120 Major Conclusions and Recommendations from the Final Report of the NIH Human Embryo Research Panel

Guiding Considerations

The Panel concluded that certain areas of research involving the preimplantation human embryo are acceptable for Federal funding within a framework of stringent guidelines. Three overarching considerations led the Panel to this conclusion:

- the promises of the human benefit from the research is significant;
- the preimplantation human embryo warrants serious moral consideration as a developing form of human life, but it does not have the same moral status as infants and children because of the absence of developmental individuation, the lack of even the possibility of sentience and most other qualities considered relevant to the moral status of persons, and the very high rate of natural mortality at this stage; and,
- Federal funding of such research would provide consistent ethical and scientific review at the national level to an area of research that has been ongoing in the private sector without such review and public scrutiny.

From the Final Report of the NIH Human Embryo Research Panel, September 27, 1994.

Definition

"Preimplantation human embryo" is defined by the Panel as a fertilized ovum in vitro that has never been transferred to or implanted in a uterus. This includes a fertilized ovum that has been flushed from a woman before implantation in the uterus. This procedure, which is both infrequent and poses special risks, is included because it is one potential source of embryos.

General Principles

The following general principles should govern Federally funded research involving the preimplantation human embryo:

- The research must be conducted by scientifically qualified individuals in an appropriate research setting.
- The research must consist of a valid research design and promise significant scientific or clinical benefit.
- The research goals cannot be otherwise accomplished by using animals or unfertilized gametes. In addition, where applicable, adequate prior animal studies must have been conducted.
- The number of embryos required for the research must be kept to the minimum consistent with scientific criteria for validity.
- Donors of gametes or embryos must have given informed consent with regard to the nature and purpose of the specific research being undertaken.
- There must be no purchase or sale of gametes or embryos used in research. Reasonable compensation in clinical studies should be permissible to defray a subject's expenses, over and above the costs of drugs and procedures required for standard treatment, provided that no compensation or financial inducements of any sort are offered in exchange for the donation of gametes or embryos, and so long as the level of compensation is in accordance with Federal regulations governing human subjects

research and that it is consistent with general compensation practice for other federally-funded experimental protocols.

- Research protocols and consent forms must be reviewed and approved by an appropriate Institutional Review Board, and for the immediate future an ad hoc review process which extends beyond the existing review process to be established by the NIH and operated for a period of at least three years.
- There must be equitable selection of donors of gametes and embryos and efforts must be made to ensure that benefits and risks are fairly distributed among subgroups of the population.
- Out of respect for the special character of the preimplantation human embryo, research involving preimplantation embryos should be limited to the shortest time period consistent with the goals of each research proposal, and for the present, research involving human embryos should not be permitted beyond the time of the usual appearance of the primitive streak in vivo (14 days). An exception to this is made for research protocols with the goal of reliably identifying in the laboratory the appearance of the primitive streak.

Fertilization of Oocytes for Research

With regard to the difficult issue of whether it is ethically acceptable to fertilize oocytes expressly for research purposes, the Panel concluded that studies that require the fertilization of oocytes are needed to answer crucial questions in reproductive medicine and that it would therefore be unwise to prohibit the fertilization and study of oocytes for research purposes altogether. However, because the preimplantation human embryo merits respect as a developing form of human life, the Panel recommends that the deliberate fertilization for research purposes be allowed only under two conditions (examples of research that might meet these two conditions are provided in the Panel report). Those conditions are:

- when the research by its very nature cannot otherwise be validly conducted.
- when a compelling case can be made that this is necessary for the validity of a study that is potentially of outstanding scientific and therapeutic value. Because of their concern that attempts might be made to create embryos for reasons that relate solely to the scarcity of embryos remaining from infertility programs and because of their interest in preventing the creation of embryos for any but the most compelling reasons, Panel members believe that special scrutiny during the review process is warranted for research that may meet the second condition.

Parthenogenesis

The Panel was asked to consider the acceptability of Federal funding of research involving the parthenogenesis, the activation of eggs to begin cleavage and development without fertilization (activated eggs are called parthenotes). Human parthenotes are not developmentally viable, and they do not represent a form of asexual reproduction. Because research on parthenotes might provide information on the specific role of the egg mechanisms in activating and sustaining early development, without generating a human embryo, as well as shed light on problems arising during oocyte development that promote a type of ovarian tumor formation, the Panel recommends that research proposals involving parthenogenesis be considered ethically acceptable on condition that they adhere to the general principles and that under no circumstances is transfer of parthenogenetically activated oocytes permitted.

