against this bill.

Just to clarify, we are for adult stem cell research, but we are against anything -- any research dealing with embryonic therapeutic cloning.

Thank you.

ASSEMBLYWOMAN WEINBERG: Thank you, Mr. Crowe.

Harold Cassidy, an attorney in private practice.

H A R O L D J. C A S S I D Y, ESQ.: It appears my light's on, Assemblywoman. (referring to PA microphone)

ASSEMBLYWOMAN WEINBERG: I always have to point out, in the Legislature, the red light means your microphone is on.

MR. CASSIDY: As anybody who knows me would testify--

ASSEMBLYWOMAN WEINBERG: So everybody knows that the red light means on.

MR. CASSIDY: Thank you for inviting us.

I'd like to address topics that I don't think I've heard anything about today. I think it's important before--

I have a statement. I'll read parts of it.

I'd like to clarify a few things about this bill, and I think you should categorize four different things about it. You have implantation in a woman of a cloned embryo; you have implantation of a woman of an IVF spare embryo; you have creation of a cloned human embryo; and you have, of course, the existing spare IVF embryos. I don't think that you can view all of these in the same way.

Having said that, I am a former member of the Bioethics Committee here in New Jersey, as an attorney -- a civilized -- a civil -- a certified civil trial attorney. We have been involved in some of the most

important moral issues in litigation that we presented. Virtually all of those issues that we've had over the last 20 years, that we've dealt with, are implicated in Assembly Bill 2840 and its counterpart, 1909.

But I'm also here as a witness to great human suffering. The express policies of the bill -- everyone can support them. We all have relatives -- I have them now -- suffering from all of these diseases that we're talking about. We all support the goal of making life better for those of us who have the unfortunate -- unfortunately have these diseases. We also support -- all of us -- the concept of having to advance -- not at all costs -- but to advance our economy and our State.

However, we cannot permit our compassion and our enthusiasm, for the hope that these technologies may have, to lead us to ignore the legal and the moral -- not theological -- the moral and legal deficiencies that are all too palpable in this bill.

Without regard for the subtle problems that others have talked about, the central difficulty of this bill, as I see it personally, is that it authorizes -- in deed, it promotes and encourages the implantation of donated frozen embryos and cloned human embryos in a woman, who is asked to carry the child to advanced stages of pregnancy, even full gestation, and, even the way most people read this bill, after birth, with the sole purpose--

ASSEMBLYWOMAN WEINBERG: Can I interrupt you?

MR. CASSIDY: Sure.

ASSEMBLYWOMAN WEINBERG: Could you tell us what part of the bill you are referring to that you interpret as it would encourage--

MR. CASSIDY: It's not only my interpretation.

ASSEMBLYWOMAN WEINBERG: --cloning implantation?

MR. CASSIDY: It's not only my interpretation, Madam Chairwoman, it's the interpretation of 11 of the most brilliant legal scholars in this country, and I have their letters attached to a statement that I'm going to submit to you.

Let's begin by recognizing this: If you don't ban cloning, anyone can legally clone. So what you've done with this bill is if -- you have attempted, I think, in a way that's not intended -- I don't believe this is your intent. You have addressed cloning in a way where you say our goal is to prevent a clone for creation of a child, but you don't achieve that.

Now, what you do do is, you're silent except at the end of the bill, Section 3 -- if you want me to read it-- What it says is a person who knowingly engages -- you create a Class 1 crime, a degree one crime, which is the highest crime in our State -- if one deliberately clones a human being for purposes of walking the face of the earth. But you define it-- What cloning -- what you mean is, that it's a replication of a human individual by cultivating a cell with genetic material through the egg, embryo, fetal, and newborn stages, into a new human individual. So what you've said is, it's okay to clone, it's okay to implant, it's okay to go to five months gestation -- kill the child, six months gestation -- kill the child, nine months gestation-- And you even say that as long as you don't complete the newborn stage, whatever that is -- I don't know what that is, and I don't think you do either -- is that two days after birth, is that three days after birth -- then you are guilty of a degree one crime.

Here's the problem as I see it. I didn't come here today -- and this is the section of my statement I would like to read -- to focus on the painful

dismemberment and death of the children. I'm certain others will speak eloquently to that aspect of the bill. I prefer to focus on the other victims, which I am certain have been overlooked by the 25 senators who voted for Senate Bill 1909 and the 15 senators who were so confused by it that they abstained.

For 23 of the 27 years I've practiced law in our state, I've represented women who were compelled, involuntarily, to surrender their constitutional rights to the unborn children they carried. First, I was called upon to litigate those rights in the adoption context. Later, I represented woman induced to act as surrogates and tricked into believing they were under a legal compulsion to give up their rights. And most recently, I've represented women who were subjected to involuntary abortions. The common thread in each of these kinds of cases is that the rights of the mothers were ignored by third parties, and the women are exploited.

Fifteen years ago today, I came to this city, to this day, to get the decision in the *Baby M* case. That day, the court held that a surrogate contract, which forces a woman to give up the rights of her child, was illegal and unenforceable.

ASSEMBLYWOMAN WEINBERG: Remember, Mr. Cassidy, we're talking about stem cell research, not the *Baby M* case.

MR. CASSIDY: The worst elements of surrogate contracting is involved in this bill, and that's why I'm here, because I don't think you realize it.

ASSEMBLYWOMAN WEINBERG: I think you are reading a little bit more into it than the bill implies. Personally, I'm familiar with the

Baby M case. And the attorney who represented the baby happens to be a close personal friend. I don't think there's anything in this bill that talks about surrogate parenting or anything.

MR. CASSIDY: In this bill--

ASSEMBLYWOMAN WEINBERG: Now, if you've got something other than what you've just pointed out that you feel this definition is wanting, in terms of the last section that you just read--

MR. CASSIDY: Let me finish the point, because I think it will be helpful to you.

ASSEMBLYWOMAN WEINBERG: I'd like to let you, but I'd like to let you talk about the bill. And I'm really interested in hearing from you where you think this bill says you are to take a cloned embryo, for want of a better term, and implant it and carry it to gestation.

MR. CASSIDY: The term implant--

ASSEMBLYWOMAN WEINBERG: You've explained where you think the definition is not explicit enough. Now, if there's anything else in the bill that points to that--

MR. CASSIDY: The term implantation is referenced in the bill. It clearly anticipates that. And if you don't anticipate--

ASSEMBLYWOMAN WEINBERG: It is -- reference--

MR. CASSIDY: It is absolutely referenced in the bill. And I will suggest to you that, even if we didn't anticipate it, people will be doing it, and you haven't outlawed it.

ASSEMBLYWOMAN WEINBERG: Where is it referenced in the bill?

MR. CASSIDY: Let me get my copy.

ASSEMBLYWOMAN WEINBERG: I'm not being adversarial with you. I'm trying to understand what you're pointing to here.

MR. CASSIDY: No, and I don't mean to be offensive, but I shall not equivocate either.

In the section of the bill that talks about reasonable compensation for various services, one of the services that is referenced is implantation. So if it didn't reference in the bill, you have to know that this will occur.

ASSEMBLYWOMAN WEINBERG: But what it refers to in the implantation is that you are not allowed to purchase, sell, or otherwise transfer or obtain or promote the sale or transfer of embryonic, etc., etc., for research. And it goes on. It's that section-- It is outlawing that, the way I read this.

