Cloned baby monkeys in China have been introduced to the world

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Cloned monkey Zhong Zhong sits with a fabric toy. For the first time, researchers have used the cloning method that produced Dolly the sheep to create two healthy monkeys, potentially bringing scientists closer to being able to do that with humans. Photo: Sun Qiang and Poo Muming/Chinese Academy of Sciences via AP

NEW YORK, New York — For the first time, scientists have used cloning to create two healthy monkeys.

A clone is a man-made copy of a living thing. When one animal is a clone of another, it is not the same animal but it has exactly the same genes. It is similar to the way identical twins share the same genes, even though they are two different individuals. Genes are made of DNA, which contains the instructions that determine how a living being grows and develops.

The two female baby macaque monkeys are now about 8 and 9 weeks old. They are named Zhong Zhong and Hua Hua.

Many Animals Have Been Cloned

The world's first successfully cloned animal was a sheep named Dolly. She was born in 1996. Since then, scientists have cloned nearly two dozen kinds of animals, including dogs, cats, pigs, cows and ponies.

Scientists were previously unable to create clones of primates, however. Primates are a group of animals that includes monkeys, apes and people.

Now, scientists are an important step closer to being able to clone humans.

Chinese scientist Muming Poo led the team responsible for the new breakthrough.

Cloning Is Complicated Science

There were several steps to the monkey cloning.

It began with a monkey fetus. A fetus is a developing baby that has been in the mother's womb for at least eight weeks. Before eight weeks, the developing baby is called an embryo. Normally, an embryo starts to form after the mother's egg has been fertilized by a male.

The Chinese scientists removed the DNA from monkey eggs and replaced it with DNA from the monkey fetus.

The redesigned eggs grew and divided, and some became embryos. The embryos were then placed into female monkeys to grow to birth.

The scientists had to implant 79 embryos to produce the two monkey babies. Still, the approach succeeded where others had failed.

Human Cloning is Not The Goal–Yet

The births of Zhong Zhong and Hua Hua mean that humans could likely now be cloned. However, Poo said his team has no plans to do that.

The goal is keep cloning monkeys, he said. They would be particularly valuable to scientists because they are more like humans than other lab animals such as mice or rats. They could help scientists find cures for diseases.

Scientist Jose Cibelli did not work with Poo to clone the monkeys. He said it might soon be possible to clone humans. However, he said it would be terribly wrong to do so. It would involve too much suffering because most of the pregnancies would fail. It took Poo 127 eggs to get the two monkey babies.

U.S. Scientists Are Not Allowed To Clone Humans

Of course, when people imagine human cloning they usually think of making a copy of someone already born. That is not yet possible, though it might be someday.

If it does become possible, some people might be tempted to try it. For example, some parents might want to create a clone of a child if their child died.

Of course, the cloned child would never really be the same as the original child. They would look the same, but they would not be the same person. It might be hard on them knowing they were a clone of someone else.

The United States does not allow scientists to make a human baby by cloning, because of safety concerns. Most scientists around the world also oppose the idea.

PETA Says Animals Suffer For Cloning

Animal rights groups are not happy about Poo's work. One of these groups, People for the Ethical Treatment of Animals, or PETA, attacked the new monkey-cloning experiments.

"The suffering that such experiments cause is unimaginable," PETA Senior Vice President Kathy Guillermo said. She pointed out that the experiments failed nine out of 10 times. "These two monkeys represent misery and death on an enormous scale," she said.

Quiz

1 What do the Chinese scientists who cloned a monkey and the PETA group disagree about in the article?

(A) whether cloning is easy to do

(B) whether cloning involves animals

(C) whether cloning uses embryos

(D) whether cloning should be allowed

2 Read the sentence from the section "Human Cloning is Not The Goal — Yet."

The births of Zhong Zhong and Hua Hua mean that humans could likely now be cloned.

How is scientist Jose Cibelli MOST likely to respond to this sentence?

(A) He would say that he is worried scientists will now try to clone humans.

(B) He would say that there are many good reasons to clone humans.

(C) He would say that he is excited about scientists trying to clone humans.

(D) He would say that scientists should not clone humans.

3 Read the paragraphs below from the section "Many Animals Have Been Cloned."

The world's first successfully cloned animal was a sheep named Dolly. She was born in 1996. Since then, scientists have cloned nearly two dozen kinds of animals, including dogs, cats, pigs, cows and ponies.

Scientists were previously unable to create clones of primates, however. Primates are a group of animals that includes monkeys, apes and people.

Which word, if it replaced "previously" in the first sentence of the second paragraph, would change the meaning of the sentence?

(A) before

(B) earlier

(C) rarely

(D) formerly

4 Read the sentence below from the section "Many Animals Have Been Cloned."

Chinese scientist Muming Poo led the team responsible for the new breakthrough.

Which sentence from the article BEST helps the reader understand what "breakthrough" means?

(A) For the first time, scientists have used cloning to create two healthy monkeys.

(B) The goal is keep cloning monkeys, he said.

(C) He said it might soon be possible to clone humans.

(D) Of course, when people imagine human cloning they usually think of making a copy of someone already born.