

# Who will run in Big Brown's footsteps?



## HealthWatch: Stem Cell Therapy for Tendonitis

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### Stem Cell Therapy Effective for Tendonitis in Cornell Study

According to Dr. Alan J. Nixon of Cornell University, veterinarians might be able to treat horses with injuries to their superficial digital flexor tendons (SDFTs) effectively by injecting stem cells directly into the injured tendon using cells that were harvested and expanded from the horse's own bone marrow.

Nixon said a research study found "The biochemical compositions of the treated and untreated tendons were similar eight weeks after treatment; however, tendons injected with the stem cells had significantly improved histology scores, indicating a more normal microscopic appearance in treated tendons than untreated tendons."

He said these results suggest that injecting mesenchymal stem cells (those that can differentiate into a variety of cell types) directly into the damaged area of the SDFT is beneficial.

### Shock Wave a Valid Treatment for Osteoarthritis

Extracorporeal shock wave therapy (ESWT) significantly reduces lameness in horses with osteoarthritis, but it does not alter the course of disease, report researchers from the Equine Orthopaedic Research Center at Colorado State University.

ESWT is a noninvasive medical procedure that generates pulses of sound that travel through the skin. To evaluate ESWT in horses with osteoarthritis, Dr. David Frisbie and colleagues evaluated 24 horses, each with osteoarthritis induced in one knee. Frisbie said horses treated with ESWT "had a significant improvement in lameness compared to both the ESWT placebo (no treatment) and the horses treated with intramuscular PSGAG (polysulfated glycosaminoglycan)." While no modification to the disease process was noted in any of the treatment groups, the authors suggest that ESWT might be beneficial, particularly if used in conjunction with a drug known to have disease-modifying properties.

### Toxin Test Might Help Identify Serious Diarrhea

Scientists from the University of California, Davis, School of Veterinary Medicine report that early identification of a toxin produced by the diarrhea-causing bacterium *Clostridium difficile* in the feces of horses with diarrhea might help identify which horses are at risk for developing serious disease.

Dr. K. Gary Magdesian, an associate professor in the department of Medicine and Epidemiology, said the study's results suggest horses with measurable toxin A in their feces have a more severe clinical disease than diarrheic horses without measurable fecal toxin A levels.

According to Magdesian, "Measuring toxin A levels in horses that present with diarrhea may play an important step in identifying horses at risk for developing a more severe diarrhea."

### Help Researchers Conduct Horse Size Genetic Study

Want to help researchers study horse size? A group at Cornell University hopes to study the genes of a large group of horses to learn more about horse size and equine health.

The researchers are asking horse owners to submit a hair sample from their horses—the skin tags from a routine tail hair pull supply more than enough DNA for analysis—a profile photo, a three-generation pedigree, and 35 measurements of the horse. The entire process should take about 15 minutes per horse. All information is kept strictly confidential.

For more information contact Cornell's Brooks and Sutter Genetics Labs at 607/254-8217, or e-mail [equinegenetics@cornell.edu](mailto:equinegenetics@cornell.edu).

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