Is it possible to bring the extinct woolly mammoth back to life?

Extinction, it seems, may no longer be for ever. Recently, scientists in George Church's lab at Harvard University announced that they had created living elephant cells that contained a small component of synthesised mammoth DNA. The announcement stirred both excitement and concern that the mammoth – a hairier cousin of the Asian elephant – might soon be back from the dead. But how close are we really to seeing resurrected mammoths wandering their old stamping grounds, including the Norfolk countryside? The answer depends on how you define mammoth.

Creating an animal 100 percent identical to an extinct species may be an impossible task. Despite the common use of the term "de-extinction", one cannot actually "clone" an extinct species. Cloning is a specific scientific technique in which a living cell, for example a skin cell, is taken from one animal and its genetic material is inserted into a different animal's egg cell. The proteins in the egg cell then "reset" the genetic material from the skin cell, which had been programmed during development to express only those genes necessary to be a skin cell. The newly unprogrammed cell then begins to divide and eventually develops into a 100 percent identical copy – a clone – of the donor. This powerful technology has, since the mid-1990s, been used to create clones of dozens of species. But it requires something that doesn't exist for any extinct species – a living cell.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: Could we 'de-extinctify' the woolly mammoth?