

Stem Cell  
Research

7/13

NOTE TO BRUCE REED AND CHRIS JENNINGS –

The National Bioethics Advisory Commission is meeting today in Cambridge, MA, and is expected to formally vote on its draft report. Attached are the existing Q and As, which we plan to stick to today if asked about their actions.

I have not sent these to OSTP – let me know if you'd like me to.

Melissa

For Internal Use Only Stem Cell Q&A's June 28, 1999

National Bioethics Advisory Commission and Stem Cells Questions and Answers

Q. Some research has shown that adult stem cells can produce many of the same cells and tissues of the body that could be developed using pluripotent stem cells derived from human embryos. Why wouldn't NIH just fund research using adult stem cells?

A. Recent research with a number of adult stem cells suggests that adult stem cells previously thought to be committed to the development of one line of specialized cells may have more flexibility than previously thought. These are preliminary results, but if this finding holds true for human adult stem cells, there is, indeed, enormous potential for using such adult stem cells as therapies for a number of diseases. These findings, although extremely important, do not, and should not exclude the pursuit of other avenues for developing important cell therapies, like exploring the potential of human pluripotent stem cells derived from embryos and fetuses, because they may have unique properties not present in other types of stem cells. It is also important to understand that human adult stem cells have only been isolated from a few types of tissue and, when they have been identified, they are often present in only minute quantities and are difficult to isolate and purify. In fact, in the report of using mouse nerve stem cells to make mouse blood cells, the mouse nerve stem cells were isolated directly from brain tissue that had to be removed from the mouse. The fact that brain tissue must be removed as the source of nerve stem cells, is likely to limit this line of experimentation in humans.

Q. Why not simply allow the private sector to pursue research on human pluripotent stem cells derived from embryos?

A. It is essential that the Federal Government play a role in funding and overseeing the conduct of this research so that all scientists-- both privately and federally funded--have the opportunity to pursue this important line of research. The NIH understands and respects the compelling ethical, legal, and social issues surrounding pluripotent stem cell research and is sensitive to the need for stringent oversight of this research that goes beyond the traditional rigorous NIH scientific peer review process. Federal funding will provide oversight and direction that would be lacking if this research were the sole province of private industry and academe, by providing a set of guidelines for the conduct of this research, as well as a public oversight process to ensure investigators are adhering to the DHHS guidelines.

Q. Once several pluripotent stem cell lines have been established, why is it necessary to create more?

A. This is a very new area of research and there are a number of questions that remain unanswered. Initial investigations show that pluripotent stem cells replicate themselves for prolonged periods. But it is important to recognize that the immortality of these stem cell lines has not been proven. It remains to be seen if these cell lines lose any of their function and/or potential after years or even decades of culture. Hence, existing human pluripotent stem cell lines may require replenishing.

It will also be important to produce human pluripotent stem cell lines that have different genetic characteristics. For example, if such cells are developed for transplantation into humans, it will be important to reduce the chance of rejection. This may require the creation of new cell lines which more closely match the tissue type of the patient.

Q. What are the arguments for the Federal investment in this research?

A. Federal funding of this work would engage the attention of many more people and would bring more oversight to this area. For example, more investigators would likely enter the field and the pace of this critical work would be enhanced. In addition, Federal government involvement in this research area would also provide important scientific and ethical oversight. Research on human pluripotent stem cells would go through several levels of detailed discussions including NIH scientific peer review groups, and NIH National Advisory Council meetings. This would encourage openness, ensure that all researchers could use

these important research tools, and assure public access to the information and to the practical medical benefits of research using these stem cells. This would also increase the opportunities for collaboration in this research arena and sharing of data.

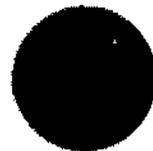
Q. Are there examples of research that have not been legally restricted but for which NIH has established special review and oversight procedures? How has NIH provided the oversight to ensure the research moves forward, while the ethical, legal, and social implications of the research are given full and public consideration?

