Committee Meeting

of

ASSEMBLY HEALTH COMMITTEE

"Testimony on cloning-related research"

LOCATION: Committee Room 15
State House Annex
Trenton, New Jersey

DATE: May 4, 1998
1:00 p.m.

MEMBERS OF COMMITTEE PRESENT:

Assemblywoman Charlotte Vandervalk, Chairwoman
Assemblyman Nicholas R. Felice, Vice-Chairman
Assemblyman Francis J. Blee
Assemblyman Samuel D. Thompson
Assemblywoman Barbara W. Wright
Assemblyman Herbert C. Conaway Jr.
Assemblywoman Joan M. Quigley
Assemblywoman Loretta Weinberg

ALSO PRESENT:

David Price
Office of Legislative Services
Committee Aide

Natalie A. Collins
Assembly Majority
Committee Aide

Kevin Jarvis
Assembly Democratic
Committee Aide

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ASSEMBLYWOMAN CHARLOTTE VANDERVALK (Chairwoman): Good afternoon, everybody. We're going to get started. We have, I think, a very interesting agenda today. We're going to start with a hearing, taking testimony only. There's no legislation involved, simply taking testimony on the subject of cloning. And this is done at the request of Assemblyman Sam Thompson, and I certainly agreed with him, and so it's on the agenda.

We will proceed, I guess, Dr. Gillian Woollett and Dr. Joseph Sorrentino.

It was my understanding you wanted to come up and testify together. Is that correct?

G I L L I A N R. W O O L L E T T, Ph.D.: Okay, good afternoon. My name is Gillian Woollett, and I'm the Assistant Vice President for Biologics and Biotechnology at the Pharmaceutical Research Manufacturers of America, PHRMA. That's the trade association of the research-based pharmaceutical industry. I'm pleased to have the opportunity to share the views of PHRMA at this hearing on human cloning.

First, we appreciate the subject of the cloning of humans raises very complicated, moral, ethical, religious, and scientific questions, and we welcome the opportunity to work with you as you deliberate about these very important issues.

Second, the pharmaceutical and biotechnology industry does not clone human beings and does support a voluntary moratorium on any such cloning. PHRMA signed on to the President's call for a moratorium in early 1997.

ASSEMBLYWOMAN VANDERVALK: Excuse me.

Could we make sure that door stays closed. The hallway is rather noisy. So whoever is nearby, you're on duty.

Thank you.

MS. WOOLLETT: PHRMA signed on to the President's call for a moratorium in early 1997, shortly after the announcement on the cloning of the sheep, Dolly. We continue to maintain this position and believe that the moratorium is the appropriate approach.

Third, the reason we are here this afternoon is our ongoing concern about the risk to biomedical research posed by legislative proposals in the U.S. Congress and in many of the states. We appreciate that Assemblyman Thompson has said that any legislation on cloning should protect biomedical research. This research can yield medicines that help patients live longer, healthier, happier, and more productive lives.

However, we remained concerned whether this goal will, in fact, be realized. To the extent that a promising avenue of biomedical research may be impeded or even foreclosed, the dreams of patients and their families, throughout America and the world, would be disappointed. To which, the cloning of human genes, cells, and tissues must be protected by any legislation that bans the cloning of entire human beings.

Let me briefly describe why research could be impeded or foreclosed by legislative (indiscernible) on the use of specific technologies.

While nothing in scientific research is guaranteed, the techniques becoming available through genomics are allowing a fundamental understanding of the basis of a variety of human diseases. The understanding

of the molecular basis of disease allows prevention of disease, especially genetic ones, as well as treatment and cure, to be real possibilities.

Biotechnology, using cloned genes and cells, is allowing the creation of replacement proteins that cannot be made by any other means. These proteins can be made in unlimited amounts and carry virtually no risk of transmission of disease, unlike products derived from human tissue donors. The possibilities for gene therapy, while yet to be realized, represent legitimate dreams for those families who carry genes for devastating diseases.