MR. CASSIDY: Which section are you looking at?

ASSEMBLYWOMAN WEINBERG: I'm looking at the same section you are. It's on Page 3 of the Senate bill. It begins at Line 30, "A person shall not knowingly, for valuable consideration--"

UNIDENTIFIED SPEAKER FROM AUDIENCE: It excludes reasonable.

ASSEMBLYWOMAN WEINBERG: Right, but it's referring to the prior paragraph.

MR. CASSIDY: But it defines what valuable consideration means. It shall not include reasonable payment. That is to say, valuable consideration shall not include reasonable payment for the removal, processing, disposal, preservation, quality, storage, transplantation, or implantation. It clearly

allows it, and it clearly allows payment for it. It specifically says it can be reasonable payment for implantation.

ASSEMBLYWOMAN WEINBERG: Which is done now -- which, I'm assuming they're talking about, now, that it's done with egg donors when women are trying to get pregnant with IVF and using an egg donor.

MR. CASSIDY: Madam Chairwoman, with all due respect, if you do not understand, that this bill allows implantation of cloned human embryo or a -- even an IVF embryo into a woman's uterus for the sole purpose of killing the child. And what I'm really fearing -- and this is what I came here for today -- is that the day is going to come when there's going to be an implantation in a woman of either, and she's going to be told that if she doesn't abort the child -- when she decides -- when that child grows in a womb -- like we have had-- I'm here just to give you my experience. I've dealt with hundreds and hundreds of women, I don't care if it's someone who promised an adoption, someone who promised surrogacy, or someone who thought she was going to have an abortion-- When the day comes when she can't deny she's carrying a human being -- I don't care if it's three months, six months, eight months, and she says, "I can't kill this baby" -- you're going to be in a situation where we are going to be faced with a decision of whether we're going to make a woman have an abortion against her will, legally, or we are going to let a human clone walk the face of the earth and be a citizen in this state.

Now, we can't even touch -- scratch this topic or any of the other things that were talked about today. On a Federal level, we have a President's commission that had hearings for six months. They wrote a 250-page report. They said unanimously that no human clone should ever be allowed to walk

the face of the earth. The report said that there should be no human cloning of any kind permitted for the next four years, until we understand this issue.

ASSEMBLYWOMAN WEINBERG: Mr. Cassidy, I understand your point, and I will make sure that I bring that up with the sponsor of the bill, so that it is clarified that that is not the intent of this bill in any way, shape, or form.

MR. CASSIDY: It should go further than that. It should outlaw it. Implantation and creation from the embryos should be as a separate issue to the other in-vitro issues.

ASSEMBLYWOMAN WEINBERG: Well, implantation of human embryos with in-vitro fertilization is not outlawed.

MR. CASSIDY: No, for the purpose of killing the child in-utero, it is not outlawed, but it should be, because you're going to force a woman to have an abortion against her will, and that's what's going to happen.

ASSEMBLYWOMAN WEINBERG: I will certainly take that up with the sponsor of the bill with the point that you have raised.

MR. CASSIDY: May I make one last point, and then we'll let others talk?

ASSEMBLYWOMAN WEINBERG: Sure.

MR. CASSIDY: I know that there's a leaning towards this bill. It's obvious. And I don't think you've been anything but candid about that. You haven't hidden that fact. I think it's a terrible mistake. One of your witnesses said that this will be the most significant -- and that was his term -- bill of the decade or the century, and I agree. This will be the most significant piece of legislation, because it will place this State, and perhaps the nation, not

into a moral spiral, but a moral free fall. And what will happen to these women who are exploited in this manner-- You will not understand the damage that we do to these women for another couple decades.

And I do not view this as a theological issue. I do not believe that I live in the dark ages. I believe that this is a matter of human rights for the women and the children. And if you won't do it for the children, please do it for the women.

Thank you.

ASSEMBLYWOMAN WEINBERG: Mr. Cassidy, I can assure you that we take that quite seriously here, and that is not the intent. It is not the way we understand this legislation, and if somehow it can be interpreted in that manner, we will take that up with the attorneys who work in the Office of Legislative Services and with the sponsor. And I appreciate your coming forth. And I do understand it is not a theological issue with you. And you're raising a point, which, I think, will demand a little further look and a talk with the sponsor prior to this bill being voted on by the full Assembly.

MR. CASSIDY: And I do point out that, attached to the statement I will give you, is letters from 10 different legal scholars across the country. And I will tell you, these are the brightest people in the country, and if they're telling you this, then the most generous thing that can be said, to whoever is advising you about the meaning of this bill, is that at the very, very least, it is confusing. That confusion has to be totally eliminated, and there should be a clear statement in your bill that all cloning is banned, all implantation is banned.

Thank you.

ASSEMBLYWOMAN WEINBERG: Thank you. And you're leaving that statement with us?

MR. CASSIDY: Yes, ma'am.

ASSEMBLYWOMAN WEINBERG: Okay, thank you.

Pastor Carolyn McCombs.

Was that called earlier while I was out, or no? (affirmative response)

And we are going to have to be out of this room in about 10 minutes. We're going to have to call a vote on this. So if everybody would sum up.

I know you're in opposition, but if you've got any new points--

PASTOR McCOMBS: Thank you, Madam Chair.

I do have a statement prepared, but because my testimony dovetails with the testimony we've just heard, what I'd like to say is that I'm coming representing the voices of poor women who do not have the ability to discern and understand what they might be engaging in.

And what I've heard repeatedly by the scientists is that this will require lots of ovum. Where are all these ovum coming from, not probably from women who are women of means, but women who don't have money, women who don't have any other means of support, who would give their bodies for medical science.

And I'm coming because I've seen the results of this kind of experimentation, with the Tuskegee Experiment and other things that have gone on in the past. And I implore you to please, please hear the voice of

women who do not understand what they are doing when they give their bodies for medical science.

And the last thing that I would like to say is that I believe we have a generational issue here, and the generational issue we have is that we will open the door for experimentation and for research that we will be long gone, and our children, our grandchildren, and our great grandchildren will be left with the results of what we've decided to do here today. And that is what I would like to leave as my testimony.

ASSEMBLYWOMAN WEINBERG: Thank you very much, Pastor McCombs.

Dr. Patricia Morton?

P A T R I C I A M O R T O N , P h . D . : I'm not listed as a Speaker. I simply want to correct--

ASSEMBLYWOMAN WEINBERG: Put your microphone on.

DR. MORTON: I simply want to correct the record. I'm Dr. Patricia Morton. I work with Dr. Wise Young. He would be here today, except that he is in Washington, D.C. He was quoted by an opponent. Dr. Wise Young testified in favor of S-1909, and is a very strong supporter of stem cell research. I think it's important that correction be on the record.

Thank you.

ASSEMBLYWOMAN WEINBERG: Thank you, Dr. Morton.

John Howard, representing yourself.

Barbara Stopa. I'm going to call you up here as a group.

John Howard, Barbara Stopa.

JOHN C. HOWARD: My name is John Howard. I live in South River, New Jersey. I have been in life-saving work for nearly 30 years. In all of those years, what I want to present to you today is my most important effort.

There's a good deal of research gone into this green binder -- all strong evidence to show the successes of adult stem cell research.

