RESEARCH HIGHLIGHTS

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In the news

INADVERTENT PARTHENOGENESIS

Once a national hero in South Korea for purportedly generating human embryonic stem (ES) cells by transferring the nucleus of an adult somatic cell into a 'hollowed out' oocyte, Woo Suk Hwang became a scientific pariah after evidence of fraud came to light. In a new twist, George Daley and colleagues now report in Cell Stem Cell that Hwang and co-workers unwittingly achieved a scientific first: they obtained human ES cells by inducing parthenogenesis — the production of a cell line from an unfertilized egg.

When Daley and colleagues compared Hwang's ES cell line with cell lines generated by parthenogenesis or somatic cell nuclear transfer, they found that the genetic profile of Hwang's line matched that of the parthenogenic line: most genes were different on the two sets of chromosomes, with the exception of those located close to chromosome centres.

As Harvard University researcher Kevin Eggan explains, this finding means that while "trying to do the process of somatic cell nuclear transfer, [Hwang and colleagues] failed to remove the chromosomes from one of the eggs." (The Scientist, 2 August 2007.) Whether this failure was deliberate or accidental is unclear. But according to Kent Vrana, an expert on parthenogenesis from Pennsylvania State University, Hwang and colleagues could have reported a "seminal finding if they hadn't had their blinders on." (The New York Times, 3 August 2007.)

Although other teams recently isolated human ES cells by inducing parthenogenesis, it's unfortunate that this finding didn't emerge sooner. "If we had known three years ago that it was possible to generate stem cells through parthenogenesis," says Daley, "then we almost certainly would already have patient-specific embryonic stem cells by parthenogenesis by now." (Time, 2 August 2007.)

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