Cell-based therapies, with immunologically customized replacement cells and tissues, offer hope for burn victims, patients with spinal cord injuries, and others on long organ transplantation waiting lists. Sematic cell nuclear transfer may offer the means of customizing such replacement cells and avoiding problems with tissue rejection and immunode-suppressive drugs for life.

I'm lucky. I happen to have an identical twin, and therefore, a certain number of spare tissues are available to me. But most people don't. I cannot overemphasize enough that the results of future research are necessarily conjecture. But to ban scientific techniques that are being used for good research because they could be used for bad research is like banning knives because they could be used to kill when they are likewise used for surgery and, incidentally, forgetting that other techniques could also be used to achieve the bad outcome.

Finally, we at PHRMA do not believe that legislation is necessary to prevent the cloning of human beings. For instance, FDA has already asserted authority. However, we do welcome the opportunity to work with you

regarding any legislation you consider here in New Jersey. We would not forget -- we should not forget that we all agree that the cloning of human beings is inappropriate and that, therefore, this is what any legislation, if there is to be legislation anywhere in the country, should specifically do.

Our goal in this effort is to protect biomedical research and the hopes for patients with medical needs and their families. As you deliberate about any legislation to clone -- to ban the cloning of an entire human being, we urge as narrower a ban as possible and as broad a savings clause as possible to protect biomedical research and therapy that may involve the cloning of individual cells, genes, and tissues but not the genetic duplication of existing or previously existing persons.

If you have any questions, I'll be happy to answer them.

J O S E P H M. S O R R E N T I N O, Ph.D.: My name is Joe Sorrentino. I am a Vice President for Biotech -- Vice President and counsel for Biotechnology and Patents at Bristol-Myers Squibb. We are in agreement with everything Dr. Woollett just said. We feel that cloning offers a tremendously important tool for biomedical research. Again, we also agree that cloning of whole human beings is not something that we desire or that the pharmaceutical industry would likely pursue because, quite frankly, there's no profit in it.

In order to put any restrictions of cloning on -- restrictions on cloning or the use of recombinant cells and gene therapy and gene uses would impede a tremendous amount -- the advancement of biomedical research.

Cloning, in its research capacity, is primarily used for the generation in animal studies of duplication of exact animal research, whether it be mice or goats, that can be used to monitor and compare various drugs.

If you're comparing four or five drugs in (indiscernible), it's always possible that the difference is maybe due to individual differences of the organism; whereas, if they are cloned, they should behave exactly the same.

The use of insertion of genes, whether they be human genes or animal genes, into cells to either produce proteins, as is being manifested by many of the developing biotech companies around the country and the world, such as the reproduction of recombinant insulin, growth hormone, erythropoietin for the treatment for the treatment of kidney disorders and blood plate elevations -- Bristol-Myers feels that the FDA is probably the appropriate organization to regulate this, as they regulate all other drugs and medical techniques. And basically, if any legislation is imposed to restrict cloning, it should be narrowly construed, so it does not interfere with the beneficial aspects of cloning research.

Again, to paraphrase what was just said, the possibilities that techniques can be used in a less desirable, or even unacceptable, manner should not preclude the fact that those techniques should exist. The pharmaceutical industry is not interested as far -- at least Bristol-Myers Squibb is not interested in being a duplication of Dr. Frankenstein's lab. We're not going to make monsters. We're not going to clone human beings. Our research is primarily directed to production of new drugs and development of tissues which could be used for transplants and immunological disorders.

Thank you.

ASSEMBLYWOMAN VANDERVALK: I'm sure I have lots of questions, but I'm not sure I should ask them now. Maybe we should just complete with the rest of the testimony.

Assemblyman Thompson?

ASSEMBLYMAN THOMPSON: We prefer to wait till they all--

ASSEMBLYWOMAN VANDERVALK: No, I'm not suggesting--I'm suggesting I will withhold--

ASSEMBLYMAN THOMPSON: The advances that have been made in cloning in recent years have been rather phenomenal, and as you indicated, the potential benefits that could be achieved for mankind are almost boundless. Some of the things that have occurred in recent years, of course, have caused a great deal of concern for many people, primarily related to human cloning. And this has, of course, led to the introduction of legislation in many states related to cloning, as well as several bills in Congress. As we have seen, some of these bills were rather hastily drawn and, in part, exceeded the restrictions they imposed -- probably exceeded what they were hoping to achieve.

