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Stem cell research: a religious and ethical perspective

by

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Abstract

Stem cell research is among the most promising and controversial technological breakthroughs of our time. Stem cells are the cells from which all 210 different kinds of tissue in the human body originate. There are great potential to relieve human disease and suffering. The first studies on stem cells began in the 60s. Scientists have isolated the first human embryonic stem cell lines specifically tailored to match the nuclear DNA of patients, both male and female of various ages, suffering from disease or spinal cord injury. Because many diseases result from the death or dysfunction of a single cell type, scientists believe that the introduction of healthy cells of this type into a patient may restore lost or compromised function.

Stem cells are able to divide, while maintaining their totipotent or pluripotent characteristics. Early in mammalian development, stem cells (embryonic stem cells); have the ability to differentiate into every cell of the human body (totipotent), potentially forming an entire fetus. Stem cells derived from later stages of mammalian development have the ability to differentiate into multiple cell types, but not into an entire organism. Adult stem cells are generally limited to differentiating into different cell types of their tissue of origin

Most cells in the human body are differentiated and have the ability to form only cells similar to them. If one can manipulate the conditions controlling cellular differentiation, it may be possible to create replacement cells and organs, potentially curing illnesses such as diabetes, Alzheimer's disease, Parkinson's disease and other potentially serious illnesses..

Embryonic Stem cells for research are obtained from the surplus fertilized embryos in infertility management with IVF, from aborted fetuses, umbilical cord and cloning whether therapeutic or reproductive.

The overwhelming objection to stem cell research is that it involves the destruction of an embryo or foetus. For many, this constitutes destruction of a potential human, and conflicts with religious

and moral views held in our society. For others, the potential for this research to provide treatments and possibly cures for debilitating illnesses that have no cure and significantly impact on our way of life overrides this concern. Central to any argument on this is what actually constitutes the beginning of life for a human. Opinions on this vary from the moment of conception to a 14 day embryo and a living baby at birth. The other major ethical issue associated with stem cell research ties in with the combination of embryonic stem cell and cloning technologies.

This newly emerging technology has caused a great deal of ethical, legal, and theological discussion and debate. Is IVF permitted to begin with? Are pre-embryos included in the prohibition of abortion? May a very early embryo be sacrificed for stem cells that could save lives or at least cure disease? May we fertilize ova specifically to create an embryo to be sacrificed for stem cells? With 'surplus' embryos cryopreserved in IVF clinics, is there a need to create additional embryos solely for purposes of stem cells basic research? Need we make "fences" in the form of protective laws to protect fetuses from wanton destruction? May tissue from aborted fetuses be used for research or medical treatment?.

This paper discusses stem cell research in an ethical and religious perspective showing the Islamic, Catholic, Judaism and secular ethical views. it also projects possible compromises that could be utilized and urges local authorities to develop regulations for all clinical and research work that involves the human embryo.

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