Due to the time constraints that are being placed upon us today, I would like to just relay to you several of the examples that I have about the examples and successes of adult stem cell research.

The first one--

ASSEMBLYWOMAN WEINBERG: Again, if you've got new points-- I think we know that adult stem cell research has led to some promising issues, but that has nothing to do-- That's not directly related to what we're discussing. So if you've got something new from the scientific evidence-- I mean, we have to move this along, or we are going to be asked to vacate this room.

MR. HOWARD: From the New Science Archive-- It's called the cell of a revolutionized medicine. The cells were found in the bone marrow of adults by Catherine Verfaillie at the University of Minnesota. Extraordinary claims require extraordinary proof. And although the team has, so far, published little, a patent application, seen by new scientists, shows the team has carried out extensive experiments.

These confirm that the cells, dubbed multi-potent adult progenitor cells, or MAPCs, have the same potential as embryonic stem cells. It's very dramatic, the kinds of observations Verfaillie's reporting, says

Irving Weissman, who was mentioned earlier in this meeting -- the findings (indiscernible) -- are remarkable.

An article by Wesley Smith, a well-known attorney and author, talks about, in Los Angeles -- the transplantation of stem cells harvested from umbilical cord blood has saved the lives of three young boys born with defective immune systems. I have other information here showing that parents -- many -- thousands of parents now are taking the cord blood, and maybe placenta blood, too, but certainly the cord blood, and preserving that -- cryopreservation -- and using it later on, when diseases develop that would require the use of adult stem cells.

One last story. This is the story in the Canadian Sunday *Times*, where parents bagged baby blood for stem cell cures. A little boy named Jesse Farquharson came down with a serious type of brain cancer, which progressed to his eye. They gave him extensive chemotherapy and destroyed his immune system. They revived his immune system with the stem cell blood that was--

ASSEMBLYWOMAN WEINBERG: Again, we do know about the wonders of adult stem cells. If you've got anything new to add to that-- Otherwise, I'd like to ask Ms. Stopa to please speak.

MR. HOWARD: Just one final comment.

ASSEMBLYWOMAN WEINBERG: Thank you.

MR. HOWARD: I think this bill should be reserved for adult stem cells and have nothing to do with embryonic stem cells, because of the solid evidence to show that the future really is in adult stem cell research.

ASSEMBLYWOMAN WEINBERG: Thank you, Mr. Howard.

Ms. Stopa, were you the one with the little child?

BARBARA STOPA: Yes, I was.

ASSEMBLYWOMAN WEINBERG: Where is she?

MS. STOPA: He, actually, is in Room 14, I think, now.

Anyway, I will be extremely brief. I am just a citizen. I'm a lay person. I know nothing about the extensive research except for embryonic stem cells -- which I have a picture of my son when he was two days old in-utero. I had in vitro fertilization done, because I had ectopic pregnancies, four of which I had to have surgeries for.

I had three embryos -- actually eggs -- three eggs fertilized. I left the State of New Jersey because I had to make a choice here in New Jersey to have 20 to 30 eggs fertilized, and could not morally or ethically do that. Having lost children previously, they were children to me, and I could not, in my mind, separate that -- as a child.

So I went to the state of Michigan, where they do research on your eggs and will say -- and let you know if they are healthy and allow you to fertilize as many -- which would also make the need for so many embryos left over in cryopreservation -- really, it would reduce that amount.

ASSEMBLYWOMAN WEINBERG: So are you saying that in New Jersey, you were not allowed to make the decision. You had to have 20 or 30 eggs fertilized?

MS. STOPA: Yes, I am.

ASSEMBLYWOMAN WEINBERG: Was that based upon the particular clinic that you went to?

MS. STOPA: Yes, that was the clinic I called. And I was originally going there, and they told me-- I said, "I only want two or three. Can you

examine the eggs?” They said, “We do not do that procedure. We do not examine the eggs. We will solely hyper-stimulate you to receive the eggs in the ovary, retrieve them, and implant them all.”

ASSEMBLYWOMAN WEINBERG: Oh, 20 or 30 eggs they’re going to implant.

MS. STOPA: Correct. I had 15 eggs.

ASSEMBLYWOMAN WEINBERG: I do know that there are -- that the clinics in New Jersey do -- that there are clinics that do the pre-embryo -- there’s a name for it, which escapes me now-- But they actually can tell which eggs are the most viable.

MS. STOPA: Absolutely. I believe that’s here, as well.

ASSEMBLYWOMAN WEINBERG: So I’m very sorry for your particular issue here, but I can assure you that you didn’t have to leave New Jersey in order to find an appropriate in vitro clinic.

MS. STOPA: Okay, but my point being that there’s no need for 30 embryos in cryopreservation. And, also, you can adopt out, as we’ve heard already, these embryos. And if we cut down the number of cryopreservation, we really don’t need to say, “Oh, what are you going to do with them? Just discard them and put them down a toilet,” as one man had suggested.

Beyond that, stem cell research-- I think that we should expand and fully fund the adult stem cell -- cord blood stem cell.

I want to thank you for your time. You guys all get a gold star in patience. I think this will be the first and probably last time I’ll do something like this.

But I do want to say one more thing. You all have a great, great responsibility before you that I would just hope that you would understand the weight of this legislation. Me, not knowing really anything, could read the bill and understand the potential of cloning and the potential in the embryonic stem cell research.

I would not want to be in your positions, at all. I am sure that you are pressured greatly by many people for financial reasons. That's always an aspect and subject in cases like this.

I will ask you to consider who is the giver, who is the taker of life? Is it you, yourself, or is there someone greater? That's up to you to decide.

I know there is one quote from a book -- and I'm done -- it's called -- well, the quote is, "Before I formed you in the womb, I knew you, as he knows each one of you. Before you were born, I sanctified you." That's from the book called, *Jeremiah*.

I think your decision here is far-reaching than you could ever imagine. And I would just hope that you would do the right thing in your own hearts.

Thank you.

ASSEMBLYWOMAN VANDERVALK: Madam Chair.

ASSEMBLYWOMAN WEINBERG: Assemblywoman Vandervalk.

ASSEMBLYWOMAN VANDERVALK: Ms. Stopa, I think you ought to reconsider. You said you were never going to go to another hearing. You've been an excellent witness, and you provided some very good testimony.

I just want to thank you for being here, especially in light of the fact that you had to come with the boy.

MS. STOPA: Thank you very much.

ASSEMBLYWOMAN WEINBERG: I will join my colleague over here in saying that you have been an excellent witness. And saying, "I'm just a citizen" -- you're really the type of person that we hope to hear from. I know it's not easy for people to get here, particularly somebody with a little, squirming child. We're going to have to set up some kind of day care here for long hearings.

MS. STOPA: I don't know. My tax dollars will go for it. I don't know.

ASSEMBLYWOMAN VANDERVALK: That could be our next bill. (laughter)

ASSEMBLYWOMAN WEINBERG: That will be our next bill. I think Joan, Charlotte, and I are going to put that in, to have a day care for those who come to testify.

So, although we might not always agree, we do realize the seriousness of what we're doing. And we appreciate your patience and your willingness to come forth.

MS. STOPA: I appreciate your patience.

ASSEMBLYWOMAN WEINBERG: Assemblywoman Quigley.