Of course, that is one of the things we are looking for here is guidance and recommendations as to how to draft the bill to bar human cloning, but, at the same time, assure that we do not impede the research that can lead to the many other beneficial uses available.

So, if you are -- some of your attorneys, when you get back, have some recommendations for language that would achieve that, I would be more than happy to hear from you.

ASSEMBLYWOMAN VANDERVALK: Dr. Sorrentino, you mentioned a phrase, development of tissues, I think you said, for neurological purposes. Could you expand on that a little bit?

DR. SORRENTINO: I actually said immunological purposes.

ASSEMBLYWOMAN VANDERVALK: Oh, immunological.

DR. SORRENTINO: Immunological purposes, primarily, skin transplants; possible bone marrow can be done that way. As techniques advance, other tissues, possibly even organs, pancreas -- pancreatic cells, etc.-- Also, gene therapy can be utilized for treating various inherited disorders. Such as, if a child is born with an inherited -- inborn irrometabolism (phonetic spelling) -- missing a particular enzyme, a gene for that can be inserted, say, into the liver to counteract that, such as--

DR. WOOLLETT: I think there is certainly one thing to emphasize. None of this stuff is actually trivial to do. So when we talk about replacement tissues, you necessarily have to start with the simple ones first. And already I think on the market is a therapy that uses cartilage cells, crondosites (phonetic spelling), from an individual to grow replacements for that individual. There are certainly moves on skin because skin is a structurally simple tissue.

And the idea on spinal cord is that once you're born, you have the number of neurons you're going to have for life, so if you get injured, you can't replace them. So you're looking at, is there a way to create bridging neurons that can bridge the break? And because of, obviously, the devastation of spinal cord injuries, that would be a priority. Plus, the tissue, in principle, would be very simple because it doesn't have a hard (indiscernible) structure.

The idea of pancreas would be on the cells for diabetics for the idea of structurally creating an entire organ is a long way off.

DR. SORRENTINO: Wait.

DR. WOOLLETT: That is something that is not readily available tomorrow. That's not something that is going to happen immediately. It will be the simple tissues first, particularly for burn victims.

ASSEMBLYWOMAN VANDERVALK: Assemblywoman Quigley.

ASSEMBLYWOMAN QUIGLEY: Dr. Gillian -- I forgot your last name.

DR. WOOLLETT: No problem, my first name works well.

ASSEMBLYWOMAN QUIGLEY: You had mentioned that your organization does not support the cloning of whole human beings. However, I would like to ask where you stand on the possibility of cloning for use in fertility problems.

DR. WOOLLETT: I don't think PHRMA has a position, per say. I mean, obviously our main concern has been -- is drugs and therapies for unmedical needs of existing human beings. So PHRMA companies are not involved in the assisted reproduction side of things other than, I guess, in the availability of certain hormones or whatever, but we have no policy, per say, on this issue, reproduction.

ASSEMBLYWOMAN VANDERVALK: Well, thank you very much.

Dr. John Gilly? Gilly?

How do you pronounce it?

JOHN A. GILLY, Ph.D.: Gilly.

ASSEMBLYWOMAN VANDERVALK: And Patrick Kelly.

I don't know if you wanted to come up together.

PATRICK M. KELLY: Yes.

ASSEMBLYWOMAN VANDERVALK: Welcome.

MR. KELLY: Thank you for the opportunity to be here this afternoon. Please bear with me, I've got kind of a nasal cold, and I may get a little stuffed up.

Thank you for the opportunity again to speak with you today regarding the importance of medical research and how it relates to the issue of human cloning. On behalf of the Biotechnology Industry Organization, I would like to state, for the record, that as an industry, we are opposed to the cloning of entire human beings.

At this time, we see no ethical or medical justification for replication of an existing or previously existing human being. We agree with the findings of the National Bioethics Advisory Commission that it is unacceptable, at this time, for anyone in the public or private sector, whether in a research or clinical setting, to create a human child using cloning techniques.

