

# Stem Cell Wars: Inside Stories from the Front Lines

*Eve Herold. 2006*

*Palgrave MacMillan: New York*

Taking cells from adults or the umbilical cord of newborn babies for regenerative purposes seems to have been accepted almost universally without obvious concern. Moreover, even using abortuses as a source of cells or tissue for this purpose has prompted surprisingly little protest. Thus, "Stem Cell Wars" is not about stem cells generally, but is concerned specifically with so-called embryonic stem cells obtained from very early stages of human embryonic development grown *in vitro*. While this is a war that is being fought on many fronts throughout the World, the author focuses on one particular theatre, namely the USA, and the reader will soon appreciate that her stance is far from that of a dispassionate observer.

The case for allowing research on early stages of human embryonic development for certain specified purposes was accepted some sixteen years ago in the United Kingdom with the passing of the Human Fertilization and Embryology Act. More recently, regulations governing this research were extended to allow both the derivation of the embryonic stem cells and what has come to be known as "therapeutic cloning". While those in the UK who are totally opposed to the use of early human embryos for research or the production of stem cells still continue to protest, they have at no stage enjoyed any real clout politically. That the situation is starkly different in the US is evident from Eve Herold's documentation of political shenanigans and economies with the truth on a scale that almost beggars belief. What she does not attempt to explain is why the embryonic stem cell debate continues to arouse so much passion on the other side of the Atlantic.

It must, at least in part, be because the US is a country of stark contradictions, where primacy in biomedical research coexists with more widespread belief in Creationism and Intelligent Design as alternatives to evolution than can be found anywhere else. And, undoubtedly, the strength of such fundamentalism in Republican circles has helped to engender an ambivalence towards science within the Federal administration that has coloured its handling of important issues like embryonic stem cells and climate change.

"Stem Cell Wars" is written in an engaging and eminently readable style and, apart from somewhat over-enthusiastic interpretation of a few of the animal studies cited to illustrate the promise of stem cell therapy, the relevant science is presented with commendable accuracy and clarity. My one quarrel with Herold's discussion of the ethics of using early embryos as a source of stem cells is laxity in terminology. The critical issue in the embryo debate is not when human life begins, which ceased to be pertinent with the demise of belief in spontaneous generation, but when the life of a new human individual begins.

A particularly interesting part of the book, and one to which considerable space is devoted, is the extraordinarily precipitate fall from grace of Woo Suk Hwang following his meteoric rise to international scientific stardom. The author's close involvement with aspects of this very sad episode provides novel insight into how initial disquiet about the provenance of human eggs for producing cloned embryonic stem cell lines led eventually to the revelation that Hwang had fabricated his published results. This disclosure was not only deeply embarrassing for the Government of South Korea, but is claimed by Herold to have been exploited ruthlessly by those in the US opposed to embryonic stem cell research as a way of discrediting it.

This book is a must for anyone wishing to understand the complexities of the stem cell debate in the US and, in particular, how casually relevant scientific findings can be variously exaggerated, belittled or ignored in a battle in which emotive impact becomes the principal weapon. Thus, I think it will appeal rather more to people concerned with facilitating the application of stem cells to regenerative medicine than to those actually doing the research.

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