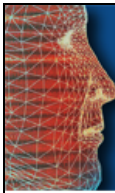




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## Interactive Case Study: Recruitment of Egg Donors by South Korean Stem Cell Researchers

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# International Dimensions of Ethics Education in Science & Engineering

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HOME

CASE DESCRIPTION

INTERVIEWEES

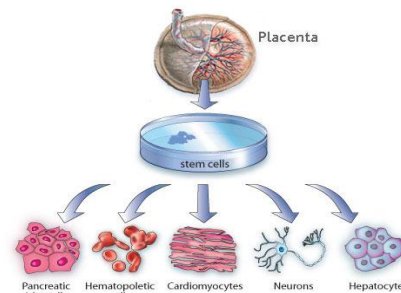
RESOURCES

DISCUSSION

## Recruitment of Egg Donors by South Korean Stem Cell Researchers

### Background:

Stem cells are undifferentiated cells in the human body which are able to replenish themselves by dividing. Under particular natural or medically induced circumstances, they are able to develop into more specialized cells for forming bones, nerves, body tissue, brains, muscles, and blood. Stem cell research has provoked considerable ethical concern; while many welcome the prospect of more effective treatments of birth defects or diseases, using human embryonic stem cells for such treatments, or even in scientific research, is very controversial. The embryo must be destroyed to secure its stem cells, and anyone who believes that human life begins at the moment of conception equates destroying embryos with committing murder. Excitement generated by the first acquisition of human embryonic stem cells in 1998 spread around the world. In South Korea, where scientists and the government had been attuned to advances in genetics, bioscience, and biotechnology since the mid-1980s, there was strong interest in taking up the new possibilities. Four years earlier, the South Korean government had adopted an ambitious "Plan 2000" intended to make South Korea one of the leading sites of bioscience and biotechnology research in the world. In 1990 it provided its national Genetics Research Institute with ample facilities in the new Taedok Science town just outside Seoul; in 1995 it expanded the Institute and renamed it the Korean Research Institute for Bioscience and Biotechnology to better reflect its expanded areas of work.



### Controversy:

In 2002, when his team began their effort to develop patient-specific stem cell lines by extracting stem cells from cloned embryos, Dr. Hwang Woo-suk was one of South Korea's leading stem cell researchers. He already had a record of considerable research accomplishment, was skilled at organizing teams for large projects, and had sufficient international reputation to recruit foreign collaborators. He was a veterinarian, however, on the Veterinary Faculty at Seoul National University, and therefore not qualified to perform medical procedures on humans.

Collaborators at Hanyang University Hospital submitted plans for the experiments and for procurement of eggs to its Institutional Review Board, which approved them. Though online supplementary material in one of Hwang's published papers indicated that volunteers were not paid and had provided informed consent on forms detailing how the eggs would be used, rumors that two female members of Hwang's research team had donated eggs and that other donors had been paid began to circulate in late 2003. Hwang denied the allegations and was supported in his denial by members of the Hanyang University Hospital IRB.

Public support for Hwang's research remained high. Publication of Hwang's patient-specific stem cell paper had triggered a threefold rise in prices of South Korean biotech stocks. In late June, the South Korean Ministry of Science and Technology honored Hwang with the new title of Supreme Scientist and awarded him the equivalent of US \$15 million in research support.

Doubts about the propriety of the egg donations continued to swirl, however, and at about the same time one of Hwang's US-based collaborators, Dr. Gerald Schatten, announced he was suspending his collaborations with Hwang. The controversy intensified in South Korea when Dr. Roh Sung-il, head of the fertility clinic at MizMedi Women's Hospital where many of the eggs used by Hwang's team were donated, held a news conference and told the assembled journalists that he had paid some 20 women the equivalent of US \$1,400 each for donating their eggs in 2002. Roh added that payment had become unnecessary later because women were willing to donate eggs without compensation after Hwang's work became well-known. He also insisted that Hwang did not know about the early payments.

Three days later, Hwang called a press conference to announce his intention to resign as President of the World Stem Cell Hub. He claimed he had rejected proposals that team members donate eggs while acknowledging that two members of his team had done so. He said they had gone ahead and donated under false names, he had found out about the donations later, and he had lied about the source of eggs to protect their privacy. To critics pointing out that he should have been aware that having members of the research team act as donors contravened the Helsinki Declaration, Hwang replied he was unaware of that Declaration.

### Conclusion:

Hwang's defenders in the government and among the public still felt the charges reflected an unfair imposition of foreign standards on Korean researchers. Health Ministry official Choi Hee-joo was quoted as saying that the women providing eggs for Hwang's research were motivated by a desire to serve science, that their actions accorded with Asian ethical conceptions, and that neither they nor Hwang's team should be judged by Western standards.

The next month, Seoul National University convened a 9-scientist internal review panel to look into all of the charges against Hwang. Its reports in December and January confirmed the charges that he had faked data in the stem cell papers. They also confirmed irregularities in procurement of egg donations. First, the review panel concluded that Hwang's team had used at least 273 eggs to produce embryos, rather than the 185 they reported in their published paper. Also, after being informed that Hwang had distributed egg donation consent forms to his researchers and even given one of them a ride to MizMedi Hospital for the egg extraction procedure, the panel rejected Hwang's claim that he was unaware of egg donations by female researchers on his own team.

Notes: While the characters and events depicted in this case are based on factual occurrences, the dialogs and case study presented are fictionalized. Additionally, at approximately the same time the case involving paid donors and involvement of female research assistants gained prominence in the media, the same researcher was also accused of fabricating data. Some of the news articles included below may reference the data fabrication aspect of the case, though the materials used for this exercise do not focus on that element of the scandal.

[HOME](#)   [CASE DESCRIPTION](#)   [INTERVIEWEES](#)   [RESOURCES](#)   [DISCUSSION](#)



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