

Goat to be cloned to treat rare genetic disorder

April 15 2014

Scientists in Brazil have genetically modified a goat to produce milk with an enzyme to treat a rare genetic disorder, O Estado de Sao Paulo newspaper reported Tuesday.

The goat, named "Glucal," is the first of its kind in South America. It has been genetically modified to produce the enzyme glucocerebrosidase.

Gaucher's disease is a rare human genetic condition caused by hereditary deficiency of that enzyme.

People with Gaucher's—which can manifest itself with fatigue, bruising, anemia, low blood platelets and an enlarged liver and spleen—often are treated with drugs and [bone marrow transplants](#) but still face pain and often poor long-range health prospects.

Brazil, where about 600 patients are affected, imports \$113 million a year in drugs to treat them, according to the newspaper.

"It is cheaper to feed goats than to feed [cell lines](#). And purifying the protein (for use in treatment) is basically the same," said researcher Luciana Bertolini at the University of Fortaleza in the northeast, where the goat was cloned.

Glucal was born March 27. She should start producing milk about four months from now. "We need to see how much of the protein she is producing and test its effectiveness," said Bertolini.

If all goes well, and her milk has a high content of glucocerebrosidase, scientists plan to clone her so that identical animals can produce the protein on a larger scale.

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Citation: Goat to be cloned to treat rare genetic disorder (2014, April 15) retrieved 17 July 2024 from <https://medicalxpress.com/news/2014-04-goat-cloned-rare-genetic-disorder.html>

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