Stem Cell Research in China: An Intertwinement of International Finances, Ambition, and Bioethics

By Margaret Sleeboom

stem cell research promises remedies to widespread diseases ranging from diabetes to paralysis. Stem cell is a term used to refer to a range of cells that have the ability to divide into specialized body cells, such as blood cells or new tissue. By studying the processes in which stem cells grow and differentiate, biologists study the causes of many diseases, and hope to use them for therapeutic uses in the repair of damaged tissue and organs for a wide range of currently incurable disorders.

In China the situation is not very different. But what arguments are used for and against it in Chinese debates on embryonic stem cell research (ESR)? At the Conference on Stem Cell Research in May 2002, a German scholar of Asian Studies, Ole Doerrning (Hamburg University), caused controversy when he spoke about the bioethical and legal dimensions of stem cell research in Germany. He had probably aimed to sensitize his mostly Chinese audience to bioethical issues linked to ESR in general. Quoting a famous Tang physician, Sun Simiao, by the phrase ‘who ever destroys life in order to save life, faces life at a greater distance’, he related that heated debates on ESR in Germany include discussions on the abuse of human bodies and Nazi experiments on human subjects. In April 2002 it was decided that German law would allow the importation of human embryos for research.

1 However, in the long run the use of adult stem cells will probably coexist with that of embryonic stem cells for several reasons. The occurrence of teratomas (tumours of heterogeneous tissues) in case of the use of embryonic stem cells is high, and the occurrence of immune problems in case of the use of adult stem cells is low.

2 For more information on the scientific work and achievements of Chinese researchers in the life sciences, see www.Eastday.com.cn.

Chen Yingling also emphasized that the bioethical debate is heavily influenced by the difference in national regulations for ESR. For instance, Britain takes a liberal attitude, as Tony Blair turned it into a free haven for stem cell research. Similar to the European Community, China has ruled that if the withdrawal of federal funding for stem cell research continues, private companies will acquire a monopoly on the research. Therefore, most research gets patented or is kept secret. Furthermore, Chinese scientists are aware that, as it is usually funded by federal money. Finally, the Chinese research environment allows ESR in China to thrive. In the long run it has found a way to introduce genetic material into a stem cell, which could turn it into a full organ that would then be transplanted into a human body. So far Li has successfully caused human stem cells to produce a glandular structure that secretes chemicals useful in treating diabetes and Parkinson’s disease. Chinese scientists have successfully transplanted healthy (embryonic) nerve stem cells into a patient’s brain to replace the deteriorated ones (Xinhu.net, Zhongzhou, 31 August). They have chosen pulsating heart cells from human embryo stem cells (Reuters, 5 September 2002), and succeeded in curing a mouse of lower paralysis four months after implanting nerve stem cells from a human embryo (Xinhu.net, Huhin, 5 December 2002).

Bioethical debate in the PRC

It is clear that a better understanding of our bioethical pri-

orities is needed. In Mainland China a beginning has been made by the National Bioethical Committees and by research centres at various institutions of higher education such as the Chinese Academy of Medical Sciences (CAMS) and the Centre for Applied Ethics located in the Chinese Academy of Social Sciences. Ethical issues in stem cell research seem to involve arguments both for and against its continuation. Obvious arguments for continuation include its promise of relief from a large range of diseases, and an extension of the human lifespan. Furthermore, it will be able to facilitate transplantation or even replace transplantation of organs by stem cell replacement. Another argument ‘for’ is the fact that it makes the use of animal stem cell research largely unnec-
erary. Others, however, such as Yang Huanming, director of the Beijing Genomics Institute, recommend the use of ani-

mals to grow human body parts as bioethical to humans. Arguments that oppose ESR object to the creation of embryos, especially for stem cell research. In case of the use of abort-

ed embryos and spare embryos (left over after IVF treatment), there are worries about the observation of informed consent procedures. Arguments that oppose ESR object to the use of financial resources for expensive med-

ical technologies, while many diseases could be prevented and cured with simple investment in water, vaccines, and cosmetics. Moreover, there is a significant worry that it is of utmost importance, concern the question of the value of embryonic life: what it means to people and how it is experienced in different cul-
tural and economic environments.

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Notes

[who ever destroys life in order to save life, faces life at a greater distance]

Stem Cell Research at Beijing’s Military Medical College, at the Conference on Stem Cell Research in Beijing (23–27 May 2002, Xiaotangshan) claimed that 128.4 million precious cells could be helped by stem cell research; on the one hand, strong supporters of stem cell research, such as Nancy Reagan, tried to get Bush to use public money to finance it, reportedly because her sympathies lie with Alzheimer patients such as her husband. On the other hand, Pope Paul II urged President Bush to put a ban on embryo use altogether, comparing it to a ‘cannibalization of embryos’. Generally, Christian parties regard embryos not as just a lump of cells but as an emerging individual and scientific or economic interests cannot legitimize embryo use.

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