Sources of Gametes and Embryos

With regard to sources of gametes and embryos — which could include women in IVF programs, healthy volunteers, women undergoing pelvic surgery, women and girls who have died, and aborted fetuses — the Panel concluded that the following were acceptable sources of gametes and/or embryos provided all other conditions regarding consent, risk/benefit, and limits on commercialization are met:

- Women/couples in IVF programs. Great care must be taken to ensure that there is no undue,

or even subtle, pressure to donate. The voluntary nature of such donations is essential, and under no circumstances should individuals who do not wish to donate their gametes ever feel pressured to do so.

- Women undergoing scheduled pelvic surgery, as long as no additional risks are imposed. Researchers must explain any changes from standard surgical procedures and, if hormonal stimulation is used, the risks of such drugs.
- Women who are not scheduled to undergo a surgical procedure, but only for research that involves transfer of the resulting embryo for the purpose of establishing a pregnancy.
- Women who have died, but only for research that does not involve transfer and as long as the woman had not expressly objected to such use of her oocytes and that appropriate consent is obtained. Consenting donors, or next of kin proxy, should be clearly and specifically aware that the organ being donated is the ovary and that it might be used in research that could involve the fertilization of any oocytes derived from it.

The Panel concluded that the following sources were unacceptable for Federally funded research:

- Women who are not scheduled to undergo a surgical procedure, unless the research is for the purpose of establishing a pregnancy.
- Oocytes obtained from aborted fetuses for research that involves transfer. The use of fetal oocytes in research that does not involve transfer also should not be supported until the ethical implications are more fully explored and addressed.

Review and Oversight

Because of the sensitive nature of research involving the preimplantation human embryo, all such research proposals submitted to the NIH for funding or that are proposed for conduct in the NIH intramural research program should be subject for a period of at least three years to an additional review at the national level by an ad hoc body created with discretionary authority of the Director of NIH. When the ad hoc review body ceases to exist, all such research proposals should continue to be specially monitored by the NIH councils and the NIH Office for Protection from Research Risks. This monitoring would include a commitment by the councils to pay particular attention to the protocols as they are presented for approval, in order to ensure that the local Institutional Review Board and NIH study section have correctly applied the guidelines adopted by the Director of NIH.

Categories of Research

Consistent with its mandate, the Panel considered specific areas of research in terms of acceptability for Federal funding. The Panel was charged to classify types of embryo research into three categories: (1) acceptable for federal funding; (2) warranting additional review; and (3) unacceptable for federal funding.

Acceptable for Federal Funding

A research proposal is presumed acceptable if it is in accordance with the general and specific guidelines recommended by the Panel and unless it has been placed in the warranting additional review or unacceptable categories. Examples of acceptable research include, but are not limited to, the following:

- Studies aimed at improving the likelihood of a successful outcome for a pregnancy.
- Research on the process of fertilization.
- Studies on egg activation and the relative role of paternally-derived and maternally-derived genetic material in embryo development (parthenogenesis without transfer).
- Studies in oocyte maturation or freezing followed by fertilization to determine developmental and chromosomal normality.
- Research involving preimplantation genetic diagnosis, with and without transfer.
- Research involving the development of embryonic stem cells but only with embryos resulting from IVF treatment or clinical research that have been donated with the consent of the progenitors.
- Nuclear transplantation into an enucleated,

fertilized or unfertilized (but activated) egg, without transfer, for research that aims to circumvent or correct an inherited cytoplasmic defect. [A narrow majority of the Panel believed such research should be acceptable for Federal funding. Nearly as many thought that the ethical implications of research involving the transplantation of a nucleus, whether transfer was contemplated or not, needed further study before the research could be considered acceptable for Federal funding.]