A. In the 1970s, when it first became possible to use molecular cloning in bacteria, there was a great deal of public apprehension about possible risks of the research. Fortunately, however, legislation was not enacted to ban the research. Instead, the scientific community established a voluntary moratorium until guidelines could be developed to govern the research. Guidelines were written by the NIH in a public process to provide oversight of the research. The Recombinant DNA Advisory Committee was also established to ensure public review of the research and ongoing policy development to keep pace with scientific progress. With the advent of human gene therapy, the NIH Guidelines were extended to address specific concerns associated with human trials. For example, the NIH Guidelines state that protocols involving germline gene therapy will not be considered.

Q. NBAC has stated that it is not possible to ethically separate the derivation of human pluripotent stem cells from human embryos and the research done on these human pluripotent stem cells. How can DHHS find it acceptable to fund research using human pluripotent stem cells when it can not fund research on the embryos themselves?

A. Federal law currently prohibits DHHS from funding research in which human embryos are destroyed, discarded or subjected to greater than minimal risk. The DHHS Office of the General Counsel recently concluded that the Congressional prohibition does not prohibit the funding of research utilizing human pluripotent stem cells because such cells are not embryos. Thus, DHHS funding for research using pluripotent stem cells derived from human embryos is not prohibited. We recognize and appreciate the serious ethical and social considerations raised by this research, and maintain great respect for the full range of viewpoints surrounding these issues. Funding federal research on these stem cells is legally permissible, and such research holds great promise for treatments for Parkinson's disease, heart disease, diabetes, stroke, burns, arthritis, and other serious medical conditions. However, we intend to proceed with great care, setting up a special oversight committee, developing guidelines, and consulting with NBAC and other outside authorities as the process continues.

The attached reflects John Podesta's 7/6/99 edits.



THE WHITE HOUSE  
WASHINGTON

Stem Cell  
Research

July 6, 1999

MEMORANDUM FOR JOHN PODESTA

FROM: NEAL LANE *Neal*  
SUBJECT: Human Stem Cell Research Update

**Background:** In November 1998, human embryonic stem cells were successfully isolated and cultured in two privately funded laboratories. Human embryonic stem cells are primitive cells, which themselves lack a specific function but have the capacity to develop into any specialized type of cell found in the human body (such as nerve, bone, blood, or muscle cells). While this announcement stirred great excitement in the biomedical research community, because of the tremendous potential that stem cells have for treating human disease, the source of these cells (human embryos and aborted fetuses) generated a great deal of controversy. The isolation of stem cells from human embryos (but not fetuses) currently cannot be done using public funds because of the Congressional ban on the use of Federal funds for human embryo research, which has been attached to the HHS appropriations bill for the last four years. On November 14, 1998, the President asked his National Bioethics Advisory Commission (NBAC) for a "thorough review of the issues associated with such human stem cell research, balancing all ethical and medical considerations." In January 1999, HHS General Counsel Harriet Rabb issued a decision that the human embryo research ban did not include human embryonic stem cells, because stem cells are not themselves embryos, and so research using these cells would be eligible for Federal funds. The House Pro-Life Caucus has objected strenuously to this decision. However, Senators Specter and Harkin of the Senate Appropriations Committee strongly support NIH funding of human stem cell research (they held three hearings on this issue in late 1998), as does Congressman Porter of the House Appropriations Committee.

**Present Status:** NBAC is examining the ethics of research on stem cells derived from fetuses, embryos left over from fertility treatments, and embryos produced for research, either from fusing donated eggs and sperm or via cloning methods. They are also considering the ramifications of Federal funding of each of these activities. The Commissioners unanimously agree that the use of human embryonic stem cells for research is ethically defensible and should be eligible for Federal funding. However, there is still considerable debate over the ethics of deriving cells from the different sources, and the use of Federal funds for such research. Even though NBAC generally agrees that deriving cells from embryos left over from fertility treatments is ethically acceptable, some Commissioners may recommend against using public funds to support such a controversial activity. At this point, it appears that the Commission will not recommend Federal funding for research using stem cells derived from embryos produced for research purposes using either cloning or IVF technologies, which is consistent with the President's 1994 position opposing the creation of human embryos for research purposes. NBAC expects to finalize their report shortly after they meet next week (July 13-14) in Cambridge, MA.

