

# Bioethics

## Stem Cells

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# What are Stem Cells?

- Unspecialized cells used to make specialized cells
- They form cells to repair the damaged body tissues and organs
- Help the body grow
- Research began in 1981 when vitro fertilization cells were donated
- Derived from human embryos and grown in the lab
- Three general properties: they are capable of dividing and renewing themselves for long periods; they are unspecialized; and they can give rise to specialized cell types.

# Types of Stem Cells

- Embryonic- cells from embryos
- Somatic- Stem cells left in adults to repair minor damage
- Pluripotent- adult cells that have been genetically reprogrammed to an embryonic cell

# Problems

-Embryonic: In the 3- to 5-day-old embryo, called a blastocyst, the inner cells give rise to the entire body of the organism, including all of the many specialized cell types and organs such as the heart, lungs, skin, sperm, eggs and other tissues.

-Somatic: Not many

-Pluripotent: Have to take from adults



# Problems Continued

To be useful for transplant purposes, stem cells must be reproducibly made to:

- Proliferate extensively and generate sufficient quantities of cells for making tissue.
- Differentiate into the desired cell type(s).
- Survive in the recipient after transplant.
- Integrate into the surrounding tissue after transplant.
- Function appropriately for the duration of the recipient's life.
- Avoid harming the recipient in any way.

# Importance

- Advance scientific knowledge
- Repair and help damaged bodies, better lives
- Disease cure research
- Knowledge on how we develop and how stem cells specialize

# Who it affects

- Scientists
- Patients
- Embryo (if thought of as human)
- Religious people
- People with views on it in general

# Viewpoints

-Embryo is a human/is not

-Religion, religious people say that as soon as an egg is fertilized it is a human, therefore it is wrong to use stem cells.

-Need for research- Many people believe that stem cells are essential for scientific advances.

-Stem cells can wither cure living human, or become a baby.

-60% of Americans say it is morally acceptable.(us.news.com)



# Our Viewpoint

- It's for the good of society so we should do it
- We are pro stem cells
- We believe that even though the egg is fertilized, it has not developed any social relationships or connections with others. It doesn't know anything and therefore will not be affected by its death.

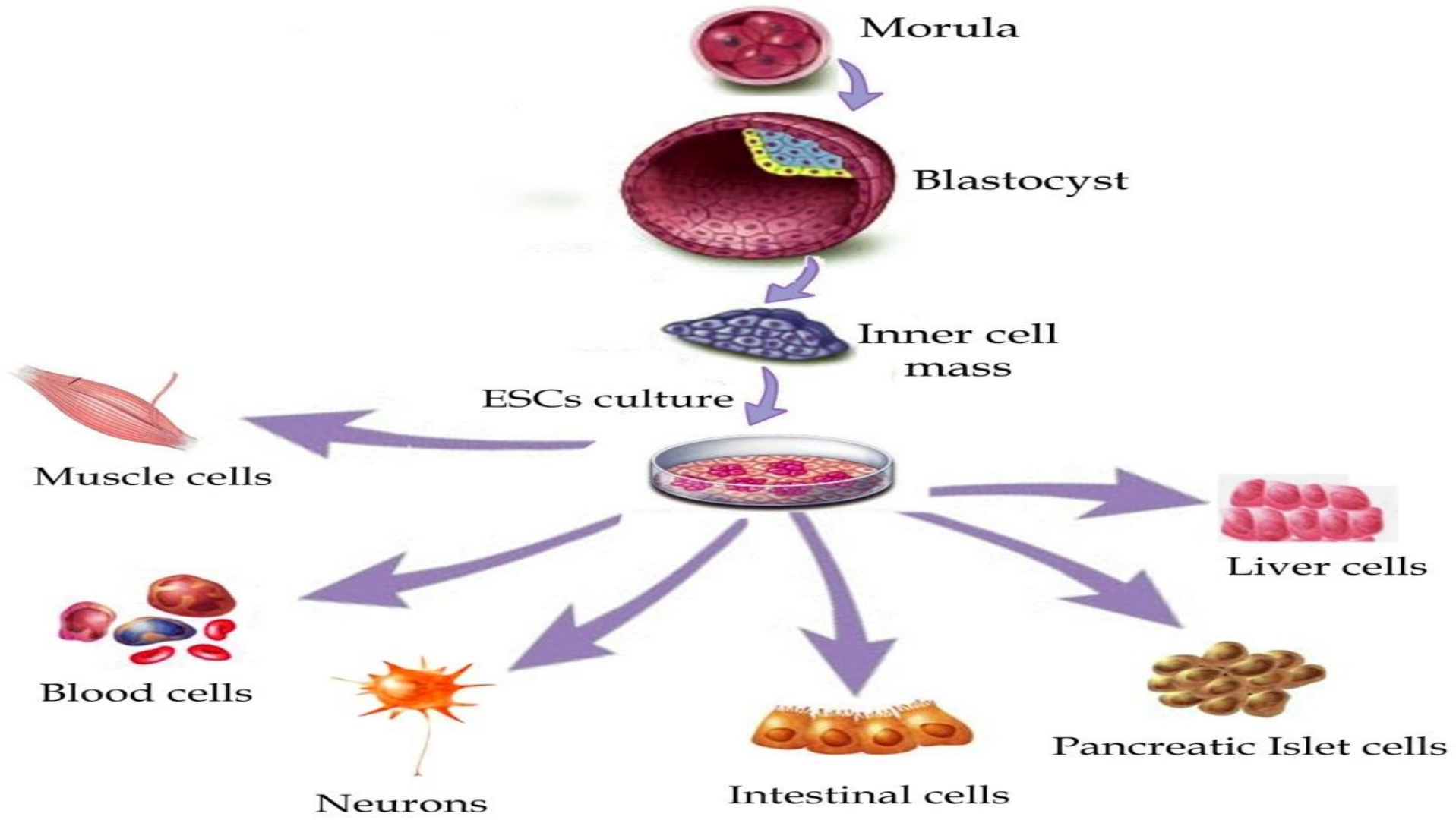
# Counter Viewpoints to Ours

-It is against some religions

-Response: Yes but not everyone is religious

-That child could have grown up to be someone great

-Response: Yes that is an unfortunate aspect and could be a great loss. But someones greatness compared to others does





Stem cells, even badgers have them!



**COME AND GET ME...**

...LIMEY!