ASSEMBLYWOMAN QUIGLEY: I also want to tell you, you did a great job, and when I came down here the first time, I was, kind of, scared and sitting on that side of the desk. But I ended up over here.

I just want to bring you another perspective, a little bit.

MS. STOPA: Sure.

ASSEMBLYWOMAN WEINBERG: And I just checked what town she was from, whose district, before you go any further. (laughter)

ASSEMBLYWOMAN QUIGLEY: I'm not either a nurse or a doctor, but understanding my -- remembering Biology 101 -- when the giver of life created us women, he gave us each tens of thousands of ova. And I have three children. I don't know anybody that-- The one I know who has the most brothers and sisters had 18. So that means that, in each one of us, there is the potential of another many thousands of eggs.

MS. STOPA: Right.

ASSEMBLYWOMAN QUIGLEY: I've used up all mine. Those that aren't withered -- if they're any good to anyone, they can have them. I'm not going to sell them. I'll give them away. I want to see them used for a cure. So whether women do it voluntarily-- I don't think anybody's going to be put into slavery and have them removed from them. But I think that we can have both. We can have our children, and we can make others well at the same time.

MS. STOPA: I think we can, as well, but I don't think that we need to violate a code of ethics with the potential for a human being. That is really what I'm talking about and my concern is. This is a 2-day-old embryo. We are doing research, from what I understand, on 5-day-old embryos. One of these embryos is my son that you see running around here today. The other two were implanted into my uterus and did not make it, not by my choice, but by the creator's choice, in my view.

I would not withhold the man who is in a wheelchair, the man who has diabetes, extended research on the adult stem cells, and the cord blood, and whatever other ways we can find that -- fully fund it. I agree wholeheartedly, and I'd put the first dollar in. But I don't think through embryonic-- That's my point of view.

Thank you.

ASSEMBLYWOMAN QUIGLEY: We won't persuade each other, so--

ASSEMBLYWOMAN WEINBERG: Thank you, again. And congratulations on the one that did make it. It looks like he's doing pretty well.

John Tomicki, from the League of American Families and, please, Peggy DeRossett, come up.

JOHN T. TOMICKI: Good afternoon. I know you have to have another committee hearing at 2:00. And in light of the fact that serving here, more or less individually, I've been down here for almost 20 years. And I agree with one thing that Assemblyman Cohen said. This is probably one of the most important pieces of legislation you're going to deal with. Therefore, I would urgently request -- even though we know where some of you may already possibly be going -- not completely -- that you not take action on the bill today, that you hold-- And actually, because when we were dealing with the issues of what a persistent vegetative state is -- a nutritional hydration issue -- it went on-- There were many hearings where people got a chance to explore. There was legislation, eventually, that did come out of those hearings, but I think, right now, you're going on to a rush to judgement.

When Assemblyman Cohen starting going, in a raging -- a religious issue -- we're not going to get into that -- but he completely misunderstands *Engel vs. Vitale*. There was no separation of church and state in the Constitution. You've heard enough about the promising area of adult stem cell research. There is a Website, cordbloodstorage.com, which can be-- In other words, you can now log it in, because we know the stem cells -- and I agree with what was said before by Assemblywoman Vandervalk -- on how you're going to describe what adult is. Just a few days, and, boom, you're an adult. Why was this woman, just testifying, been told by the industry, "No, you're going to have 20 or 30." Why did they create that?

ASSEMBLYWOMAN QUIGLEY: That was not the industry. She said that was a particular clinic.

MR. TOMICKI: Well, our experience is -- because our organization, when we had the frozen embryo case that came up first, out of Judge Laskin, up at the Appellate Division, we made it public that we had members of our organization that were ready to stand forward and adopt those children.

ASSEMBLYWOMAN WEINBERG: Well, she might have been at a clinic that does not do -- I don't remember what it's called -- the pre-embryo biopsy that can check the egg before implantation. It's also another step, very expensive, and perhaps she was at clinic that just didn't do that.

MR. TOMICKI: Well, I was trying to answer a new question that you raised, Assemblywoman, what would happen -- when you asked Mr. Bolan what his position would be -- with our organization -- very in the open. We

had people who were ready, and we still have a few now, that are still ready, if that case were ever to arise.

Some of the spokespersons that are in favor of the bill are basically saying, "Well, if you don't implant, the child will die." Now, I noticed that Assemblyman Cohen, every time he used the word *stem cell*, he was afraid to use the word -- and did not use the word -- *embryonic*. So I think the dividing line becomes very clear.

I'm asking this Committee, in light of the brevity of time -- even the Senate had two full hearing days -- I would ask this Assembly to hold further extensive hearings where other individuals -- because now you're, kind of, being rushed for time--

Believe me, Assemblywoman, I know that all of you take your roles very seriously. Nobody would ever say otherwise. But there are some of us that think, in a word, that what's happened now, whether it be implantation, whether it be embryonic stem cell research-- You're taking people, Biology 101-- Human life begins at conception. We're taking people, we're converting them into property for two things, profits and parts. So we're taking people-- We have a new class of untermenchen, a new class of people. And we're going to now define them as property, and we're going to turn them into parts for profits.

I would ask right now, more so than ever, when you hear a trade association coming across saying, "We represent 125 companies--" If this bill were to be held, research does not stop. There is no law, Federal or State, that stops any research. Tragically, we believe that, actually -- we wish we could have a bill in the State banning cloning. But not one bit of research would

stop if this bill is (indiscernible). I would ask you, respectfully, not to have a rush to judgement, to hold and have more hearings extensively, where people don't have to rush.

And I'm going to get out of the way to give other people, in the 12 minutes remaining-- And I'm noting, also, for the record that Dr. Conaway, who I thought would participate more, has, unfortunately, not been here for a good part of the hearings.

So having that said, then, I'm available to questions, which, I'm sure, you don't have. (laughter)

ASSEMBLYWOMAN WEINBERG: Thank you, Mr. Tomicki.

Is Mayor Steve Lonegan here?

MAYOR STEVEN LONEGAN: Yes.

ASSEMBLYWOMAN WEINBERG: I did not see you, Steve, sitting in the back of the room, nor did I come across your name. But as a Mayor in the district which I represent, I would have called you much earlier--

MAYOR LONEGAN: It's okay.

ASSEMBLYWOMAN WEINBERG: --had I seen your name down there.

MAYOR LONEGAN: Madam Chairwoman, thank you for having me today. I want to bring a different perspective from someone who allegedly may benefit from embryonic stem research. I suffer from a condition called retinitis pigmentosa, which I was diagnosed with when I was 14 years old. RP is a slow, or sometimes rapid, deterioration of the retina, resulting, eventually, in total blindness for most people. I drove a car when I was 17 and 18. I stopped driving when I was 19, when I suddenly found an old Italian man

laying across my hood. I didn't even know he was there until he got there. I stopped reading when I was 20.

There's a lot of opportunities that I'm not going to have because of this. I'd love the opportunity to be able to run for higher office, but let's face it, eye contact and being able to see is critical. It's probably one of the most traumatic things you consider -- is going blind. Some people think it's worse than the trauma of dealing with death. And there's a part of me that wants very much to see this type of research move ahead for my own self-interest. But I'm just one person, and there's another part of me that says very strongly that I think the future of humanity and a respect for life is far more important than my own personal situation.

