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Error possible in cloning of sheep

Scientist says he may have used a cell from a fetus

By DICK KAUKAS
The Courier-Journal

Ian Wilmut, the Scottish scientist credited with cloning a sheep, acknowledged in Louisville yesterday that his procedure might have been flawed and said he would try it again with other kinds of animals.

"There is a remote possibility that the cell came from a fetus rather than from the adult," Wilmut said in an interview yesterday before speaking at a genetics forum at the University of Louisville.

The distinction would be important because scientists have been able to clone mammals from fetal cells for two decades. In announcing the results of his research last year, Wilmut said he had cloned the sheep, named Dolly, using genetic material taken from the cell of an adult sheep that had died three years earlier.

Ian Wilmut says it isn't safe yet to clone people.

So far no other researchers have been able to duplicate the procedure, which has added to skepticism in the scientific community, but Wilmut said he expects that they'll be able to do so within a year.

Wilmut also reiterated his long opposition to cloning humans, saying that the process would be "appalling" because it would result in unacceptably high numbers of miscarriages and deaths among newborns. He also said that a clone could alter family relationships in profound and unpredictable ways.

In a letter published last month in the journal Science, one of Wilmut's critics said that because the sheep from which the cells to clone Dolly were taken was pregnant, it's possible that a fetal cell was inadvertently used in the procedure.

Fetal cells can be present in the circulatory system of some animals during pregnancy, Wilmut said. "We and everybody else had completely overlooked it," he said.

Wilmut's advance was considered stunning because researchers previously had thought it was impossible to create a clone from an adult cell.

Wilmut said he doesn't believe there was any real likelihood that he used a fetal cell to clone Dolly, "but it has to be said that there is a remote possibility."

For that reason, he said, scientific tests are being performed to determine Dolly's status definitely; the results of the tests will be reported in scientific journals as

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soon as they are known.

Wilmut had indicated earlier this week at a conference in Philadelphia that he will try to repeat the cloning experiment.

Although he said yesterday that answering his critics has been time-consuming, he isn't bothered by them. "It is the nature of science to be skeptical, so I think it is important that people do ask these questions," he said.

He also said he was confident that, within a year, "you will see reports from lots of labs that are making this work with other species and other cells."

Wilmut has reported that his team of scientists at the Roslin Institute in Edinburgh took genetic material from an adult sheep cell and implanted it into the unfertilized egg of another sheep. Dolly was the result.

Wilmut was in Louisville yesterday for a medical-legal forum, "Perspectives on the Impact of Genetics on Society," which was part of U of L's bicentennial observance.

During his public remarks in the Speed Art Museum auditorium, Wilmut said:

■ The techniques he and others have developed to change the structure of cells might result in a way to use pig hearts and other pig organs for human transplants.

Wilmut said about 160,000 people die every year because no organ is available for a transplant. If pig parts could be genetically altered to prevent the human body from rejecting them immediately, many people would survive.

■ It would be "absurd" to use cloning technology to copy people at this time because it wouldn't be safe to do so.

Wilmut said the techniques now available would result in many miscarriages and many infant deaths. In the sheep experiments, his researchers were able to get one Dolly in 300 tries, he said. The rest didn't work or produced lambs that died before birth or soon afterward.

BY KEITH WILLIAMS, THE COURIER-JOURNAL

Ian Wilmut spoke yesterday about cloning during a genetics forum at the University of Louisville. Wilmut, who cloned a sheep, reiterated his opposition to human cloning, calling it "appalling" because of the high number of miscarriages and newborn deaths.

"If something like that happened with people, it would be appalling," he said. "I think there is no doubt that it wouldn't be safe now."

■ Even successful cloning would have unpredictable effects on family relationships. If an infertile couple decided to clone the husband to produce a son, for instance, Wilmut questioned how the wife might react when the son — "a physical copy of the person she fell in love with" — turned 20. She might be attracted to him, Wilmut said. He also wondered how the husband would respond to a copy of himself as a teen-ager.

"On pragmatic, practical grounds, it just doesn't seem sensible to think of having a family with these relationships," he said. "And you have to ask if it is in the interest of the person who is copied."

Other speakers at yesterday's forum were:

■ Barry Scheck, a law professor at the Benjamin N. Cardozo School of Law in Brooklyn, N. Y., and one of the lawyers who helped successfully defend O. J. Simpson against murder charges.

■ Gloria Petersen, an associate professor from Johns Hopkins University's School of Hygiene and Public Health and an expert on cancer and genetic testing.

■ Karen Rothenberg, a law professor at the University of Maryland and an expert on the legal aspects of genetic testing and breast cancer.

■ Alice Wexler, author and research scholar at the Center for the Study of Women at UCLA and an expert on genetic tests and Huntington's disease, a debilitating inherited disorder.

The forum cost about $20,000 and was paid for by the university and several sponsors. Each of the speakers received a $2,500 stipend, plus expenses.