



## Morals and Primordials

What may we do with a human embryo? On this moral question hinges the fate of embryonic stem cell research. To defeat such research, opponents appeal to the premise that killing an embryo is always wrong. Before we may pronounce the verdict of any moral view—including our own—we must look beyond slogans and ascertain that view's fundamental principles. Thereafter comes the task of identifying and rigorously scrutinizing arguments. Upon close study of principles and arguments, it becomes plain that embryonic stem cell research gains moral approval even within views that might be presumed to oppose such research.

Embryonic stem cells are derived from blastocysts at about day 5 of gestation, the window of opportunity for obtaining pluripotent cells that can be grown without differentiating. Let us define as an "epidosembryo" (after the Greek *epidos* for a beneficence to the common weal) a human embryo that (i) was created in vitro in an assisted reproduction procedure, (ii) remained in storage after completion of all intrauterine transfers requested by the mother, and (iii) has departed parental control according to instructions to the attending physician that the embryo shall be given to research and that there shall not occur any transfer to a uterus, or ex vivo nurture beyond a number of weeks specified in the instructions, of either the embryo or any totipotent cell taken from the embryo. Let us assume that we owe great respect to any

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human embryo and to any possible person into which an embryo may develop. For the reasons explained below, I claim that experiments with epidosembryos are permissible at least for embryos that are less than 2 weeks old.

Before stating the case for this claim, we may put to rest a prominent argument that is not part of the case. A statute declares that no funds dispensed by the National Institutes of Health (NIH) "may be used for ... research in which a human embryo or embryos are destroyed."\* NIH has introduced a well-intentioned argument that, rendered in its strongest form, runs as follows. First, research on embryonic derivatives is distinct from obtaining such derivatives. Second, pluripotent embryonic stem cells are not embryos. Therefore, research on pluripotent embryonic stem cells is not "research in which ... embryos are destroyed." For the first premise, NIH relies on an opinion of counsel that asserts only the second. The second premise is a truism, but the statute does not recognize the distinction asserted in the first. If destroying embryos is wrong, the first premise—and hence the conclusion—carries no more moral weight than

does a bibliophile's claim, when observed perusing a stolen rare book, that he got it from a friend who visits archives. Notwithstanding that the embryos would perish anyway, embryonic stem cell investigation induces destruction of embryos. Hence investigators ride in the same moral boat with anyone who supplies them embryonic derivatives. With this we may contrast the case of stem cells derived from abortuses. Scientists stand to donate abortal tissue as transplant surgeons stand to organs or anatomy students to cadavers. The recipients have not induced the sources' deaths. So we assure by prohibiting inducements.† This constitutes the well-accepted justification for the use of donations from such sources.

Epidosembryo research is moral not because experiment and derivation are distinguishable, but because both are permissible. The argument for epidosembryo research is as follows. Outside a uterus, an embryo cannot long survive. When a fertil-



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ity patient decides against intrauterine transfer of an embryo, that embryo's developmental potential fails of enablement. Donor instructions governing an epidosembryo allow nothing but research. Hence no possible person corresponds to an epidosembryo. Nor has the epidosembryo preferences that could be frustrated or sentience by which it could suffer. Nothing can be gained for an epidosembryo by arranging that it perish as waste rather than perish in aid of others. We have a duty, when our means allow, to aid those who suffer. If we spurn epidosembryo research, not one more baby is likely to be born. If we conduct research, we may relieve suffering. Therefore epidosembryo research is permissible and praiseworthy. Such research includes studies of embryos themselves, from which we may learn how birth defects occur, and studies of stem cells with their distinctive therapeutic promise.

Epidosembryo donors turn statistical accident to good. Fertility clinicians recover and fertilize about a dozen eggs per patient; given the mortality rate of fertilized eggs (zygotes), any fewer fertilizations would fail to optimize chances of pregnancy. Once a patient has given birth to all the children that she wants, unused embryos usually

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\*Pub. L. No. 106-554, Title V, § 510 (2000), and verbatim predecessors since 1996.

†42 U.S.C. §§ 274e; 289g-1(b)(2)(A),(c); 289g-2(b).

‡J. E. Roemer, *Theories of Distributive Justice* (Harvard Univ. Press, Cambridge, MA, 1996), pp. 19–21.

§W. V. Quine, *Theories and Things* (Harvard Univ. Press, Cambridge, MA, 1981), p. 102.

Scientists in the United States may now obtain embryonic stem cells only from (i) WiCell Research Institute, Inc., a subsidiary of Wisconsin Alumni Research Foundation, patentee of method and derived cells described in J. A. Thomson *et al.*, *Science* **282**, 1145 (1998); (ii) WiCell licensees not using federal funds; or (iii) a foreign source.

