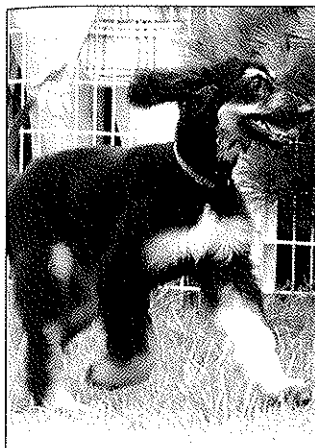


Koreans produce world's first cloned dog

The Associated Press, March 8, 2006



Snuppy, the cloned Afghan hound

South Korea's pioneering stem cell scientist has cloned a dog, smashing another biological barrier and reigniting a fierce ethical debate — while producing a perky, lovable puppy.

The researchers, led by Woo-Suk Hwang, insist they cloned an Afghan hound, a resplendent supermodel in a world of mutts, only to help investigate human disease, including the possibility of producing stem cells for treatment purposes.

The researchers nicknamed their canine creation Snuppy, for "Seoul National University puppy," a reference to Hwang's lab. One of the dog's co-creators, Gerald Schatten of the University of Pittsburgh School of Medicine, described Snuppy, now 14 weeks old, as "a frisky, healthy, normal, rambunctious puppy."

But others immediately renewed calls for a global ban on human reproductive cloning before the technology moves any farther.

"Successful cloning of an increasing number of species confirms the general impression that it would be possible to clone any mammalian species, including humans," said Ian Wilmut, a reproductive biologist at the University of Edinburgh who produced the first cloned mammal, Dolly the sheep, from an adult cell nearly a decade ago. But Dolly died prematurely in 2003 after developing cancer and arthritis.

Researchers have since cloned cats, goats, cows, mice, pigs, rabbits, horses, deer, mules and gaur, a large wild ox of Southeast Asia. So far, efforts to clone a monkey or another primate with the same techniques have failed.

Wilmut and others complimented Hwang's achievement, but they said politicians and scientists must face the larger and more delicate issue — how to extend research without crossing the moral boundary of duplicating human life in the lab.

How they did it

On scientific terms, the experiment's success was mixed. Like Dolly, Snuppy was created using a method called somatic cell nuclear transfer. Scientists took a skin cell from the ear of a 3-year-old male Afghan hound and extracted genetic material from the nucleus. They transferred it to an unfertilized egg whose nucleus was removed. The reconstructed egg holding the DNA from the donor cell was zapped with an electric current to stimulate cell division.

They implanted 1,095 cloned embryos into 123 dogs and just three pregnancies resulted. That's a cloning efficiency rate lower than experiments with cats and horses. One fetus miscarried, and one puppy died of pneumonia 22 days after birth.

That left Snuppy. He was delivered by Caesarean section from his surrogate mother, a yellow Labrador retriever.