



# STEM CELL RESEARCH

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## Introduction

Stem cell therapy has been a way for researchers to cure the incurable, learn about the effects of drugs, and understand the human developmental process. Stem cell research has progressed in the last 40 years but there stands a controversy on the usage of stem cells for treatment.

## Research Question

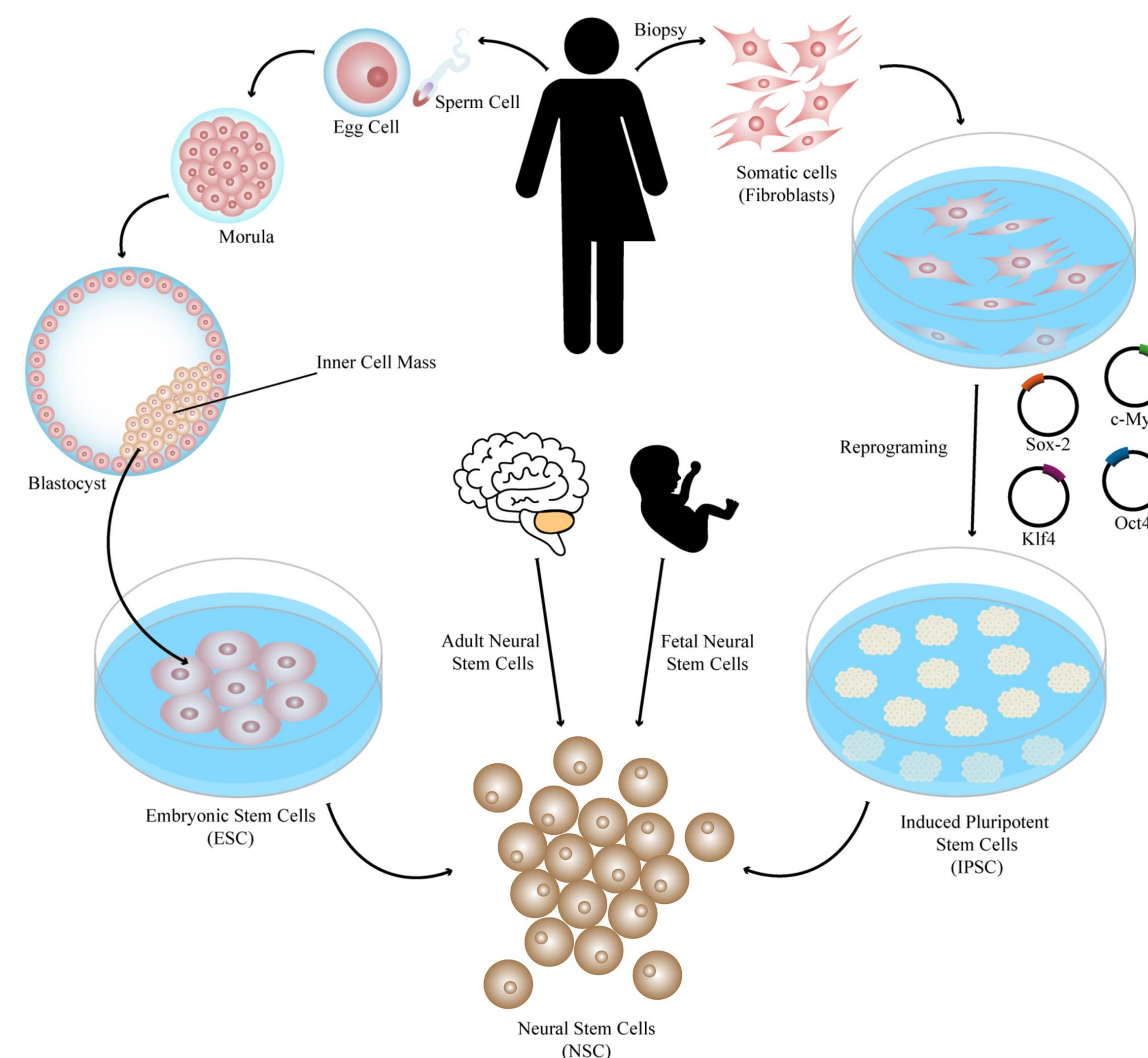
Is stem cell usage for research beneficial or detrimental to society and the moral values upheld by society.

## LITERATURE SYNTHESIS

Literature was collected from both recent and older research with an emphasis on the moral aspects of embryonic stem cell usage. Data for the usage of stem cells for treatments of disease and human development have been promising yet slow. Research on the future of stem cells, although having potential future scientific advancements, has slowed down due to the debate on the moral implications of harvesting embryonic stem cells and using these cells to alter human genetics.

## CON'S

In its basic form, the central argument against stem cells is supporting the claim that it is unethical to destroy a human embryo for future scientific gain. Stem cells allow laboratories to genetically engineer the human genome and alter specific characteristics of that genome. This is frowned upon in most societies as it mimics the role of "God".

