

Genetics, Genomics, Genethics

Week 5

Gaur Cloning

Rob: The gaur, an Asian ox, is an endangered species. Some researchers think cloning could boost gaur populations.

To clone a gaur, scientists prepared a domestic cow egg by removing its DNA, stained blue. A skin cell from an adult gaur is inserted into the cow egg. An electrical shock fuses the egg with the gaur cell. The DNA directs the cow egg to develop into a gaur.

The reprogrammed egg now develops as any fertilized egg would, forming an embryo. Out of hundreds of cloned eggs, only a few dozen survive. One embryo is now implanted into the surrogate mother, a domestic cow. Roughly nine months later, the cow is ready to give birth.

The gaur calf, named Noah, has only one genetic parent, the adult male gaur whose skin cell was cloned.

To produce Noah, researchers created 692 gaur embryos. Forty-four successful embryos were implanted into cows; eight cows remained pregnant beyond 40 days. Only one surrogate mother cow gave birth to a gaur calf.