

The Challenge of Stem Cell Research

Christian One of the challenges we face as Christians is expressing and sharing our faith in a contemporary society where science and medicine present challenging new ethical dilemmas, for example those presented by reproductive technology and stem cell research. How might we advise an infertile couple who are keen to have IVF but are asked what they want done with the spare embryos? Currently, in the UK, these spare embryos may be used in scientific research for up to fourteen days before disposal.

This is my topic for discussion: Stem Cell Research and its implications for Christian Faith. I will briefly explain what stem cells are, where they come from, what they could be used for, and lastly draw attention some passages from the Bible which should guide our Faith.

Firstly, a stem cell is a body cell that has not yet differentiated to become a specific cell type such as a nerve, muscle or blood cell. Stem cells taken from early embryos have “totipotency”, and can even produce a separate human being. This is how identical twins are formed quite naturally. As embryos develop, the range of cell types which their stem cells can become gets narrower. Thus the most potent stem cells come from early embryos.

As adults we also possess stem cells, albeit less potent, which provide us with replacement blood, skin and gut lining, and other tissues as these continuously wear away or are lost. We are all familiar with the concept of a bone marrow transplant where stem cells from one person are donated to provide a replacement supply of new blood cells in another. The success of this treatment depends on tissue matching to prevent rejection by the body’s immune system. Some medical research currently focuses on making such adult stem cells, with their narrow potentiality, much more adaptable in the type of tissue they can become, for example, replacement heart muscle or spinal tissue, rather than just blood cells. This would not seem a controversial medical advance.

There is, however, a much more challenging prospect. Since the cloning of Dolly the Sheep, we can now take genetic material from any adult cell and inject it into an unfertilized egg, thereby producing a cloned embryo. Stem cells from such an embryo would have the perfect tissue match, and also be totipotent, capable of becoming any tissue, organ, or, if implanted illegally in a womb, a reproductively-cloned human being.

When considering the ethical status of embryonic rather than adult stem cells, the question we need to ask ourselves is: when does human personhood begin? If we accept that a human on a life-support system can be allowed to die when brain stem activity ceases, should we also accept that personhood starts when brain activity begins?

I want to mention three passages from Scripture that may be helpful in our discussion: A legal argument from Exodus 21:22-25 When men strive together, and hurt a woman with child, so that there is a miscarriage, and yet no harm follows, then the one who hurt her shall be fined.

A prophetic statement from Jeremiah 1:5 Before I formed you in the womb I knew you, and before you were born I consecrated you.

Elizabeth’s declaration from the Gospel of Luke 1:44 The babe in my womb leaped for joy.

Now cast your minds back to the couple that have come to seek our advice. They have been offered the chance to have IVF, but are now being asked to donate their spare embryos to help advance medical research to help others. How should our Christian Faith guide us and them?