



## Good Ends, Evil Means & Fraudulent Science

***"Given the enormous pot of glory perceived by scientists at the end of that rainbow, researchers in their frantic rush hardly paused to catch their breath and consider the deeper questions raised by this technology."***



A few years ago, a remarkable story of scientific fraud, scandal and deceit played out in the international headlines. Many of those who promote human embryonic stem cell research watched the saga unfold with a kind of “collective mesmerized despair,” as one commentator put it. In March of 2004, Dr. Woo-suk Hwang of Seoul National University in South Korea had published a paper claiming to be the first person to produce cloned human embryos. About a year later, he published a second paper where he claimed to have produced stem cell lines which were tailor-matched to patients with specific diseases, again using cloned embryos. The work was widely hailed as a groundbreaking achievement, perhaps even of such caliber as to draw the attention of the Nobel Prize Committee in Stockholm, Sweden.

The first bump in the road came when allegations surfaced that some of the eggs that he had used for his cloning experiments came from women who worked in his laboratory, including a female graduate student. Dr. Hwang had always denied these persistent rumors, but eventually came to acknowledge not only that two junior researchers on his team had donated ova, but also that other women had received

payments for eggs used in his research.

This was followed by another stunning disclosure by one of Dr. Hwang's collaborators. He revealed that the celebrated patient-specific stem cells were fraudulent. Dr. Hwang had massaged the data – nine of the cell lines referenced in the paper were apparently faked, and the authenticity of the remaining two was also doubtful. Soon other serious problems came to light regarding Dr. Hwang's publications. Seoul National University quickly launched an investigative probe. Virtually all of his groundbreaking successes quickly became suspect. There was a small army of people working in Dr. Hwang's laboratory, and one of the “groundbreaking” published papers had 25 contributing authors listed. How could they all have missed the outright fraud and deceit?

The backdrop against which this scientific work took place, a backdrop of ongoing hype about the medical potential of cloning, provides an important clue to answering that question. Dr. Hwang, like many advocates of cloning human embryos, had a long history of fibbing about miracle cures from embryonic stem cell research. Ailments

# Making Sense of Bioethics

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ranging from paralysis to Alzheimer's could be cured, they assured us, if the government would only provide more funds, and loosen a few ethical restraints. Given the enormous pot of glory perceived by scientists at the end of that rainbow, researchers in their frantic rush hardly paused to catch their breath and consider the deeper questions raised by this technology.

Dr. Hwang himself appeared to have fallen prey to a grievous, but fairly common, ethical mistake: somewhere along the line, he concluded that *good ends can justify evil means*. He realized that a little data cooking could have *good* effects; it would be *good* for Korea; it would be *good* for the University; it would be *good* for funding his work, and it would be *good* for promoting faith in embryonic stem cells as a way to help sick people. He reasoned that as long as the ends were good, any ethical issues that might come up in the course of his research could be conveniently minimized and ignored. That approach to ethical thinking, of course, happens to be precisely the same approach taken by most human embryonic stem cell researchers when they try to justify the troubling research they do. They stress how their

research may one day have *good* effects - possible cures for suffering patients - so any ethical issues that might come up regarding the destruction of human embryos can be minimized or ignored.

Stem cell researchers today routinely violate the most basic ethical norms regarding the protection of human subjects every time they make cell lines out of human embryos. If Dr. Hwang and other researchers like him were willing to do something as ethically troubling as creating human life merely to extinguish it for its stem cells, would they necessarily be disturbed about cutting some other ethical corners, like turning to vulnerable graduate students for their eggs, or fabricating data? Many researchers speak fondly of "codes of self-regulation" and "mechanisms of ethical oversight by scientists themselves." The serious transgressions of the South Korean scandal, which has become a textbook case of scientific fraud, remind us how these vaunted codes and mechanisms amount to little more than smoke and mirrors when the researchers themselves take custody of the hen house. It was not just Dr. Hwang's dishonesty and sleight of hand that gave a black eye to the field of human embryonic

stem cell science. It is also the many current promoters of this renegade research, who have long been skirting or ignoring the basic moral concerns raised by their work.

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