And I'm just here to urge you to-- You had many great speakers before me who had far more detailed things to explain to you, but I think you're going down a path that is extremely dangerous. And as much as I may benefit from it myself, I'm here urging you not to do that.

Thank you.

ASSEMBLYWOMAN WEINBERG: Are there any questions?

(no response)

Steve, thank you for coming down, and my apologies.

MAYOR LONEGAN: Can I ask you for State aid while I'm here?

ASSEMBLYWOMAN WEINBERG: Excuse me?

MAYOR LONEGAN: Got to put a pitch in for State aid.

(laughter)

ASSEMBLYWOMAN WEINBERG: Listen, you can ask. I'll forward that to the appropriate party, by the way.

I'm sorry, I did call you before, yes. Peggy DeRossett.

PEGGY DeROSSETT: Terribly sorry.

I will leave my notes with someone.

I am a person with multiple sclerosis, I am a resident of New Jersey, and a voter.

I still have -- believe in the one-citizen, one-vote stuff. I read this in the *New York Times* about what was going on down here, and I felt I had to come.

Even though I have multiple sclerosis and, supposedly, might benefit from this, I strongly do not want you to vote in favor of this bill. Embryonic stem cells, no; research with analogist stem cells, stuff from my own body, fine. And the data that I have been seeing-- I'm not a doctor, but I'm seeing some very wonderful things about what they are seeing, even with animal experiments with the schwann cells stimulating the regrowth of myelin, which would help people that do not have-- I don't think it would help MS people a lot, but it would help people that have had an accident, and need a one-time growth, not someone that has something completely wrong.

I'm going to stop there in view of time. I'm just thinking of the words of Mark Twain. "Man is the only being that goes forth and exterminates his own kind." For whatever reason, even though we think that's a good thing, no. Please do not vote this way.

Thank you.

ASSEMBLYWOMAN WEINBERG: Thank you.

Marie Tasy, from the New Jersey Right to Life; Peggy Cowan, from the New Jersey Family Policy Council; and Joni Eareckson Tada, founder and President of Joni and Friends.

Are they still here?

You can leave their statement. If they've left, just give us the statement, and we'll put it in.

Marie.

M A R I E T A S Y: Yes, it's Marie Tasy. I'm the Director of Public and Legislative Affairs for New Jersey Right to Life.

Most of what I was going to say has already been covered by many of the witnesses, so I will just talk about the experience I've had since this bill has made its way through the Legislature, because I think it's germane to some of the problems that have occurred.

We had two Senate hearings on this bill. At the first Senate hearing, I pointed out to one of the sponsors that the language of the bill contained somatic cell nuclear transplantation, which is cloning -- which is known as therapeutic cloning. I did say that to Senator Barbara Buono, who responded that if that was the case, she would certainly be amenable to amendments, because that was not their intent, her and Senator Codey.

There was then a second hearing. Christopher Reeve came, implored them not to remove that language. They took all the testimony. At the end of the hearing, they announced that there was going to be amendments to ban human cloning to allay the fears of those people who felt that that was their intent. No one got their hands on the amendments until probably the day before the Senate vote. I don't really believe that the Senate fully

understood what they were voting on, that that amendment -- when they added the amendment to ban human cloning, they actually opened the door to reproductive cloning.

Whether intended or not is not the issue. The issue is that that is the result. So I would like to also add my voice to ask this Committee to please not vote this bill out of Committee, to take another look at the language and realize what it is this bill would do and the implications for it, because it has devastating consequences for all of humanity, not just New Jersey, but globally.

We've seen, in animal experiments with Dolly the sheep -- I mean, how many embryos it took to clone Dolly, and how many of those animals had severe defects, suffered, died shortly after birth. While that might be acceptable in animals, it certainly shouldn't be acceptable in human children. And this bill, the way it's written, could allow a child to be born through cloning, and that's highly irresponsible for the State of New Jersey.

Thank you very much.

ASSEMBLYWOMAN WEINBERG: Thank you.

Any questions? (no response)

Marie, thank you.

Damon Keeley, President and CEO of Hemo Concepts, Inc.; and Anne Perone, New Jersey Committee for Life, please come forward.

D A M O N K E E L E Y: Good afternoon, Madam Chairwoman and members of the Committee.

ASSEMBLYWOMAN WEINBERG: Good afternoon.

MR. KEELEY: First off, I consider it a privilege to be here and to address you all. I'm going to be real brief. I'm a businessman, so I talk in bullets in reality. And I'm in the medical industry in the hospital field.

My company has been in business -- it's a New Jersey corporation -- for 13 years in the area of blood conservation. One of the specialities that we've been involved in is therapeutic apheresis, the harvesting of stem cells from adult cancer patients. That data's there. It's a ready source of stem cells.

I'm qualified in the area of the perioperative blood conservation. Our company really works towards creating programs in hospitals that are leading-edge, benefiting patients' health.

I understand the fact that all of the benefits that are being derived are from adult stem cells, and I've not seen any information contrary to that. I do have some information that I very easily went on to the Web this morning and last night to bring and leave behind.

As a businessman, I deal with many attorneys, and unfortunately, I think, for my wife, I'm starting to think like an attorney and act like an attorney. I would just like to go on record also with Mr. Cassidy, who represented Marybeth Whitehead in *Baby M* -- that from a business perspective, when you look at this legislation, it does open the door for cloning. It does not outlaw cloning. The way it's defined sets forth that, as long as it doesn't go through these various stages, it is not, under this bill, considered cloning. It's that simple.

I would ask-- And I saw the kindness on everybody before. It's a very difficult process, I know. You've got different, varying view points about the pro-life issue and the religious issue, and it gets a little convoluted

at times. But I did see the Chairwoman open up and be very kind. I did see that. I don't know if I'm allowed to ask questions of the Chairwoman, but--

ASSEMBLYWOMAN WEINBERG: No, you're not. (laughter)

MR. KEELEY: Let me make it a statement then.

ASSEMBLYWOMAN WEINBERG: This is the only place where I can say that to somebody, by the way.

MR. KEELEY: I'm not from your district. I would like to say I appreciate your honesty and the integrity that you showed to me earlier, when you said if you even suspected that it had that potential, that you would look to amend this legislation. So I would ask that you seriously look at it, even today -- and if it even has the slightest possibility to do something like that to the people of New Jersey -- then I would ask you to amend that bill and eliminate the possibility, in very strong, definite terms, to have any type of human cloning, whatsoever.

Thank you very much.

ASSEMBLYWOMAN WEINBERG: Thank you.

Anne Perone.

ANNE M. PERONE, ESQ.: Hello, my name is Anne Perone. I'm an attorney. I also was on the Bioethics Commission for the State of New Jersey, and I'm also the President for the New Jersey Committee for Life. We have 160,000 people in our mailing lists that we regularly communicate with.

First of all, I'd like to agree with the analysis by Harold Cassidy. Harold Cassidy and I were adversaries about 15 years ago, and I really respect him. And I came to the same conclusion about the amendment regarding the cloning language. And it says the replication of a human individual by

cultivating a cell with genetic material through the egg, embryo, fetal, and newborn stages into a new human individual.

The word *and* is conjunctive. That means it's not a human individual if it doesn't go through all these stages: egg, embryo, fetal, and newborn stages. Legally, *and* is conjunctive, *or* is disjunctive. And because of that word in there, people could implant a cloned embryo and abort it at eight and a half months and use the body parts, and they would not be selling the body parts, but they would be paying for transplantation, processing, and services.

