

Cloning whistle-blower: little change in S. Korea

October 24 2014, by Youkyung Lee



In this Sept. 5, 2014 photo, Ryu Young-joon speaks during an interview at Kangwon National University Hospital in Cunccheon, South Korea. Ryu, the whistle-blower who exposed breakthrough cloning research as a devastating fake says South Korea is still dominated by the values that allowed science fraudster Hwang Woo-suk to become an almost untouchable national hero. (AP Photo/Joyce Lee)

The whistle-blower who exposed breakthrough cloning research as a devastating fake says South Korea is still dominated by the values that allowed science fraudster Hwang Woo-suk to become an almost untouchable national hero.

In an interview with The Associated Press after almost a decade of silence, Ryu Young-joon, one of Hwang's former researchers, said the cost of telling the truth still weighs on him but he doesn't regret his decision to out Hwang as a false prophet.

The revelations in 2005 rocked South Korea which had celebrated Hwang's research as a historic achievement, focused unfavorable international attention on the country and diminished the reputation of its scientific establishment. The memory of the scandal is still painful today and Hwang, though convicted of embezzlement and violating bioethical laws, discredited and relegated to the scientific backwater of pet cloning, retains a loyal following among sections of the public and media.

In the nearly 10 years since Hwang's accomplishments were found to be built on lies, Ryu feels little has changed in a society where cozy ties between government, business, the media and academics stifle criticism and foster blind nationalism. And junior researchers still face great pressure to produce the results their scientific mentors want and lack a formal channel for whistle-blowing.

South Korea, said Ryu, is still obsessed with joining the ranks of advanced countries and to achieve that end, many people believe it is acceptable to sacrifice ethics, safety and other concerns.

"Mr. Hwang is not a peculiar person. He is a portrait of us. He shows the South Korean society as it is," Ryu said. "Most people believe that if we play by the rules, we can't catch up with the advanced economies."

The sinking of the Sewol ferry in April that killed hundreds of people was for many South Koreans the latest vivid example of putting profit over safety. The national obsession with winning is played out every fall when Nobel prizes are announced. When Japanese scientists took the Noble Physics prize this year, South Korean media was stuffed with analysis and handwringing about how Japan has taken 19 Nobel prizes in the field of science while South Korea has none.

Hwang in 2005 had claimed a significant advance in the cloning of human [embryonic stem cells](#), which are a medical holy grail for their ability to become any type of human cell. That capacity to create healthy new cells raised possibilities such as reversing spinal cord injuries and curing Alzheimers.

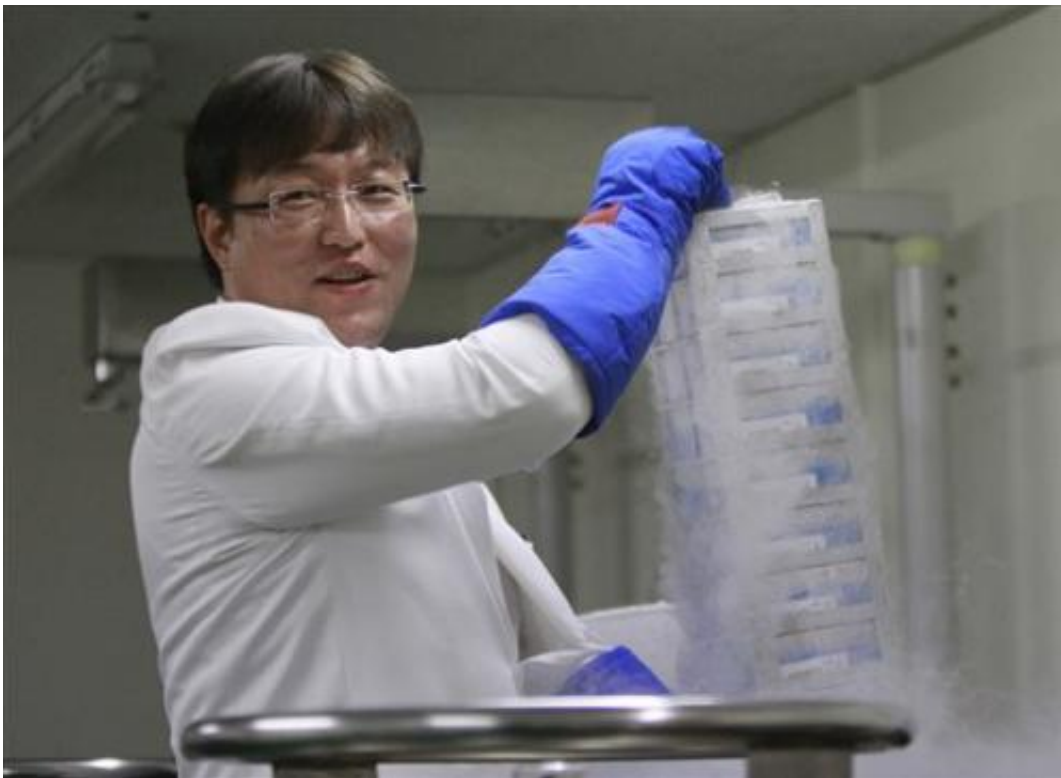
The research published in the prestigious journal *Science* said Hwang and his team used 185 eggs to establish 11 cell lines, a major advance from his research published in 2004 which claimed it took 242 eggs to create just one cell line. Hwang also asserted that his team grew embryonic stem cells that would genetically match patients and not be rejected by the immune system.