NIH has drafted a set of guidelines describing the steps investigators must complete to receive NIH funds for research involving the *use* of human stem cells, to be published in the *Federal Register* for a 60-day public comment period, once they have received departmental clearance. The guidelines will parallel existing regulations covering fetal tissue transplantation research. NIH will not fund research that would include the *destruction* of human embryos as this would violate the Congressional embryo research ban.

**Possible Administrative Action:** The release of the NBAC report and/or the publication of the draft NIH guidelines are opportunities for an Administration statement. Two draft statements are attached, which express support for funding research using human embryonic stem cells, but emphasize the need for this research to be done using the highest ethical standards. Because valuable research can proceed using stem cells that are derived using private funds, there is no need at this time to push for a relaxation of the current Congressional ban on human embryo research.

Attachments

Tab A Draft Statement for Neal Lane and/or Joe Lockhart

Tab B Draft Statement for POTUS

cc: Bruce Reed  
Larry Stein  
Dan Mendelson  
Elena Kagan  
David Beier  
Chris Jennings  
Barbara Woolley  
Barry Toiv  
Joe Lockhart

**Draft Statement for Neal Lane or Joe Lockhart when NIH Guidelines are Published/NBAC Report is Nearing Completion**

Last November, the President asked his National Bioethics Advisory Commission to undertake a thorough review of all of the ethical and medical considerations associated with human stem cell research. In the ensuing months, a national dialogue took place highlighting the potential applications of stem cells for treating people with diabetes, heart disease, Parkinson's disease, cancer, and spinal cord injury. Ethical issues were also central to this debate, including a wide range of religious and philosophical views that are a part of the fabric of our democratic culture. NBAC has nearly completed its deliberations and appears ready to endorse the medical promise and ethical acceptability of certain types of human stem cell research.

The Clinton Administration recognizes that human stem cell technology's potential medical benefits are compelling and worthy of pursuit, so long as the research is conducted according to the highest ethical standards. NIH is putting in place guidelines and an oversight system that will ensure that the cells are obtained in an ethically sound manner. The President's 1994 ban on the use of Federal funds for the creation of human embryos for research purposes will remain in effect. Because it appears that human stem cells will be available from the private sector, such research is permissible under the current Congressional ban on human embryo research and no other legal actions are necessary at this time.

**Draft Statement for POTUS when NIH Guidelines are Published/NBAC Report is Released**

Back in November, when I asked my National Bioethics Advisory Commission to look at the ethical and medical issues surrounding human stem cell research, I recognized the enormous medical potential of such research. The scientific results that have come out in just the past few months already strengthen my basis for hope that one day, stem cells will be used to replace cardiac muscle cells for people with heart disease, nerve cells for hundreds of thousands of Parkinson's patients, or insulin-producing cells for children who suffer from diabetes.

But I also understand that stem cell research raises ethical concerns that need to be addressed, and the national dialogue has highlighted a range of opinions that must be respected. First, I want to restate the ban I issued in 1994 prohibiting the use of Federal funds for the creation of human embryos for research purposes. Second, I will continue to insist that any Federally-supported human stem cell research be held to the highest ethical standards. The NIH guidelines, with input from NBAC, will be the principal mechanism to ensure this outcome, while helping scientists turn the promise of stem cell technology into reality.

THE WHITE HOUSE  
WASHINGTON

June 17, 1999

File:  
Stem Cell Research  
[Signature]

MEMORANDUM FOR JOHN PODESTA

FROM: NEAL LANE *neal*  
SUBJECT: Human Stem Cell Research Update

I want to alert you to two upcoming events regarding oversight of human stem cell research and discuss actions that we might take regarding human stem cell research and cloning for the purpose of human reproduction.

