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US scientists make modifications in human embryo

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The work at Oregon Health and Science University, Portland is believed to be ground-breaking in terms of the number of embryos modified and the safety and efficiency that was demonstrated in doing so.

American Scientists have managed to edit and improve the DNA of human embryos in an effort to correct the gene defects that cause inherited diseases.

The DNA of human embryos has been edited previously by scientists in China, but this is thought to be the first time the controversial practice has been carried out in the US.

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Chinese scientists had previously reported using CRISPR to edit human embryos, but they were only successful in altering a small number of cells. This effect, where some cells have a different genetic make-up to others is referred to as “mosaicism,” an effect that experts warned would make germline engineering unsafe for humans.

However, researchers have now shown that because the CRISPR errors are known, it is possible to avoid this problem. The team reduced mosaicism by ensuring that CRISPR was injected into eggs early on, while they were in the process of being fertilized with sperm.

Although none of the embryos were allowed to develop beyond a few days, this breakthrough has meant scientists are now one step closer to achieving the birth of genetically modified human beings.