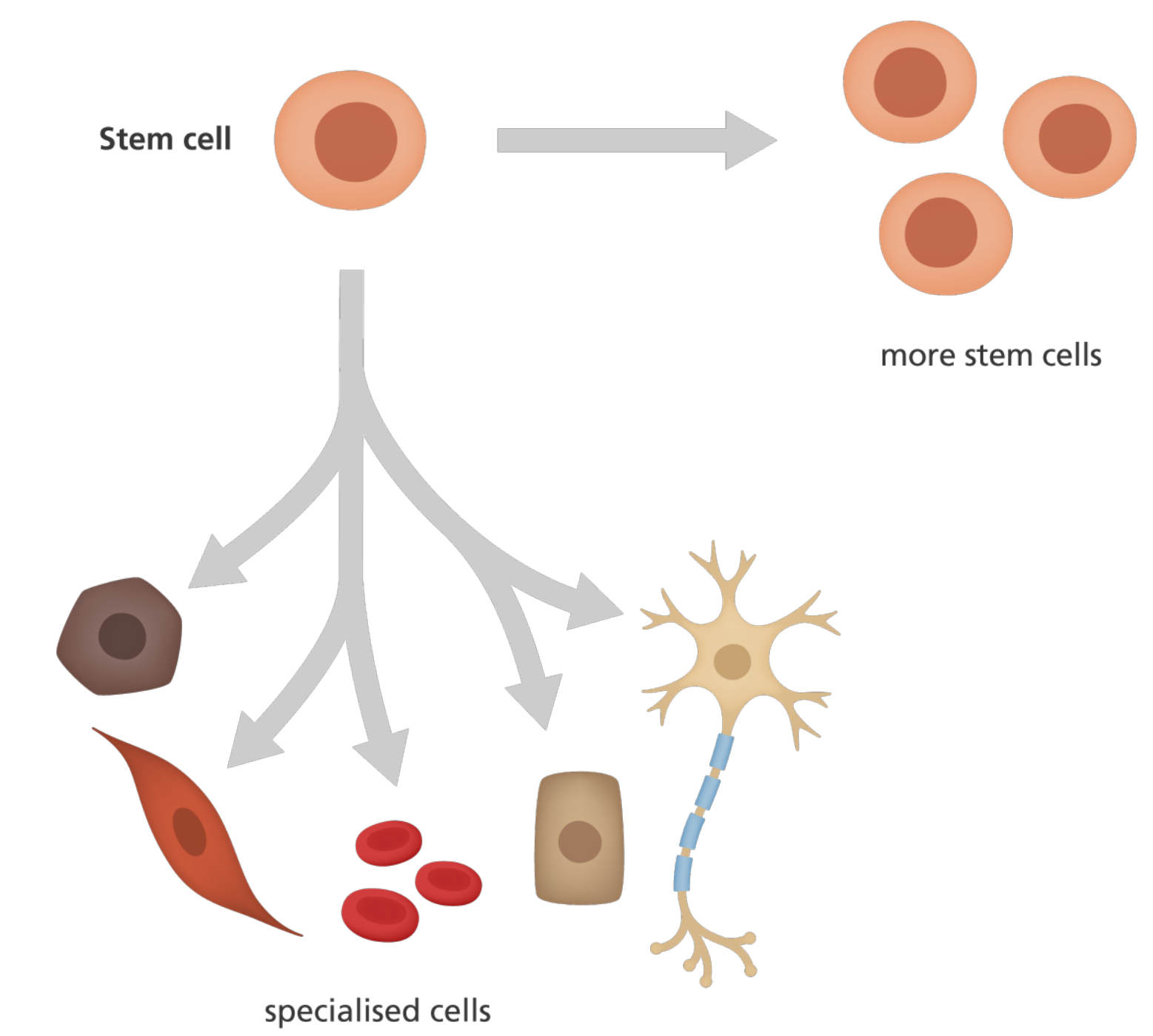


## PRO'S

Stem cells have a regenerative ability and the ability to differentiate into any specialized cell. Scientists can observe the development and differentiation of stem cells and as such, monitor each developmental step in human or disease development. These stem cells also have the ability to help with regenerative medicine and transplants. The predominant usage of stem cells is the use of hematopoietic cells used mainly in bone marrow transplants or blood disorders such as anemia. New drugs that are meant to act on particular cell types can be tested on stem cells that have been differentiated to turn into those specific cells

## POLITICS

There are no federal laws that ban stem cell research, but there are restrictions on funding and use of stem cell research.



## Conclusions

Although the use of stem cells is vastly beneficial for the creation of effective drugs and curing disease, it is ultimately up to society to decide their intentions and goals. Stem cells can advance the delivery of healthcare but the moral implications of using *embryonic* stem cells also stands on valid ground. Luckily scientists have found a technique to reprogram adult stem cells to behave like embryonic ones overcoming the moral barrier that an embryo must be harvested to do stem cell research.

## References

Dabrock, Peter. "Playing God? Synthetic Biology as a Theological and Ethical Challenge."  
"Importance of Stem Cells: University of Nebraska Medical Center." *University of Nebraska*