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Test for Hereditary Equine Regional Dermal Asthenia (HERDA)

Tech ID: 11262 / UC Case 2006-564-0

ABSTRACT

Assay for an Informative SNP used to Identify Carriers of the HERDA Disease Allele

U.S. PATENT NO. 7,608,400 ISSUED OCTOBER 27, 2009

FULL DESCRIPTION

Hereditary Equine Regional Dermal Asthenia (HERDA) is an inherited skin disease found in the American Quarter Horse population. There is no treatment for the disease and the severe lesions associated with HERDA most often result in the euthanasia of affected horses.

Researchers at the University of California, Davis have developed a test for identifying carriers of HERDA. Furthermore, this test can detect affected animals prior to clinical signs. Homozygosity mapping was used to isolate the locus.

Microsatellites and gene-based single nucleotide polymorphism (SNP) markers were used to reduce the critical interval around the disease locus to a small region, predicted to contain 20 known genes and approximately 2.0-2.5 MB of DNA based on comparisons with other mammalian genomes. A SNP within the coding region of one of the genes within this critical interval was discovered within the affected HERDA population and can be used as an informative marker for identifying unaffected carriers of the disease.

SUGGESTED USES

This test provides both a means of diagnosing the disease prior to clinical signs as well as a means for breeders to avoid producing affected animals.

FEATURES/BENEFITS

UC Davis researchers have developed a test which breeders could use to screen their breeding stock for carriers, to reduce or eliminate the possibility of producing affected horses.

RELATED MATERIALS

- ▶ Tryon RC, White SD and Bannasch DL. 2007. "Homozygosity mapping approach identifies a missense mutation in equine cyclophilin B (PPIB) associated with HERDA in the American Quarter Horse." *Genomics*. 90(1):93-102.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	7,608,400	10/27/2009	2006-564

CONTACT

Victor Haroldsen
haroldsen@ucdavis.edu
tel: 530-752-7717.



INVENTORS

- ▶ Bannasch, Danika L.
- ▶ Tryon, Robert C.
- ▶ White, Stephen D.

OTHER INFORMATION

KEYWORDS

Horse, equine disease, genetic test, hereditary equine regional dermal asthenia, HERDA, hyperelastosis cutis

CATEGORIZED AS

- ▶ **Veterinary**
- ▶ Diagnostics

RELATED CASES

2006-564-0

University of California, Davis
Technology Transfer Office
1850 Research Park Drive, Suite 100, ,
Davis, CA 95618

Tel: 530.754.8649
techtransfer@ucdavis.edu
<https://research.ucdavis.edu/technology-transfer/>
Fax: 530.754.7620

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