

# Stem Cell Research

## *Question:*

The National Institutes of Health (NIH) announced that it will allow research on embryo master cells despite a federal ban on human embryo research in the US. Does Jewish law distinguish between master cells and the embryo itself? Does it matter how the cells were retrieved? Are there any other halachic issues involved?

## *Answer:*

Man's creation in the image of God confers infinite value on every innocent human life and renders its destruction a capital offense. Although this inviolability does not begin until birth, the unborn child enjoys a sacred title to life from an early stage of its development, to be set aside only under exceptional circumstances such as serious danger to the mother's life.

Various criteria determine the fetus or embryo's halachic status. The opinions of the halachic authorities are by no means in accordance, but there is general agreement on one fundamental principle: full human status is only acquired at birth, and until then the destruction of the product of conception does not constitute murder. Nonetheless, it is clearly agreed that the potential for life must not be compromised except for the most substantial medical reasons.

All authorities agree that some protection should be given to the embryo during each stage of its development, from conception to birth. The exact status of each stage is sometimes arguable; the following seven stages, therefore, are only a summary of the mainstream opinions of recognized contemporary halachic authorities. In general, the first two stages are the most relevant to the present discussion since they concern the pre-embryo and embryo.

The pre-implantation embryo stage begins with the fusion of gametes, when they acquire all the genetic information necessary for human development.

The embryo stage begins with implantation, when no active procedure is required to maintain growth, and the chances of the embryo reaching the neonatal stage exceed fifty percent.

The first fetus stage begins on the forty-first day after conception, when gross organogenesis is complete and human form is established and visible on the expulsion or extraction of the embryo.

The second fetus stage begins at the end of the third gestational month, when pregnancy is recognizable without the use of modern equipment.

The viable fetus stage begins on the twenty-seventh week, according to Jewish sources.

The dislodged fetus stage starts at the beginning of the second stage of labor.

The neonate stage begins at birth (after the second stage of labor), when the newborn acquires full human status.

The pre-implantation embryo's halachic status is reduced by the low probability that it will actually reach the neonatal stage and be born – the Sabbath laws, for example, are not set aside in order to save its "life." The pre-implantation embryo does not enjoy the same sacred title to life as the embryo or fetus, and its status is similar to that of human semen.

The Talmud considers the embryo during its first forty days following conception as "mere water" (*maya be-'alma*) in the context of the laws of impurity normally following birth or miscarriage. Some later authorities use this as support for minimizing the embryo's "rights" or status during this phase so that the prohibition against "destruction of potential human life" does not exist. The only source for protecting such an embryo is an extension of the prohibition against "spilling seed in vain."

Such a conclusion could lead to permitting embryo research if it is conducted in order to enable the sperm donor to bear children or in order to save someone's life. It is not accepted by some halachic authorities today, however, and the Sabbath laws are set aside in order to save the post-implantation embryo's "life," indicating that the post-implantation embryo does have some human status. The prohibition against destruction of potential human life exists in the case of the embryo, in contrast to the in-vitro pre-implantation embryo.

Jewish law does not differentiate between destruction of an in-vitro pre-implantation embryo and its use for scientific research. Both are forbidden as long as the potential for implantation exists. Creation and use of in-vitro pre-implantation embryos for fertility

research should only be allowed if there are real chances that the sperm donor will have a child as a result (and thereby fulfill the commandment to “be fruitful and multiply”), or if it is highly probable that the research will save human life.

An in-vitro blastocyst that has lost its implantation potential may be kept for further research. A priori creation of such a blastocyst for research purposes, however, is prohibited.

It is forbidden to use a viable post-implantation embryo for research purposes unless the research is essential for saving that embryo’s “life.”

There is a clear distinction between the pre-implantation and post-implantation embryo, but Jewish law does not recognize the arbitrary fourteen-day limit of the distinction between embryo and pre-embryo.

*Source: ASSIA – Jewish Medical Ethics,  
Vol. IV, No. 1, February 2001, pp. 59-60*