

Horse News and Views



The term 'genome' refers to the DNA sequence, or genetic map, of one set of chromosomes of an organism. The first draft of the genome for the domestic horse, *Equus caballus*, has been deposited in public databases. Sequencing of the horse genome began in 2006, and is a collaborative effort among an international group of scientists to use genomics to address important health issues for equines, known as the Horse Genome Project. (www.uky.edu/Ag/Horsemap/)

The sequencing of the equine genome is an important step, especially for research in the area of genetic/inherited diseases of the horse.

A small amount of blood from a Thoroughbred mare, named Twilight, from Cornell University in Ithaca, N.Y., was used to obtain the DNA that was used in the sequencing effort. (News Advisory. The National Institutes of Health, (www.genome.gov/20519480))

In addition to sequencing the horse genome, researchers produced a map of horse genetic variation using DNA samples from a variety of modern and ancestral breeds, including the Akel Teke, Andalusian, Arabian, Icelandic, Quarter, Standardbred and Thoroughbred.

The plants of the genus *Equisetum*, commonly known as horsetail, are considered to be living fossils. These widespread, perennial, fern-like plants are found in most temperate areas of the world. They can have detrimental effects on horses if consumed in large quantities (e.g., 4 to 5 lbs per day for a 1000-lb horse, for 1-2 weeks). Thiaminase, an anti-thiamine enzyme present in horsetail inhibits the production of vitamin B₁. Vitamin B₁ is responsible for extracting energy from carbohydrates, fats and proteins. (Ref. Radostits OM, *et al.* Veterinary Medicine, 9th ed. Edinburgh: WB Saunders, 2000:1556-1558)

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