They're doing that right now with aborted fetuses. Supposedly, you're not supposed to sell body parts, but there's a big industry that has been reported over and over throughout the country, where body parts of aborted fetuses -- they're not paid for, but everybody who does any service, whether they store them, transfer them, implant them, and so on -- they're all getting money. So it's a big business. And this particular part of that amendment would continue embryo baby farms, cloned embryo baby farms, using parts for scientific purposes, I assume. They may be using them to implant them in -- for body organs for other people. You only need a small bit of liver to grow another liver, but you can also get livers from adults.

Our group also supports the adult stem research. That has been shown successful many, many times over. And as a matter of fact, I was very touched by the gentleman who was in the wheelchair here, because he said he wouldn't want to walk, he would want to have bladder control. And I'd just like to let -- I let him know after his testimony, but I'd like you to know also, that on June 15, 2001, the *Globe and Mail* from Canada reported a wonderful

story that provided for people with spinal injuries -- a paraplegic, Melissa Holly (phonetic spelling), age 18, became disabled with her spinal cord, which was severed in an auto accident, the same as that gentleman.

After Israeli researchers injected her with her own white blood cells, those are adult stem cells, she regained the ability to move her toes and also control her bladder. I'm going to give this material to him, because there are so many positive results in adult stem research, and there hasn't been one with the embryonic stem cell research.

And it's just countless. I mean, if you go to the Internet or go to any organization that's involved with this, they're just saying we hope, we this, we that, maybe in 10 years. Right now, human stem cells are being utilized very, very successfully. There's no reason why we have to jump over this moral divide.

Speaking personally, I have Diabetes 2. I would never want to do what this bill states. You don't have to do that, because there are so many other things going on with adult stem cell research.

Furthermore, they talked about Parkinson's. Parkinson's is the result of having too little dopamine to the brain. The opposite of Parkinson's is schizophrenia, which is too much dopamine to the brain. I have a son -- he passed away in December -- who had schizophrenia for over 20 years. And there's no way that I would allow him to even consider embryonic stem cell research.

The results that have been spelled out in different areas around the world, and one that really disturbs me, is one that happened in China, where they injected fetal brain tissue into a person with Parkinson's. And that person

did well for about 18 months, and then died of a tumor of the brain. When they examined that tumor, the tumor, because it was from an embryonic source, had diversified, or differentiated, into teeth, hair, and other body parts. This is a totally unexplored area, and it's dangerous. And I don't think, with one day of hearings, that this Committee has enough information to take a vote. I think that you need more hearings, more research, to make a calculated, intelligent vote.

This bill says it outlaws cloning, but in reality, the second paragraph about somatic cell nuclear transplantation, although it does not say cloning, that's exactly what cloning is. It's taking out the nucleus of an egg and putting in genetic material from another source. And then you produce a clone.

ASSEMBLYWOMAN WEINBERG: Ms. Perone, thank you very much. Again, I will assure you that we will take up, with the sponsor, before this bill comes to the floor, the question of whether or not the implantation sentence in this leads to the kinds of things that Mr. Cassidy has talked about. So we will be discussing that.

Now we've got five more speakers. I'd like to give them all a turn to come up here and give us a sentence or two.

MS. PERONE: I just have one thing--

ASSEMBLYWOMAN WEINBERG: Sure.

MS. PERONE: --that I would like to show you, because you asked the question, what do we do with those fertilized frozen eggs that are -- or embryos that are in storage. Here is a picture of two twins, Sam and Ben Hutchens. They were adopted when they were frozen embryos. Their parents

testified in Washington. There are 18 of these babies that have been born because they've been adopted from an agency called the Snowflake Adoption Center, the snowflake meaning a frozen embryo. It's perfect and different in all ways, and they become babies.

ASSEMBLYWOMAN WEINBERG: Ms. Perone, that is very good, and there are probably thousands upon thousands of these fertilized eggs. And we don't have enough adoptive parents for children who are here, so let's not get into the area of adoption -- foster care.

MS. PERONE: But these are women who are childless, but want to have a child.

ASSEMBLYWOMAN WEINBERG: Anybody who has a fertilized embryo who wants to donate it to another couple, I think that's fine and wonderful, and they should go ahead and do it, but that's not what this bill addresses.

Damon Owens, Life, Education, and Resource; Carolee Adams, disabled citizen.

Mr. Owens first.

D A M O N O W E N S: The red light is on. (referring to PA microphone)

My name is Damon Owens. I represent LEARN: Life, Education and Resource Network. We're a national network of independent black pro-life organizations. And we have a large affiliate here in New Jersey. We're here to speak specifically about the dignity of the human person -- has been spoken in the opposition, through many of the previous speakers, and the dignity of life, beginning at conception.

What I'd like to talk about, specifically, has not really been discussed, and probably wouldn't be, is what my organization is concerned about on the issue of cloning. And I want to thank Madam Chairwoman for addressing that it will be addressed with the sponsors.

I want to add that our concerns, specifically, in addressing this issue to the black community is -- it's pretty clear, based on the short history of the abortion industry in the last 30 years, and the disproportionate effect of abortion in the black community, specifically 11 percent -- 12 percent of the population providing over 36 percent of all the abortions. And we have a stake in the case that this does go forward as a cloning issue, where the woman, the community -- the most affected community, likely, would be those who would profit or make some money from the ability to, basically, rent their wombs.

I just want to make it clear to the group here, that in consideration of that cloning issue, our organization is primarily concerned about the effect in the black community, and that any attempts to create an industry similar to what has happened in the abortion industry and the disproportionate effect-- Our organization will be mobilized to address that. I just wanted to make that clear.

ASSEMBLYWOMAN WEINBERG: Thank you very much, Mr. Owens.

Carolee Adams.

CAROLEE ADAMS: Carolee Adams. I am a disabled citizen. I just thought I'd bring that along as proof. I lived in Jersey all of my life.

I'm here to represent the family Adams. I have had ankylosing spondylitis, a very unsexy disease, which is more commonly known as

hunchback, since, probably, the early '70s. It was misdiagnosed until the 1990s. And my son also has ankylosing spondylitis. He was treated by Tomorrow's Children at Hackensack University Medical Center.

In addition to that, I have also suffered from Graves' disease, thrombocytopenia, Shroeven Syndrome. My husband has skin cancer. My father died. He had leukemia. He died, of course, from a heart condition. My father-in-law had Parkinson's disease. And my mother-in-law has cancer, yet we still train a seeing-eye puppy, because we know that people are far worse off than we are.

I just want you to know that I oppose this for a variety of reasons, all mentioned here before. There was one that, perhaps, hasn't been mentioned. I'm going to talk about something. I find it rather ironic -- in fact, rather incredulous -- that today we're talking about something very -- we're galloping head forward, while we have physicians outside -- I believe they're outside -- picketing and going on strike so that a baby, perhaps, couldn't be easily delivered today, because we have suffered from malpractice suits. I can just imagine the amount of malpractice suits that would incur from people who have their hopes raised very high by stem cell research, which has been -- failed repeatedly. So I would ask you to really consider that malpractice suits would probably become more prevalent in the future.

