

# Complex microsatellite dynamics in the myostatin gene within ruminants.

Tellgren-Roth A, Kolesov G, Sifuentes-Rincón AM, Liberles DA.

Department of Molecular Biology, University of Wyoming, Laramie, WY 82071, USA.

## **Abstract**

A microsatellite has previously been identified in myostatin in cattle. Sequencing of this region from other artiodactyls coupled with phylogenetic analysis has been used to uncover the potential origins of the microsatellite event, which appears either to have been born twice or to have been gained and lost within ruminants. While caprids and ovids share the ancestral state with pigs and other mammals, microsatellite activity (length polymorphism) is uncovered in both deer and bovids. The dynamic process of microsatellite evolution, including birth, is discussed here in light of several models. Finally, these models are evaluated in the context of patterns of microsatellite conservation between closely related mammalian genomes.