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Human Embryonic Stem cell Research (hESR) in East Asia: an Institutional Approach to Bioethical Reorientation

It is little known that the bioethics of human embryonic stem cell research (hESR) has also led to controversies in Asian countries. After the 2001 US-moratorium on the public funding of hESR, various Asian countries jumped into the resultant 'bioethical vacuum', claiming that Asian countries do not suffer from Western religious scruples about using human embryos in hESR. But this study shows that the notion of the bioethical vacuum should be revised.

The research set out to build on and complement the efforts of the Global Watch DTI mission report on stem cell research (SCR) in Asia. The research proceeded by examining formal SCR regulation in practice, scientists' views on their public role in society, their attitudes to international SCR developments and the conflicts of interest regarding SCR developments in China and Japan.

The researcher has presented papers on hESR in Asia, held a workshop and conference on the topic and has written nine articles on the subject, while four more, a Special Issue and a monograph are planned. Joint grant application efforts have resulted in funding for three researchers to continue research on this topic in Korea, Taiwan and Mainland China, and Japan.

The research comprised two stretches of eight weeks of fieldwork in China and Japan each (c.32 weeks in total), preceded by a country analysis of the population, healthcare system and economic situation and a study of guidelines published by governments and research associations. Apart from archival and internet studies, fieldwork comprised 62 interviews in IVF clinics, stem cell laboratories, and social and patient organisations in China and 51 in Japan. published documents collected

The disappearance of the bioethical vacuum

In 2001, hESR was announced as a field in which China could take a world lead, due to its easy access to embryos and oocytes. The press and policy documents emphasize the value of hESR to Japan's rapidly ageing society, for which hESR was hoped to yield a cure. But soon, especially after the scandal around Korean stem cell scientist Hwang Woo-Suk, bioethical regulation became viewed as essential to developing world-level SCR. Thus, concepts of 'respecting the embryo' have been adopted in Japan, and the regulation of informed consent for the donation of embryos, oocytes and umbilical cords in China were put in place. But unlike regulation in the UK, the adoption of regulation was not accompanied by public consultation in China. And in Japan, although the government put considerable efforts into stimulating debate on hESR (e.g., the discussion platform, Genome Square), it was virtually non-existent compared to the one on 'brain-death' a few years earlier.

The political economy of tissues

In China, stem cell scientists from well equipped laboratories work with stem cell lines from abroad, with their own stem cells, or with those from other laboratories in China. Some research laboratories in Japan use stem cell lines from the US, and with the development of induced pluripotent stem cells (iPS, using human adult cells),

many labs also work on human iPS cell lines. Stem cell researchers in both countries find it ironic that they purchase their hESC lines from a country 'opposed' to hESR.

Although the PRC no longer can be regarded as a bioethical vacuum, the idea of China as bioethically permissive plays various important roles in negotiations about hESR: On the one hand, Chinese researchers often speak about China as known for being unethical in the field of hESR, emphasising how their laboratory complies to international guidelines for SCR. Others, however, recommend research in China for the availability of embryos and fetuses. Some researchers use their access to reproductive bioresources as an advantage in negotiating international collaboration.

Globalization and bioethical dislocation

International collaboration in hESR favours using internationally acknowledged bioethical review. This research found that the understanding of differences between bioethical attitudes among scientists in China and Japan requires a differentiation between concepts of harm to patients and donors, the reputation of the scientist, and the normative views of hESR.

China has channelled scarce resources into hESR, with little potential benefit to the health of the majority of the population. The donation of embryos and oocytes is facilitated even though most Chinese donors are unlikely to benefit from potential research outcomes. At the same time stem cell researchers use these donations to further their research and to negotiate collaborations. The lack of public discussion on hESR and ineffective bioethics institutions and the adoption of foreign derived guidelines in China led to bioethical dislocation: a large discrepancy between guidelines and the normative behaviour particular to a local research environment. Furthermore, scientists and politically powerful figureheads scramble for the power to define bioethics, excluding the 'masses'.

Another form of bioethical dislocation developed in both China and Japan, due to the ways in which debate is defined. Dominant debate in the media tends to couch bioethical discussions in terms of Eastern views on human life as a continuous process versus Western views of human life as sacred after conception, as if hESR is unproblematic at home. In Japan, this was reinforced by the loud voices of principal investigators, who usually do not engage in bench work. But until recently, administrative hesitation and a fear of scandal have kept the regulation of hESR tight.

National ambitions

The 'discovery' by a Japanese research team of iPS has enthused the broad Japanese public behind iPS research, in contrast with hESR, about which there was hardly any debate. Even though the nature of iPS and its suitability for therapeutic applications are not established, former views of 'ethics' and 'safety' are overtaken by nationalist ambitions to find therapeutic applications first. Although many research centres use foreign hESR lines, it is policy in both China and Japan to establish national lines and cell banks. Now that Wisconsin cell lines have become an unofficial standard for characterisation, Japanese scientists expressed the view that Japanese iPS cell lines should become global standard now. In both China and Japan friction exists between national ambitions in hESR, its bioethical embedding, and issues of safety, which are intimately intertwined.