BIO is the national trade organization representing over 750 biotechnology companies, academic institutions, and State biotechnology centers. The biotechnology industry employs over 140,000 people across the United States and is the most research-intensive industry in the country on a per employee basis.

BIO works closely with the Council -- the Biotechnology Council of New Jersey to represent the more than 90 companies and estimated 5000 employees in the biotechnology industry in the state.

Although cloning has been a very visible issue in the media, the actual scientific process that allowed the creation of Dolly, the sheep in

Scotland, is far from safe or ethical for use in human beings. However, some of the technologies used to create Dolly are part and parcel of the science employed every day by biotechnology companies across the United States and in New Jersey to develop treatments for disease.

Medical research has taken quantum leaps in the past decade. Scientists are identifying and developing the cures to deadly and seriously debilitating diseases. Cloning techniques have been invaluable in research leading to the production of breakthrough medicines, diagnostics, and vaccines to treat heart attacks, various cancers, kidney disease, diabetes, hepatitis, multiple sclerosis, cystic fibrosis, and other diseases. The cloning of genes already has contributed to the development of important medicines, such as tissue plasminogen activator, TPA, to dissolve clots after a heart attack and erythropoietin, EPO, for anemia associated with dialysis for kidney disease.

Scientists use cloning technology to study the regeneration of damaged or diseased tissues and organs. This technology is invaluable in many areas of research, including work with nerve cells to repair spinal cord injuries and in diseases where nerve or brain cells degenerate; muscle cells to address some types of heart disease or diseases in which the muscles are wasting; and skin cells to treat burn victims.

To allay any fears that the cloning of human beings could ever take place without stringent regulatory oversight in this country, the United States Food and Drug Administration, FDA, has publicly asserted its statutory authority to regulate any and all efforts to clone human beings. Please find attached, a copy of a letter from Donna Shalala, Secretary of the Department of Health and Human Services, stating that fact.

Pursuant to its authority, FDA will require all doctors and scientists desiring to clone a human being to meet its stringent regulatory requirements. However, FDA safety and efficacy requirements will most likely discourage any attempts at focusing this scientific technology on human subjects for the foreseeable future.

In the meantime, anyone who violates or does not register his or her work with the FDA will be subject to fines and/or imprisonment under the Public Health Services Act and the Food, Drug and Cosmetic Act. This authority serves as an effective deterrent for individuals like Dr. Richard Seed from acting irresponsibly and with disregard for human health and ethical standards.

Legislation to ban the cloning of human beings presents complex issues and requires thoughtful debate. The recent efforts in the U.S. Congress to ban this technology is a clear example of the complexity of this issue. Shortly after the statement by Dr. Richard Seed, there was a groundswell of support for legislation to ban the cloning of an entire human being. However, as the Senate attempted to act swiftly on legislation to ban human cloning, members were inundated with calls from the biotechnology and pharmaceutical industries, medical research institutions, and patient advocacy groups urging members of Congress to move very carefully to ensure that medical research was not adversely impacted by poorly drafted and hastily considered legislation. Over 60 national patient advocacy organizations and a group of 27 Nobel laureates submitted separate letters, which were shared with every member of Congress. As a result, both the House and Senate have agreed not

to rush legislation and to study this issue with great care so as not to inadvertently impede beneficial biomedical research.

It is clear that society is not ready for the cloning of a human being. We need to listen carefully and analyze thoughtfully the ethical, moral, and safety issues that have been raised. BIO believes the voluntary 5-year moratorium, called for by President Clinton, is sufficient to deter any attempt at cloning human beings. This moratorium is supported by over 65,000 scientists in the United States who are concerned that any statutory effort to ban cloning could establish a negative precedent of banning scientific research. We as an industry have committed to working with the Congress and are prepared to assist the New Jersey Legislature as you consider this complex issue.

Thank you very much.

ASSEMBLYWOMAN VANDERVALK: Thank you.

Did you wish to give some testimony? I assume you're going to be giving some testimony.