**NIH Guidelines** -- NIH expects to send a human stem cell research oversight plan and draft guidelines to DHHS next week. Once cleared, the guidelines will be published in the *Federal Register* for a 60-day public comment period. The guidelines are expected to describe the steps investigators must complete in order to receive NIH funds for research involving the use of human stem cells. The guidelines will parallel existing regulations covering fetal tissue transplantation research. NIH will not fund research that would include the destruction of human embryos as this would violate the Congressional embryo research ban.

**National Bioethics Advisory Commission Report** -- NBAC will meet on June 28-29 to discuss human stem cell research. The Commission expects to complete its report shortly after their meeting on July 13-14, in Cambridge, MA. The report will respond to the President's Nov. 14, 1998 request for a "thorough review of the issues associated with such human stem cell research, balancing all ethical and medical considerations." NBAC is examining the ethics of conducting research on stem cells derived from fetuses, and embryos left over from fertility treatments, embryos produced from donated eggs and sperm or via cloning methods. They are also considering the ramifications of Federal funding of each of these activities.

Although the Commission has not yet completed its deliberations, it appears that they will support Federal funding for research using stem cells derived from fetuses or excess embryos. A majority of Commissioners do not draw an ethical distinction between the use and the derivation of stem cells and are comfortable with the practice of deriving stem cells from excess embryos for research purposes. Despite news reports to the contrary, however, NBAC has not concluded that they will recommend that the Congressional ban be eased to allow Federally-funded research involving the destruction of human embryos to obtain stem cells. Even without an ethical basis, some Commissioners may recommend against using public funds to support such a controversial activity. At this point, it appears that the Commission will not recommend Federal funding for research using stem cells derived from embryos produced for research purposes using cloning or IVF technologies.

## **Recent News Reports**

It was reported in the June 14 Washington Post that two separate companies, Geron Corporation and Advanced Cell Therapeutics, have launched programs to produce human embryos using cloning technology. In the June 15 New York Times, Geron denied that it was producing human embryos but was, instead, using somatic cell nuclear transfer to learn about factors produced in the egg that turn back the developmental clock in an adult nucleus. The company may, in fact, be producing human embryos. Advanced Cell Technology is resuming earlier somatic cell nuclear transfer experiments using a human adult cell and a cow egg. Both companies state that their purpose is the isolation of embryonic stem cells, and not human reproduction (i.e., therapeutic, not reproductive, cloning). In 1994, President Clinton banned the use of Federal funds to create embryos for research purposes (this ban was broadened by Congress in 1995 to include all research using human embryos), and in 1997 banned Federal funding for the use of cloning to reproduce a human being. None of these bans apply to the private sector, although some companies have said that they will comply with the President's voluntary moratorium.

## **Hill Activity**

The Congressional ban on human embryo research will be debated in the HHS appropriations process. Patient advocacy groups have formed an active coalition (Patients' CURE) that has been very effective in making the case of the importance of stem cell research in developing treatments for diseases such as diabetes, heart disease, Parkinson's and cancer. Rachel Levinson, of my staff, Chris Jennings, David Beier, and Barbara Woolley, met with the coalition on April 13 to hear about their message development efforts. Chris reiterated the Administration's position as articulated in the President's and Harold Varmus' statements on the potential medical benefits of stem cell research.

Senators Specter and Harkin have indicated strong support for NIH funding of human stem cell research. Senate markup of the Labor/HHS appropriations bill could come as early as July 1, but that is unlikely.

Rep. Porter supports the Administration's position on stem cell research. House Labor/HHS appropriations staff have said that they don't envision a tightening of the embryo research ban in order to prohibit stem cell research. However, something along these lines can always slip in, especially if there is an Omnibus bill.

Last month, Rep. Bliley announced that he would hold a hearing in response to press reports that NBAC would recommend easing the ban to allow public sector research deriving stem cells. No stem cell hearings have been scheduled.

