Hwang Woo-suk's Use of Human Eggs for Research 2002-2005 [1]

By: Clay, Anne Safiya Keywords: Hwang Woo-suk [2]

Hwang Woo-suk, a geneticist in South Korea, claimed in *Science* magazine in 2004 and 2005 that he and a team of researchers had for the first time cloned a human embryo and that they had derived eleven stem cell lines from it. Hwang was a professor at Seoul National University in Seoul, South Korea. In the *Science* articles, Hwang stated that all of the women who donated eggs to his laboratory were volunteers who donated their eggs (oocytes) without receiving any compensation in return. In 2006, Hwang admitted that many of the results were fabricated. Subsequent investigations found that Hwang's lab used more eggs than they had accounted for in their experiments, and that egg [3] donors had been paid. Hwang’s use of donated eggs in his experiments attracted international attention and sparked debates about the ethics of egg donation [4] for research purposes.

Suspicions about Hwang's claims arose when one of his female researchers, Ja Min Koo, a coauthor of the 2004 publication, admitted in an interview that she had donated oocytes to Hwang's research. Hwang at first denied all allegations of ethical misconduct and said that the accusations resulted from a misunderstanding because of the female researcher's poor English skills. Not long after, Hwang lost support from one of his US coauthors, Gerald Schatten, who stated concerns over source of the oocytes used in experiments leading to the 2004 publication. Investigations by the Korean National Bioethics Committee and the Seoul National University, both in 2006, found that two research scientists in Hwang's lab had donated eggs, that many egg [3] donors had been paid to donate eggs, and that some of the egg [3] donors were not informed about the risks and egg donation [4] or the purpose of the research.

Hwang required many human oocytes in his research on stem cells [5] and cloning [6]. During his research, Hwang acquired large collection of oocytes. He claimed to have used 242 oocytes from sixteen volunteers in his 2004 publication, and 185 eggs from eighteen women in the 2005 article. Investigations revealed that Hwang had in fact collected over two thousand oocytes from at least 119 different women, two of whom were researchers from his own laboratory. Eighty-five of the women who donated eggs were paid or offered extra benefits for their donations. These were violations of the 2001 Korean *Guidelines of Medical Ethics* and the 2005 *Bioethics and Biosafety Act*. Some bioethicists consider it unethical to pay oocyte [7] donors for their eggs because the use of money can be a form of pressure to poor women. Hwang resigned from his position as a professor in 2005.

The South Korean National Bioethics Committee wrote a report in 2006 titled, *The National Bioethics Committee's Report on Bioethical Problems in Hwang Woo-Suk's Research*. The report distinguished four different types of donations performed during the course of Hwang's research. The first category was legal voluntary donors, who received little or no compensation for the extraction of their eggs. The second category consisted of paid donors, who were each paid over 1.5 million won, approximately 1,400 US dollars, in exchange for their oocyte [7] donations. The third group of women performed benefit-in-kind donations, in other words, donations in exchange for up to a 2.3 million won, approximately 2,134 US dollars, discount on *in vitro* fertilization [9] treatments. The fourth category consisted of two researchers, working for Hwang, whom Hwang coerced into donating oocytes for research. The report concluded that women in all four categories, including voluntary donors, were either under societal, personal, or work-related pressure to donate their eggs for research and were not fully informed of the actual details involved in the egg [3] retrieval procedure.

The National Bioethics Committee's report outlined the ethical violations caused by Hwang's research. The process of extracting oocytes from a woman involves physical and psychological risks to the woman donating. Because of those risks, ethical review boards require that researchers inform research participants about the risks of the procedure. When hospitals collected eggs from women for Hwang's study, they often used informal consent forms, or did not use any type of informed consent [10] if the woman was donating eggs for the second time. In addition, some women's ovaries were completely removed without their consent. Numerous women suffered from severe ovarian hyperstimulation syndrome and had to be hospitalized after the oocyte [7] extractions.

Hwang also illegally used egg [3] brokers to pay women for their oocytes. Article 55 of the 2001 Korean *Guidelines of Medical Ethics* states that a physician should not pay research subjects for anything other than compensation for treating diseases or injuries that may have been caused by the study. Hwang not only provided money, but women undergoing fertility treatments received discounts for reproductive treatments in exchange for their eggs. Paid women were generally aged in their mid-twenties.
Sources

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