DR. GILLY: Sure. I can provide testimony.

My name is Dr. John Gilly. I'm Vice President of Biopharmaceutical Operations at ImClone Systems, a biotechnology company that has operations in Somerville, New Jersey. I am also a member of the board of trustees of the Biotechnology Council of New Jersey.

I would like to thank you for the opportunity to testify before the Committee. On behalf of the Biotechnology Council of New Jersey, I would like to state that, as an industry, we also are opposed to the cloning of human beings. We do support improved understanding and education of the

techniques and the science employed to research human diseases. The industry is concerned that uninformed restrictions on scientific research may inhibit new and beneficial discoveries.

I would like to walk through a new area of research, as an example of how this area could be used. For example, scientists are developing an entirely new approach for treating human disease that depend not on drugs like antibiotics, but on living cells that can differentiate into blood, skin, heart, or brain cells, and potentially treat cancers, spinal cord injuries, or heart disease. This research, called stem cell research, holds the potential to develop and improve cancer treatments by gaining a more complete understanding of cell division and growth in the process of metastasis. This could also lead to a variety of cancer treatment advances.

The kind of cells that make up most of the human body are differentiated, meaning that they have already achieved some sort of specialized function such as blood, skin, heart, or brain cells. The precursor cells that lead to differentiate themselves come from the embryo. They are called stem cells because functions stem from them like growth of a plant. Stem cells have the capacity for self-renewal, meaning that they can produce more of themselves. They can also differentiate, meaning that they can specialize into a variety of cell types with different functions.

In the last decade, scientists studying mice and other laboratory animals have discovered powerful new approaches involving cultured stem cells. Studies of such cells, obtained from mouse stem cells, show that they are capable of differentiating in vitro or in vivo into a wide variety of specialized cell types. Stem cells have been derived by culturing cells of nonhuman

primates. Promising efforts to obtain human stem cells have also recently been reported. Stem cell research has been hailed as the most tantalizing of all research in this field. The reason for this is because adults do not have many stem cells. Most cells are fully differentiated into their proper functions. When differentiated cells are damaged, such as cardiac muscle when someone suffers a heart attack, the adult cells do not have the ability to regenerate. If stem cells could be derived from human sources and induced to differentiate in vitro, they could, potentially, be used for transplantation and tissue repair.

The generation of customized stem cells is an example of uninformed legislation creating barriers. A researcher or a doctor might want to create a human zygote with DNA identical to that of an existing or previously existing person through the use of sematic cell nuclear transfer in order to create a customized stem cell line to treat the individual from whom the DNA was extracted. By using the individual's own DNA, the stem cell would be more likely to be compatible and not rejected by the person when the stem cell is transferred back to the person for that treatment. For example, a person suffering from a heart attack could benefit from this technology. We might be able to replace damaged cardiac cells with healthy stem cells that could differentiate into cardiac muscle.

Research with stem cells could lead to the development of universal donor cells of invaluable benefit to all patients. Stem cell therapy could make it possible to store tissue reserves that would give health-care providers a wholly new and virtually endless supply of cardiac muscle cells to treat heart attack victims and degenerative heart disease; skin cells to treat burn victims; spinal cord neuron cells for treatment of spinal cord trauma and

paralyses; neuro cells for treating those suffering from neurodegenerative diseases; pancreas cells to treat diabetes; blood cells to treat cancer, anemia, and immunodeficiencies; neuro cells to treat Parkinson, Huntington, and amyotrophic lateral sclerosis, also known as Lou Gehrig's disease; cells for use in genetics to treat 5000 genetic diseases including cystic fibrosis, Tay-Sachs disease, schizophrenia, and other diseases.

Blood vessel endothelial cells for treating arthrosclerosis, liver cells for liver diseases, including hepatitis and sclerosis; cartilage cells for treating osteoarthritis; bone cells for treatment for osteopetrosis; myoblast for the treatment of muscular dystrophy; respiratory epithelium cells for the treatment of cystic fibrosis and lung cancer; adrenal cortex cells for the treatment of Addison's disease; retinal pigment epithelium cells for age-related macular degeneration; modified cells for treatment of various genetic diseases; and other cells for use in the diagnosis, treatment, and prevention of other deadlier, disabling diseases or other medical conditions.

