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Scientist Faked Stem Cell Study, Associate Says

By CHOE SANG-HUN International Herald Tribune

SEOUL, South Korea, Dec. 15 - Hwang Woo Suk, the scientist who stunned the world by announcing breakthroughs in stem cell and cloning research, faked a landmark research paper, one of his South Korean co-authors said today in television and newspaper interviews.

Dr. Hwang and his aides, who had vehemently defended the paper published in the journal *Science* in June, were not immediately available for comment on the assertion by Roh Sung Il, one of Dr. Hwang's 24 co-authors for the June paper, that the scientific finding was falsified.

Mr. Roh, the administrator of MizMedi Hospital in Seoul, told the South Korean daily *Hankyoreh* that there were no authentically created stem cells presented for the *Science* paper, according to an article on the newspaper's Web site this evening.

In an interview broadcast on MBC television, Mr. Roh said Dr. Hwang appeared to have created stem cell lines that were later destroyed because of a virus infection.

Dr. Hwang took stem cell lines from Mr. Roh's laboratory that had nothing to do with Dr. Hwang's research and presented them for the *Science* paper, Mr. Roh said. He said that nine of the 11 stem cell lines in the study were faked and that the other two were dubious.

In the June paper, Dr. Hwang's team reported that it had cloned human embryos and extracted the 11 stem cell lines, which Dr. Hwang said matched the DNA of patients.

That result seemed a major breakthrough because it raised hopes that scientists might one day help patients suffering from illnesses like Parkinson's disease or diabetes grow their own replacement cells to cure their ailments.

In a February 2004 paper also published in *Science*, Dr. Hwang's team claimed to have cloned the world's first human embryo and extracted a line of stem cells from it. In August, he unveiled Snuppy, the world's first cloned dog.

Dr. Roh's statement did not challenge those two achievements.

In interviews with KBS Television and the newspaper *Hankyoreh*, Mr. Roh said he met with Dr. Hwang this morning and received a confession.

"He told me that there were no stem cells," Mr. Roh said. "Without any cloned stem cells, he presented stem cells taken from my MizMedi Hospital."

Mr. Roh added, "Nine of the 11 stem cell lines he had said he created didn't even exist." He said he was not sure that the two stem-cell lines that Dr. Hwang's team took from MizMedi to use for the June paper still existed.

"The situation we have right now is this: we may still have two stem cell lines nor none," Mr. Roh said. At one point, Mr. Roh called the paper "a lie."

Dr. Hwang confessed to a "crushing humiliation" and said he was sending a letter to *Science* retracting the June paper, *Hankyoreh* quoted Mr. Roh as saying.

In the past week, Dr. Hwang's June paper has come under increasing scrutiny as young scientists in South Korea have raised numerous questions about its validity, including pictures of DNA traces that they cited as indications that some of the data might have been fabricated.

On Wednesday, Gerald Schatten, a University of Pittsburgh researcher who had collaborated with Dr. Hwang on the paper, demanded that Dr. Hwang must retract the research paper because it probably included fabricated data.

In his letter to *Science*, he did not present any evidence and the journal dismissed his request.

But Dr. Hwang's team has been unusually silent on Mr. Schatten's letter, although it had earlier reacted angrily to any challenges to the paper's veracity.

"I cannot confirm anything right now; I don't have the information," said Sung Myung Hoon, a spokesman for the World Stem Cell Hub, which Dr. Hwang had headed until last month when he relinquished the post after apologizing for ethical breaches in his 2004 work.

Dr. Hwang is under increasing pressure at home and abroad to submit his findings to an independent inquiry. His school, Seoul National University, is forming a panel to verify his work.

Eight international leaders in cloning technology - including Ian Wilmut in England, who cloned Dolly the sheep in 1998 - urged Dr. Hwang to accept an outside test to help increase public confidence in their often controversial field of research.

It takes only a day or two to determine by DNA tests whether the stem cells were indeed derived from separate patients. But Dr. Hwang's team has been unusually reluctant to make such a test.

A South Korean government ethics committee unexpectedly canceled a news conference today at which it was scheduled to announce its

findings on Dr. Hwang's ethical standards.

The allegations against Dr. Hwang could carry far-reaching implications. If it is proved that Dr. Hwang's research used falsified data, that would be devastating news for other stem cell scientists who have been inspired by Dr. Hwang to ramp up their research.

That would also devastate the pride of South Koreans, who have lionized Dr. Hwang as a national hero.

To the jealousy of other scientists, the government of President Roh Moo Hyun has provided Dr. Hwang with millions of dollars a year as well as a new laboratory, which is being constructed. It has designated Dr. Hwang's bioengineering research as one of the South Korea's future "core industries."

Numerous South Korean politicians have expressed support for Dr. Hwang.

In October, President Roh pledged "full support" for Dr. Hwang's ambitious plan to turn South Korea into a global stem cell research hub. An opposition leader called Dr. Hwang "the treasure among treasures."

Dr. Hwang's trouble began last month when he apologized and acknowledged that his team had used eggs donated by junior scientists among the researchers, a practice widely considered unethical.

Still more than 1,000 women have volunteered to donate their eggs for Dr. Hwang.

Many Koreans have dismissed the allegations against Dr. Hwang as foreign jealousy.

But South Korea, and especially its news media, have recently begun raising questions on whether they have created a myth around Dr. Hwang.