

Lion tamers step aside: beasts could be tamed through genes

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Scientists say they have learned where genes responsible for tameness lie in the rat genome. The finding may lead to new breeding strategies to produce tame animals by passing specific genes into new generations—and lead to the taming of hitherto “untameable” species, according to the researchers.

“I hope our study will ultimately lead to a detailed understanding of the genetics and biology of tameness,” said Frank Albert, a scientist from the Max Planck Institute for Evolutionary Anthropology in Germany and the first author of the research report.

“Maybe we’ll then be able to domesticate a few of those species where humans have historically not been successful like the wild African Buffalo.”

The study, published in the June issue of the research journal *Genetics*, has roots dating back to 1972 when researchers in Novosibirsk, in what is now Russia, caught a large group of rats in the woods around the city. The scientists then divided the rodents into two groups. The first included the most “friendly” rats – those that weren’t aggressive toward people. The second group included the most aggressive rats – those that screamed, attacked and bit humans.

Since then, these rats have been bred with one another. Now, the two groups of rats act very differently toward people. The tame rats tolerate being touched and picked up, and never attack. The aggressive rats scream, run away, or attack and bite.

For the study, the scientists mated the tame with the aggressive rats and identified regions in the rat genome that make a rat tamer or more aggressive.

“For thousands of years, humans have domesticated animals,” said Mark Johnston, editor-in-chief of *Genetics*. “All during this time, much folklore and mythology has surrounded the process. But of course genetics plays a large role in the process,” he added. “This research provides a solid scientific explanation of this phenomenon, and offers clues about how genomes can be manipulated to breed tame animals of species once believed to be untamable.”