The use of stem cells to create these therapies would lead to tremendous advances.

Again, I would like the opportunity to thank you for reviewing this, and I would certainly be happy to take questions.

ASSEMBLYWOMAN VANDERVALK: What do you see as the time line for some of these things? I mean, you went through a remarkable list there of what the potential is. It's staggering when you think of all the suffering we have. What sort of time line would you predict?

DR. GILLY: Well, it's very difficult to predict a time line for when the therapies could become actually available to health care, but what I can

state now is that this is active research. This is research where we are looking to actively develop these technologies and identify a mechanism by which we can isolate stem cells and potentially culture them. How the therapies would play into health care would have to be in conjunction with FDA review and also further development of these potential treatments as products.

So it's difficult to provide a time line. But again, if we look 10 years ago from where we are now, I think we would be surprised at the amount of advances that have become available due to biotechnological research, some of which was listed by Mr. Kelly.

ASSEMBLYWOMAN VANDERVALK: Thank you.

Assemblyman Felice.

ASSEMBLYMAN FELICE: Yes, thank you.

Doctor, coming down today, I heard on the radio -- is this the same research that they do on mice to reduce the malignant tumors and, I guess, the certain type of blood cells that you're talking about? Is this the same treatment? Because they also specified that within a year they would be going to clinical testing. So I guess we're talking about the same thing here as one of these forms.

DR. GILLY: The research that was described today related to treatments for angiogenesis or antiangiogenesis, that's neovascular, the growth of new blood vessels, and trying to inhibit that growth to tumors, to starve tumors.

What I described could be very similar in that sense of looking to grow vasculartur e in the reverse and providing stem cells to be able to allow new vessels to grow for other injuries or cardiac tissue to address injuries. So

it's similar. It's a similar family of research. But, as you can see, the research areas are complex and can go in many different ways.

ASSEMBLYMAN FELICE: Well, the most encouraging thing, of course, is that within a year, they expect to do some clinical trials on that, which is very encouraging.

DR. GILLY: That's correct.

ASSEMBLYMAN FELICE: Thank you.

ASSEMBLYWOMAN VANDERVALK: Assemblywoman Wright?

ASSEMBLYWOMAN WRIGHT: Thank you, Dr. Gilly. I wanted to review some of the points that you made that I may not be clear on.

You said that you were culturing cells that had not -- from nonhuman primates, and then you talked about sematic cell transplants from human zygote, and they sounded like, pretty -- two different ideas to me.

DR. GILLY: Well, the technology that is described in nuclear transfer sematic cell and nuclear transfer has only been employed, or at least in the published literature, as it relates to sheep, as was described, or in nonhuman primates. The question relates to expanding that research potentially in developing donor, or universal donor, stem cells using the same technology potentially in human research.

ASSEMBLYWOMAN WRIGHT: What is your definition of the human zygote?

DR. GILLY: Well, a human zygote is specifically defined, and it can vary as it relates to the definition in terms of creation of a -- of a creation of an embryo versus a cell that contains all the genetic information necessary for a -- for a human to be formed. So it varies.

ASSEMBLYWOMAN WRIGHT: Thank you, Madam Chairwoman.

ASSEMBLYWOMAN VANDERVALK: Yes, Assemblywoman Weinberg.

ASSEMBLYWOMAN WEINBERG: Thank you for asking the question, Assemblywoman Wright.

Could you go over that definition again of a human zygote? I don't understand what you mean by it varies. How does it vary?

DR. GILLY: Well, I think the traditional definition is -- a zygote is a human cell that contains all the genetic information to create a human being.

ASSEMBLYWOMAN WEINBERG: And what is the varying factor?

DR. GILLY: Well, what I -- I don't want to get into a complexity in terms. It can-- It doesn't necessarily vary. It -- what I wanted -- the point I wanted to make is that the definition of a human zygote, in this specific example, is one that varies from the traditional definition.

