

Now, genetically modified cows to produce healthier milk

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Chinese scientists claim to have bred genetically modified cows that can produce much healthier milk than the ordinary livestock for human consumption.

In two separate breakthroughs, researchers at the Inner Mongolia University revealed that they have successfully created a calf whose milk could be drunk by people suffering from lactose intolerance and a second animal whose milk contains high levels of "healthy" fat found in fish.

The genetically modified cows are part of an effort by scientists to make dairy products healthier, but critics have reacted angrily to it and questioned the safety of

milk from genetically modified animals, the *Daily Telegraph* reported.

In one research, a group of scientists injected genes, which causes lactose to break down into other types, into cells from cow embryos. They created 14 embryos and implanted them into the wombs of surrogate cows.

Five calves were born in April this year and three were found to carry the genes needed to create low-lactose milk, although two of them died within 24 hours of birth.

One of the calves, named Lucks, a modified Holstein dairy cow, was "healthy and strong".

They will conduct tests on her milk once she starts lactating to assess exactly how



much lactose the milk contains.

Dr Zhou Huanmin, Director of the Key State Laboratory for Bio-manufacturing at the University, said they hope to create herds of low-lactose

cows that would eventually produce new types of dairy products to be sold in shops in between five to ten years time.

"Ordinary milk contains lactose, while milk produced by our modified cow will

have relatively low-content of lactose, or even have no lactose. We hope to commercialise it in the future," Dr Zhou said.

In a separate research published in journal of *Transgenic Research*, another group at the Inner Mongolia University have created a genetically modified cow that has high levels of omega-3 fatty acids, which protect against heart disease and improve brain function, in its milk.

Using cloning technology, the team introduced a gene from roundworm into cow embryos.

The genetically modified cow was then allowed to mature and give birth to its own offspring before tests were conducted on its milk.