## **Possible Administrative Actions**

Publication of the NIH guidelines and/or release of the NBAC report are opportunities for an Administration statement, in the event one is called for. However, I do not see a compelling reason to make a new statement at this time. We are on record supporting human stem cell

research as a promising avenue of biomedical research. We have already stated the need for stringent ethical oversight and publication of the NIH guidelines will reinforce this message.

In the event that NBAC recommends in mid-July that the government fund research involving the destruction of human embryos in order to obtain stem cells, I would advise against working toward relaxation of the current Congressional ban. Harold Varmus says valuable research can proceed using stem cells that are derived using private funds and there is no need to go across this line for the time being. Although fertility research could be enhanced if the ban were lifted, the incremental approach appears to be more prudent at this juncture. Going further might lose the support of some of the patient groups (Paralyzed Vets, e.g.) because it would bring the debate closer to the abortion issue.

We drafted a bill to prohibit reproductive cloning (June 97) while protecting biomedical research but it was never introduced. We could call on Congress once again to address this real area of concern—rather than restricting biomedical research.

Additionally, we should work with FDA to clarify their regulatory authority to prevent private sector use of cloning technology to produce a child. We might also explore other administrative oversight options.

Given that our current positions on stem cell research and reproductive cloning are clear and enjoy the support of patient groups and the biotechnology and pharmaceutical industries, we need not issue new statements until we see what develops in the appropriations process.

cc: Bruce Reed  
Elena Kagan  
David Beier  
Chris Jennings  
Barbara Woolley

↑ ?

Bruce  
FBI  
for your consideration -

JFF Smith 6-60917

Human Stem Cell Research

**DRAFT**

June 28, 1999

Stem Cell Research

**Draft Statement for Joe Lockhart or Neal Lane on Monday or Tuesday on NBAC meeting:**

Last November, the President asked his National Bioethics Advisory Commission to undertake a thorough review of the all the ethical and medical considerations associated with human stem cell research. In the ensuing months, a national dialogue took place highlighting the potential applications of stem cells for treating people with diabetes, heart disease, Parkinson's disease, cancer, and spinal cord injury. Ethical issues were also central to this debate, including a wide range of religious and philosophical views that are a part of the fabric of our democratic culture. NBAC has nearly completed its deliberations and appears ready to endorse the medical promise and ethical acceptability of certain human stem cell research.

The Clinton Administration recognizes that human stem cell technology's potential medical benefits are compelling and worthy of pursuit, so long as the research is conducted according to the highest ethical standards. NIH is putting in place guidelines and an oversight system that will ensure that the cells are obtained in an ethically sound manner. Because it appears that human stem cells will be available from the private sector, such research is permissible under the current Congressional ban on human embryo research and no other legal actions are necessary at this time. However, the President's 1994 ban on the use of Federal funds for the creation of human embryos for research purposes will remain in effect.

**For POTUS when NIH Guidelines are published:**

**DRAFT**

Back in November, when I asked my National Bioethics Advisory Commission to look at the ethical and medical issues surrounding human stem cell research, I recognized the enormous medical potential of such research. The scientific results that have come out in just the past few months already strengthen my basis for hope that one day, stem cells will be used to replace muscle cells for people with heart disease, nerve cells for hundreds of thousands of Parkinson's patients, or insulin-producing cells for children who suffer from diabetes. (Juvenile Diabetes Foundation, Alliance for Aging Research, Paralyzed Vets or other members of the Patients' Coalition for Urgent Research may be invited.)

But I also understand that stem cell research raises ethical concerns that need to be addressed, and highlights a range of opinions that must be respected. First, I want to restate the ban I issued in 1994 prohibiting the use of Federal funds for the creation of human embryos for research purposes. Second, I hereby direct that any publicly-supported human stem cell be held to the highest ethical standards. The NIH guidelines will be the principal mechanism to ensure this outcome, while helping scientists turn the promise of stem cell technology into reality.