ASSEMBLYWOMAN VANDERVALK: Yes, Dr. Conaway.

ASSEMBLYMAN CONAWAY: Well, a zygote, I mean, does form from the union of sperm and an ova. I mean, you're talking about -- you're starting to get close to an area where people are going to have problems.

Now, what definition are you talking about that gets beyond this union and cell division?

DR. GILLY: The definition that was referred was related to creating a stem cell, or progenitor cell. That would be one that would contain all the genetic information and yet would be able to be self-replicating.

ASSEMBLYMAN CONAWAY: So you're going to create the stem cell. This is apart from harvesting stem cells from neonates, then. You're going to be able to create stem cells. That is what you're looking to do?

DR. GILLY: Well, that is a possibility not specifically that we're looking to do it or that the research is being done right now. But the point is that it is an area that needs to be considered when creating legislation.

ASSEMBLYWOMAN VANDERVALK: Dr. Thompson, you looked like you had a question.

ASSEMBLYMAN THOMPSON: How advanced does your nonhuman primate (indiscernible) at this stage?

DR. GILLY: Well -- that -- I can only go off of the published research, and at this point in time, it is not that advanced.

ASSEMBLYWOMAN VANDERVALK: I'm sorry. What at this -- what was your answer? At this point in time it's what?

DR. GILLY: It is not that advanced, and I'm not sure exactly--

ASSEMBLYWOMAN WRIGHT: On nonhuman primates.

ASSEMBLYWOMAN VANDERVALK: --that they're not that--

ASSEMBLYWOMAN WRIGHT: No, I just didn't hear the word advanced. But they're very well advanced on the human.

ASSEMBLYWOMAN VANDERVALK: Well, we hope.

ASSEMBLYMAN THOMPSON: As I stated earlier, again you have emphasized the importance of any legislation not being such as to

compromise a lot of the significant research that is going on, and that is information we're seeking here, recommendations on how to achieve our basic purpose without compromising a lot of the significant research.

ASSEMBLYWOMAN VANDERVALK: We do have a letter -- statement that was submitted from the Catholic Conference, and I just want to acknowledge that it should be on all of the Committee members' desks, and if not, I'll make sure you get a copy.

ASSEMBLYWOMAN WRIGHT: Are they testifying?

ASSEMBLYWOMAN VANDERVALK: Assemblyman?

ASSEMBLYMAN THOMPSON: Yes. I do have one more comment I want to add. The Committee notice here indicates that we were having some invited speakers on the topic today. Actually, we sent out two press releases announcing our intention to receive the testimony and inviting anyone who wished to speak to participate.

Unfortunately, to the best of my knowledge, none of the media picked up the releases, so it was not intended to be a closed session. But we were seeking anyone that was interested in providing testimony.

ASSEMBLYWOMAN VANDERVALK: I'm glad you brought that out. I just think scientific expansion of this whole topic is mind-boggling, and maybe because it's the Health Committee or maybe not, we just hear so many problems in society, and if medicine can advance to make life easier, it -- I just really want to encourage that. I have a personal, philosophical--

Well, let me put it in another way. I am not promoting cloning of a human, but I don't know that has ever come up in this dialog. I personally do not want to see that happen, but I am very excited about the potential for

research to help the human beings that exist and that are coming down the road. I mean, we have so many horrible diseases, and if you can do just a little bit to make life easier, we'll all be grateful.

Yes, Dr. Conaway.

ASSEMBLYMAN CONAWAY: I can't help, as you went through your list, I was saying cloning may be one thing, but it's not going to replace all the parts that go bad, and I hope we get that done within the next, I don't know, 10, 20 years.

I'm looking forward to living forever, so keep up the good work.

ASSEMBLYMAN FELICE: As long as you can't clone legislators. (laughter)

ASSEMBLYWOMAN VANDERVALK: Well, thank you very much.

MR. KELLY: Thank you.

DR. GILLY: Thank you.

ASSEMBLYWOMAN VANDERVALK: We certainly appreciate you taking time out from your research, and I hope you rush right back.

(MEETING CONCLUDED)