

How to resurrect the mammoth

Woolly mammoths vanished from Earth
10,000 years ago, but scientists
plan to bring the great
beasts back to the
Arctic tundra

Woolly mammoth
and Asian elephant
share 99.6% of
DNA

1 Mammoth genomes extracted from specimens recovered from permafrost are compared with Asian elephant genomes to identify particular genes responsible for dense hair, thick fat and other cold climate adaptations

2 Relevant mammoth genes inserted into Asian elephant DNA using **CRISPR*** gene-editing technique, which acts as copy-and-paste tool for genetic code

3 Nucleus of elephant egg cell replaced with CRISPR hybrid nucleus containing mammoth DNA

Egg divides, growing into embryo

4 To avoid use of elephant as surrogate, embryo is implanted into artificial womb for near two-year gestation period

5 New animal would be genetically-engineered mammoth-elephant hybrid, rather than exact copy of extinct woolly mammoth

**Clustered Regularly Interspaced Short Palindromic Repeats*