- Research involving the use of existing embryos where one of the progenitors was an anonymous gamete source who received monetary compensation. In order to determine whether the exception might apply, special attention must be given during the review process to ensure that payment has not been provided for the embryo itself and that all other proposed guidelines are met. (This exception would apply only to embryos already in existence at the time at which this report is accepted by the Advisory Committee to the Director, NIH, should such acceptance occur.)
- A request to fertilize ova when a compelling case can be made that this is needed for the validity of a study that is potentially of outstanding scientific and therapeutic value. Special attention is warranted for such research because of concern that attempts might be made to create embryos for reasons that relate solely to the scarcity of embryos remaining from infertility programs and because of the Panel's interest in preventing the creation of embryos for any but the most compelling reasons.

Warrants Additional Review

Research in this category is of a particularly sensitive nature. The Panel did not make a determination for the acceptability of these proposals and recommends that there be a presumption against funding such research for the foreseeable future. This presumption could be overcome only by an extraordinary showing of scientific or therapeutic merit together with explicit consideration of the ethical issues and social consequences. The Panel recommends that such research proposals be funded only after review by a broad-based ad hoc body created at the discretion of the Director, NIH, or by some other formal review process.

- Research between the appearance of the primitive streak and the beginning of neural tube closure.
- Cloning by blastomere separation or blastocyst splitting without transfer.
- Nuclear transplantation into an enucleated, fertilized or unfertilized (but activated) egg, with transfer, with the aim of circumventing or correcting an inherited cytoplasmic defect.
- Research involving the development of embryonic stem cells from embryos fertilized expressly for this purpose. [Decided by a narrow majority of members. A number of members felt that the research was acceptable for Federal funding and some believed that such research should be considered unacceptable for Federal funding].
- Research that uses fetal oocytes for fertilization without transfer. [Decided by a narrow majority of members. A number of members believed that such research should be placed in the unacceptable category.]

Unacceptable for Federal Funding

The Panel was guided by four ethical considerations in determining the types of research that should be unacceptable for Federal funding: the potential adverse consequences of the research for liveborn children, women, and men; the respect due the preimplantation embryo; concern for public sensitivities on highly controversial research proposals; and, concern for the meaning of humanness, parenthood, and the succession of generation. Throughout its report the Panel balanced these concerns against the scientific promise and the clinical and therapeutic value of proposed research, particularly as it might contribute to the well-being of women, children, and men. For the types of research considered unacceptable, the Panel determined that the scientific and therapeutic value was low or questionable, or that animal studies did not warrant progressing to human research. Even if claims were made for their scientific or therapeutic value, the Panel believed that serious ethical concerns would counsel against Federal funding of such research. Such unacceptable research includes:

- Cloning of human preimplantation embryos by separating blastomeres or dividing blastocysts (induced twinning), followed by transfer in utero.
- Studies designed to transplant embryonic or adult nuclei into an enucleated egg, including nuclear cloning, in order to duplicate a genome or to increase the number of embryos with the same genotype, with transfer.
- Research beyond the onset of closure of the neural tube.
- Research involving the fertilization of fetal oocytes with transfer.
- Preimplantation genetic diagnosis for sex selection except for sex-linked genetic diseases.
- Development of human-nonhuman and human-human chimeras with or without transfer.
- Cross-species fertilization except for clinical tests of the ability of sperm to penetrate eggs.
- Attempted transfer of parthenogenetically activated human eggs.
- Attempted transfer of human embryos into nonhuman animals for gestation.
- Transfer of human embryos for extrauterine or abdominal pregnancy.

121 The Inhuman Use of Human Beings

A Statement on Embryo Research by the Ramsey Colloquium

A panel of nineteen experts appointed by the National Institutes of Health has recommended government funding for conceiving human embryos in the laboratory for the sole purpose of using them as materials for research. After carefully studying the Report on the Human Embryo Research Panel, we conclude that this recommendation is morally repugnant, entails grave injustice to innocent human beings, and constitutes an assault upon the foundational ideas of human dignity and rights essential to a free and decent society. The arguments offered by the Panel are more ideological and self-interested than scientific; the actions recommended by the Panel cross the threshold into a world of apparently limitless technological manipulation and manufacture of human life. The Panel claims to draw a "clear line" against experiments that almost everyone would deem abhorrent. In fact it does not draw such a line and, by virtue of its own logic, it cannot draw such a line. The recommendation, if adopted, will be a fateful step for humanity from which it may be impossible to turn back.

All of us have a stake in the questions raised. In a society such as ours, these questions cannot be, they must not be, decided by a committee of

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