GENETICS

Topic: Ethical Issues in the Use of Human Embryonic Stem Cells
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James J. Walter presented a description of both the essentials of pluripotent stem cell research and current developments in the field, as well as presenting the recommendations of the National Bioethics Advisory Commission and the guidelines proposed by the National Institutes of Health for research using human embryonic stem cells.

Essentially, stem cells have the capacity to divide for indefinite periods while in culture and to give rise to specialized cells in the body. There are two sources: the germ cells of aborted human fetuses and the inner cell mass of the blastocyst. This inner cell mass forms all the parts of the body, while the outer layer of cells forms the placenta and tissues needed for fetal development. The stem cells of the inner mass are pluripotent and form only specific types of cells. Such pluripotent cells cannot form a whole embryo. The value of such pluripotent stem cells is at least fourfold: their study will help us understand human development; they can help in the development of new drugs as well as their testing; the development of cells, tissues, and perhaps organs that could be used to replace diseased tissue; if used in conjunction with cloning technologies, such cells could resolve the problem of tissue incompatibility in some patients.

Because such cells are derived either from aborted fetuses or from so-called "spare" embryos not used in assisted reproduction, and because there is still a prohibition on the use of human embryos in research, two different sets of recommendations have been made regarding the use of human pluripotent stem cells. The National Bioethics Advisory Commission in September, 1999, made thirteen recommendations, four of which will be highlighted here: (1) limit the use of federal funding for the use and derivation of such cells to cadaveric fetal tissue and embryos remaining after fertility treatments; (2) research regarding the derivation and use of remaining embryos after IVF could be federally funded; (3) no federal funding should support the derivation or use of stem cells from embryos made solely for research purposes; (4) no federal funding should support funding of the derivation or use of stem cells from cloned embryos. The Department of Health and Human Services, through the National Institutes of Health, also issued a set of guidelines that focused on the use of such pluripotent stem cells in research. Because such cells cannot become embryos, NIH issued a legal opinion that the use of such cells derived from early human embryos in research did not fall under the federal ban on funding of human embryos in research. Although surrounded by guidelines prohibiting a market in such embryos, guarantees of informed consent, and prevention of conflicts of interest, this recommendation is highly controversial because it allows the use of fetal material in research.

Thomas A. Shannon examined first micro issues in this research. One issue is that of cooperation in the evil of abortion to obtain such tissue. Another is that the early human embryo is not a person and that some intervention may be possible. This argument has three stages: (1) because such cells are toti- or pluripotent, they do not have a level of ontological organization; (2) because such cells are not committed to a particular body part, the organism in not individualized; (3) because of 1 and 2, the organism at this stage is better understood as human nature, or as the philosopher Duns Scotus says, the common nature. Since this organism is not individualized, it is not a person and some interventions are possible, though we should always remember that such interventions objectify the organism. This suggests that such interventions ought to at least be the last resort.

On the macro level several different issues occur. First, many of the promises associated with stem cell research appear to be exaggerated as a way to increase funding. Second, such research continues to commit us to high-tech, rescue medicine which is after the fact of disease and very expensive. Might we begin to think of a focus on preventive medicine and life style intervention as a first level of intervention rather than rely primarily on such high-tech interventions? Third, who will benefit from this research? The short answer is those who can afford to pay for it and those who are insured and whose insurance will cover it. Thus the majority of Americans will not benefit from this research—at least not in the near future. Finally, much research is being done by the biotech industry that will need to recover its investment. and make a profit, thus ensuring that such interventions will be costly. However, some of this research derives from the Human Genome Project. Thus some price adjustment should be made lest the public pay several times. While such research does not appear to be inherently unethical, it does commit us to the status quo of high-tech medicine and perhaps we need to rethink that, as well as how such research might fit the health needs of the majority of Americans.

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