

# Bio 100 essay

Health & Medicine, Disease



The quest for improving the quality of life of man is not one that is up or will be up anytime soon. Rather, it continues to intensify and broaden by the day. For diseases that do not have known cure for now, new research breakthroughs are raising beacons of hope in the treatment of such diseases as Parkinson's disease, Alzheimer's disease etc.

Stem cell technology involves the use of embryonic stem cells to produce specialized tissues for use in research and medicine. Embryonic stem cells are used because they are not yet differentiated and can be programmed into any desired tissue with the right environmental intervention.

A recent technological breakthrough created cells that are like embryonic stem cells called induced Pluripotent Stem Cells (iPSCs). This was achieved by reprogramming adult skin tissues of rats with four genes found active in the embryo. This discovery of iPSCs initially raised the hopes of finally working with a substitute that would eliminate the various ethical issues surrounding the use of embryonic stem cells (Hochedlinger 2010). However, as a result of quality control and safety concerns, there would still be need to validate the efficacy of the iPSCs with the use of human embryonic stem cells.

The ever present ethical issues with the use of stem cell are thus raised. One such is the contention of using a life to save another life. We are torn between upholding two moral principles: the duty to alleviate suffering and the duty to respect human life. As stated earlier, the goal of these research endeavors is to cure diseases and make the quality of life better for man. This is achieved through research using embryonic stem cells.

Scientists will not stop at trying to attain better and healthy living for man. In

order to achieve this however, there is still the need to overcome the ethical dilemma attached to working with embryonic stem cells, and work within universal acceptable ethical standards.

## **REFERENCES**

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