I cannot get the medication that I want for my disease. There's something called Remicade, as an example. Remicade is a very expensive drip method in which -- for ankylosing spondylitis -- is not prescribed by the insurance companies.

We have an insurance care crisis in this state, and I think that that's something that has to be addressed long before we just gallop forward on something we can't handle. Remicade is an example that can be prescribed for people who have rheumatoid arthritis. Rheumatoid arthritis is not what I have. However, I do know people who have wonderful doctors who give them prescriptions for Remicade, and put down that the diagnosis is rheumatoid arthritis when they have ankylosing spondylitis. It's a major issue.

I would have brought a friend with me today. She has MS, her daughter has MS, her other daughter has MS. She would oppose this. And I know you've been very kind in allowing me to testify at this last opportunity. And I would just ask you just to listen to this very brief quote by Helen Keller. And the other thing is, too, I have iritis. That's another part of my ankylosing spondylitis, which stems from my neck to my toes. There are good days, and there are bad days. And this day is getting very bad for me from sitting so long. So my eye sight is under great risk, as well.

"The marvelous richness of human experience would lose something of rewarding joy if there were not limitations to overcome. The hilltop hour would not be half so wonderful if there were no dark valleys to traverse."

I will be honest with you that this book, which comes -- it's a preface to Christopher Reeve's *Still Me*. I would say to you that the dark vallies of my disability are far brighter than the dark vallies I think we're traversing here regarding human cloning and regarding embryonic stem cell research. I support adult stem cell research. And I would ask that we would, perhaps, reach that higher ground of understanding and looking at things in

a much more practical way. We're not attending to the practicality. Indeed, I love science. I absolutely adore science. I should have been a scientist, but I wasn't lead in that direction. I was a banker.

So I would ask you to please seriously consider that there are higher grounds to be reached, and this is not one of them. I do not see that.

Thank you so much for your time.

ASSEMBLYWOMAN WEINBERG: Thank you very much, Ms. Adams.

Reverend James A. Kuykendall and Michael J. Donnelly and Seriah Rein. And that will be the end.

UNIDENTIFIED SPEAKER FROM AUDIENCE: Assemblywoman, the first individual you mentioned had to leave.

ASSEMBLYWOMAN WEINBERG: I'm sorry, I can't hear you.

UNIDENTIFIED SPEAKER FROM AUDIENCE: I'm sorry. The first individual that you mentioned, I believe, left a while ago.

ASSEMBLYWOMAN WEINBERG: That's Reverend Kuykendall?

UNIDENTIFIED SPEAKER FROM AUDIENCE: Yes.

ASSEMBLYWOMAN WEINBERG: And you're Michael Donnelly?

MICHAEL J. DONNELLY: Thank you, Madam Chairwoman and members of the Committee. Very briefly, I came here in 1969 because of the wonderful drug industry in New Jersey and worked my entire career for Sandoz Pharmaceuticals.

This is a subject that I don't think has been touched at all. The potential for abuse of this law is unbelievable. I worked in the drug industry as one who was -- who did the data processing for the control of human drug trials. It was a constant battle for integrity and honesty, because there was so much money being thrown around.

I worked for a trial in Maryland, the Framingham Study of 5,000 patients across the United States. I worked for the university group diabetes project. And I wrote the program that is still used today to monitor clinical studies by my company. I also had to blow the horn, terrified as a young intern, at the Sandoz Pharmaceuticals against a doctor -- a very highly reputable doctor -- I didn't even know who to go to -- because he was allowing one of the clinics to falsify, to enable enough patients to be enrolled to study in the midst--

ASSEMBLYWOMAN WEINBERG: Mr. Donnelly, back to the bill. I don't think we're suggesting in this bill that there be falsification of data. So if you would get back to the subject of this bill--

MR. DONNELLY: In the midst of that, we had the crisis of prisoners being unwillingly used for experimentation against their will.

This is a clear case of, as Dr. Black pointed out -- you start at the top of that chart, or the zygote. Every single human being here, and has ever lived, started there. And they all have the potential to either become a fully developed human being, or, if somebody interferes with that, not. There is nothing else that that zygote can become, and you couldn't have come from anything else.

If the onus is properly placed, the onus is on the people who advocate the unrestricted, basically, killing of human beings at that earliest stage. The onus is upon them to prove this is not a human being. And if so, doctor or scientist, when does it become a human being. And when, in the name of God, does it ever have protection.

The last thing is, I really -- forgive me -- felt hurt and resentful at the implication that people who happen to believe in God -- and interestingly, one of the first things that the good senator (*sic*) said was, "God willing, I should live to be that age." The implication that we -- that could be taken in some places in this area -- that we are less than intelligent, that we are archaic-- I happen to freely acknowledge God in my own particular way.

This is not a theological issue, folks. It is a scientific fact issue. And those who are advocating this simply don't have the facts to justify what they want to do. I suspect most of you know that after today's hearings. And if you violate that truth, the implications for New Jersey, for mankind, are atrocious.

Lastly, I'm sorry, please watch the movie -- 1949 -- *Judgement at Nuremberg*. Good, highly intelligent, brilliant men were seduced into calling people who were insane or less than fully sane as nothing other than things that could be, (a) sadly enough killed, or (b) experimented upon. This bill -- you won't believe me -- it could end up there.

Thank you very much.

ASSEMBLYWOMAN WEINBERG: Thank you, Mr. Donnelly.

Dr. Rein.

SERIAH REIN, D.C.: Yes. Thank you for your time. We've all been sitting here.

I happen to have been the first one in the room this morning. It's ironic I'm the last one to speak.

ASSEMBLYWOMAN QUIGLEY: Our apologies.

ASSEMBLYWOMAN WEINBERG: That will show you.

DR. REIN: It's been a long session.

I concur with Senator (*sic*) Cohen's remarks, that this, indeed--

ASSEMBLYWOMAN WEINBERG: It's Assemblyman. Even God could not elevate him. He is an Assemblyman. (laughter)

DR. REIN: Assemblyman, excuse me.

I do concur with his remarks that what we are deciding today is, perhaps, the most important, significant legislation of the century, and this is why we come before you today. I would also say that the remarks of the gentleman from Robert Wood Johnson, who is for this legislation, to me, gave the greatest validity as to why this legislation is premature and not well thought out.

I wrote briefly-- I mean, remember the title -- he had the potential advantages of bone marrow stem cells. These were the advantages of the adult stem cells. And he said, "Well, it eliminates immunosuppression, you have safe tissue access, you have a wonderful robust growth, you have no genetic defects, it even obviates the ethical concerns which you've heard expressed. There's no genetic mutations." In other words, all of these things have been happening in embryonic stem cell research. I was amazed.

UNIDENTIFIED SPEAKER FROM AUDIENCE: Adult.

DR. REIN: Did I just say-- I'm a little tired and very hungry. I apologize.

All of these issues -- we can draw a strong case as to why we should stay away from embryonic stem cell research. I would again encourage you to consider the remarks of Harold Cassidy, who went to the trouble of collecting 11 different statements of some of our finest legal scholars throughout the country in pointing out the problems with the way this bill is written.

I'm going to be just skipping over what I was going to say, because of everything said, but please remember the only way that human stem cells can be harvested is by killing the embryo.

I would also say that considerable fortunes can be made at the expense of the most helpless. Though I am not personally a Catholic, I noted that Pope John made the charge that considerable fortunes can be made also.