Ryu, who by then had left Hwang's lab, instinctively knew the research was a sham. He had written the first draft of Hwang's 2004 study for *Science*. But that work still posed major obstacles for clinical treatments because it needed too many eggs and it was possible that the one stem cell line produced had occurred spontaneously, not as a result of cloning. The new research claimed to have overcome these challenges in less than a year even though key researchers had left the lab.

Still, Ryu did not immediately act. He waited for other researchers to come forward and didn't want to jeopardize the medical career he was pursuing in a neurosurgery department.

In 2005, South Korea's government approached biotechnology like it had supported exporters of computer chips and cars years earlier: an engine for the country's growth that would make Koreans rich and win foreign recognition.

With the 2005 article in *Science*, Hwang was put on a pedestal. Media and politicians united to wax lyrical about Hwang. Drunk on acclamation, Hwang promised to cure a famous singer who was paralyzed from the waist down after a traffic accident.



In this Sept. 5, 2014, Ryu Young-joon holds a container that stores human tissue and other human biological samples at a biobank during an interview at Kangwon National University Hospital in Cunccheon, South Korea. Ryu, the whistle-blower who exposed breakthrough cloning research as a devastating fake, says South Korea is still dominated by the values that allowed science fraudster Hwang Woo-suk to become an almost untouchable national hero. (AP Photo/Joyce Lee)

"He began to gain an image of religious revivalist," Ryu said. "In the past, he was just a scientist with some bluff."

The country doled out lavish treatment that other scientists could only dream of. A government commission anointed him as the nation's top scientist. Hwang's word could cut or add to the funds that flowed to scientists. Government-appointed security guards began escorting him. Stamps were issued to celebrate Hwang's coup. Korean Air Lines promised him first class travel for free. Children began reading Hwang's biography.

Even before his emergence as a national hero, researchers at Hwang's lab felt unable to challenge him. A quiet exit from his lab was all they could wish for.

But they could not leave without a letter of recommendation. Without it, no employer or graduate school would accept them. To get one, they had to deliver the results that Hwang wanted, Ryu said.

No longer under Hwang's control after using a plausible excuse to leave his lab, Ryu had the choice of being silent forever.

Yet there was one factor that would convince him to take an enormous risk: a paralyzed 10-year-old boy who believed Hwang would help him walk again.

Ryu was furious when he heard that a clinical trial on the paralyzed 10-year-old was imminent, believing there was a risk the experimental stem cell procedure could kill him.

"If I did nothing then how could I live with the remorse? What if

someone died? It would be harder to stand that," he said.

Ryu made several calls to professors at Hwang's lab but they were ignored.

His friends and colleagues warned him it would be almost impossible to prove the 2005 study was fraudulent when its author was so powerful.

Ryu recalled the night before he emailed Munhwa Broadcasting Corp. In his journal, he wrote a list of things that would happen to him after whistle-blowing. His would lose his job. He would not be able to see his patients again. He would not be able to make a living. His career would end.



In this Sept. 5, 2014 photo, Ryu Young-joon peers through a microscope, at Kangwon National University Hospital in Cunccheon, South Korea. Ryu, the whistle-blower who exposed breakthrough cloning research as a devastating fake, says South Korea is still dominated by the values that allowed science fraudster

Hwang Woo-suk to become an almost untouchable national hero. (AP Photo/Joyce Lee)

MBC eventually aired two programs that questioned the research's authenticity and unethical methods used to recruit egg donors.

Far from being thanked, Ryu and MBC faced an intense backlash from a public that adored Hwang.

Denounced by Hwang's supporters as a traitor, Ryu was forced to resign from his job and lived like a fugitive with his wife for months, separated from his child.

But the programs led Seoul National University to open an investigation, which concluded that no embryonic stem cell lines were created and the articles in Science in 2004 and 2005 were based on fabricated data.

Hwang was dismissed from the university and Science retracted his work. His legal battles concluded earlier this year with a suspended 18-month prison sentence. His license to clone human embryos was revoked but Hwang has since made a comeback in animal cloning.



This Sept. 5, 2014 photo shows glass slides with human tissue samples at the pathology department of Kangwon National University Hospital in Cunccheon, South Korea. Ryu Young-joon, the whistle-blower who exposed breakthrough cloning research as a devastating fake says South Korea is still dominated by the values that allowed science fraudster Hwang Woo-suk to become an almost untouchable national hero. (AP Photo/Joyce Lee)

Ryu also returned to science but it wasn't until 2007 that he was able to find his first job following the scandal.

Since then, he earned a Ph.D in bioethics. In 2013, he got a job at Kangwon National University Hospital and was appointed a pathology professor.

Last year, Ryu learned what happened to the boy who was saved from Hwang's clinical treatment after Ryu's revelations. The boy's father, a pastor, told a MBC journalist he went to heaven, giving no details about the circumstances that led to his death.

Han Hak-soo, the journalist at MBC who exposed Hwang's fraud based on Ryu's tips, said a "cartel" among the government, the media and academia turns a blind eye to ethical problems in South Korean society.

"South Koreans still have not overcome nationalism, the country-first attitude and the tendency to prioritize economic benefits over truth or ethics."

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