While this bill supposedly prohibits financial gain, I would ask you to consider that the financial incentive for those who market these tiniest human beings is absolutely awesome, especially given all the exceptions to financial gain defined in the bill as "valuable consideration." Who defines reasonable payment for all of these exceptions? An appointed ethics review panel also troubles us as opposed to an elected review panel. Who chooses those that would sit on such an important panel for accountability as to how the specifications of this legislation would be carried forth?

The burden it puts on a couple that is seeking in vitro fertilization has been expressed, and I concur. To approach a couple that is so committed to creating life and suggest to them that they should, perhaps, consider donating the other embryos that would result in death is very bizarre to me.

I would quote something by Dr. O'Mathúna, Ph.D. and a fellow at the Center for Bioethics and Human Dignity -- saying, "Human embryos are living human beings in their earliest stage of development. They are more than just biological specimens." The CBHD recorded that, "An international scientific consensus now recognizes that human embryos are biologically human beings beginning at fertilization and acknowledges the physical continuity of human growth and development from the one-cell stage, forward. Human embryos are humans and, therefore, persons. And when an embryo is destroyed, a human life is extinguished."

Science Magazine said we must, as a civilized body, understand, also, that stem cells are not just found in the earliest stages of human development, but exist within the adult human body, as well. The most current research has clearly demonstrated the adult stem cells, and you've heard all afternoon the superiority of the adult stem cells. And the most exciting news is that they can differentiate into different organ systems, different bodies. A very serious problem with embryonic, as you heard in this tumor formation, is they seem to have a memory. And when they're transplanted somewhere else, you can then see teeth and hair in a brain tumor, of all things.

I would urge you to truly look at this bill and be impacted by just the passion and the testimony you've heard today.

I thank you for your time, and I pray, I sincerely pray, that you will make the intellectually correct decision and the right moral decision from a scientific and a theological perspective. Because, make no mistake about it, while there are strong medical considerations, there are strong theological considerations.

Thank you very much.

ASSEMBLYWOMAN WEINBERG: Thank you, Dr. Rein.

Are there any questions? (no response)

Okay, can I have a motion and a second, and then we will--

ASSEMBLYWOMAN QUIGLEY: Move the bill as amended.

ASSEMBLYWOMAN WEINBERG: --have a discussion?

Yes, we will be amending the bill to concur -- to make it identical to the Senate bill.

Second?

ASSEMBLYMAN GUSCIORA: Second.

ASSEMBLYWOMAN WEINBERG: Comments?

ASSEMBLYMAN GUSCIORA: Yes.

ASSEMBLYWOMAN WEINBERG: Assemblyman Gusciora.

ASSEMBLYMAN GUSCIORA: Thank you, Chairwoman. I appreciate the opportunity of substituting on the Committee today. I came here particularly when the subject-- I was interested in the bill. I don't have any financial stake in the outcome of this, and I don't think any of us can claim any moral or religious convictions over anyone else.

My grandfather used to live in Bergen County. He passed away a few years ago.

ASSEMBLYWOMAN WEINBERG: That's why you came from such good stock. (laughter)

ASSEMBLYMAN GUSCIORA: He was 101 years old. He immigrated through Ellis Island. But when he was 92, he had to go into a nursing home, because he suffered from dementia. So from the age of 92 to

101, I recall the frustration and the pain of my parents when we went to visit him. And we all went to visit him on every single holiday -- Easter, Christmas, Thanksgiving -- to spend time with him, even though he didn't recognize us. Particularly, what was very painful for my mother is the fact that he didn't even recognize her for eight years.

My aunt, who is a widow of a World War II vet, went through Normandy invasion, she sits in a veteran hospital. She has Alzheimer's. My dad, for the last two years of his life, was in a nursing home, because he suffered from the effects of diabetes and kidney failure. And I even have a committee woman in my district that lives a couple of miles, here-- She started to suffer from the effects of Alzheimer's. She still comes out to party functions with her husband, but it's also painful to watch the agony, as he loves his wife and sees her deteriorating.

I think -- I support this bill wholeheartedly for many reasons, but I think this offers the one great hope to alleviate the pain and suffering that many families and people, as they watch their loved ones deteriorate from their condition and die -- that we can alleviate their pain and suffering. I think this is a good way, a good first step. This may not be a panacea, but, yet, it's a good first step. I've heard many reports and studies on stem cells and the potential is there, and I wholeheartedly support this legislation.

Thank you.

ASSEMBLYWOMAN WEINBERG: Thank you, Assemblyman.

Any other comments?

Assemblywoman Quigley.

ASSEMBLYWOMAN QUIGLEY: I respect the opinions of those who think that this is not a good bill on the basis of morality or theology. I may never persuade them that my point of view is that what I think God wants, and I don't speak for him, is for us to use all of the knowledge, all of the abilities he gave us to help the people he has already given life to. Many of those people are suffering.

But I don't agree with the people who have said that we should vote against this bill on the basis of science, because almost without exception, they have said there's no proof. Well, there will never be proof without research. And I think research is necessary. That's why I strongly, strongly support this bill.

ASSEMBLYWOMAN WEINBERG: Thank you very much.

I think we've been here for about four hours -- a little bit less than four hours. This is the third hearing that's been held on this bill, two on the Senate side. We received most of the testimony. A lot of the research-- I think, Assemblywoman Quigley is holding up some of the material that we have received and were given by both our staff and by the hearings that were held on the other side of the aisle.

I too respect those who have theological problems with this bill. Those are the kinds of issues that we face in much of the -- not much of, but certainly some of the legislation that passes through this Committee. And we've always tried to be respectful of one another.

Having said that, we have heard from the scientists from Robert Wood Johnson and the laboratories that are involved -- Coriell Institute -- and I think there's enough science that has been presented to us, as well as the

information we got from the state of California, which also passed this bill. And I, again, want to compliment the sponsor for having put it forth. I'm hoping that we're going to have the votes today to release this bill from Committee. I have passed on to the sponsor Mr. Cassidy's testimony. And I can assure you, if there's anything relevant in there to talk about the implantation of clones, particularly under some kind of a forced scenario, we will be addressing that before this bill comes to a vote before the Assembly.

So having said all of that, I would like to ask David to do the roll call, please.

MR. PRICE: On both the bills?

ASSEMBLYWOMAN WEINBERG: Yes, this is on both bills. We're making the Assembly bill identical to the Senate bill.

MR. PRICE: On A-2840, as amended, and S-1909 1-R, Assemblymen Gusciora, Green, and Conaway are recorded in the affirmative. Assemblywoman Vandervalk.

ASSEMBLYWOMAN VANDERVALK: I cannot support this bill. I'm going to abstain.

MR. PRICE: Assemblyman Thompson.

ASSEMBLYMAN THOMPSON: Abstain.

MR. PRICE: Assemblywoman Quigley.

ASSEMBLYWOMAN QUIGLEY: Yes.

MR. PRICE: Assemblyman Johnson.

ASSEMBLYMAN JOHNSON: Yes.

MR. PRICE: Assemblywoman Weinberg.

ASSEMBLYWOMAN WEINBERG: Yes.

MR. PRICE: The bill is reported.

ASSEMBLYWOMAN WEINBERG: Thank you.

(HEARING CONCLUDED)