



RESEARCH PROGRESS REPORT SUMMARY

Grant 02107: Landmark Clinical Trial to Establish the Evidence-Based Use of Regenerative Medicine to Treat Tendon Injury in Dogs

Principal Investigator: Dr. Jennifer G. Barrett, DVM, PhD

Research Institution: Virginia-Maryland Regional College of Veterinary Medicine

Grant Amount: \$254,509.00

Start Date: 7/1/2014 **End Date:** 6/30/2016

Progress Report: Mid-Year 1

Report Due: 12/31/2014 **Report Received:** 4/1/2015

Recommended for Approval: Approved

(Content of this report is not confidential. A grant sponsor's CHF Health Liaison may request the confidential scientific report submitted by the investigator by contacting the CHF office. The below Report to Grant Sponsors from Investigator can be used in communications with your club members.)

Original Project Description:

Tendon injury is common, often progresses undiagnosed, and results in reduced function, lameness and pain in both companion dogs and canine athletes. Failed healing and recurrence frequently occur because unassisted tendon healing results in scar formation with inferior mechanical properties. Supraspinatus tendon injury of the shoulder is readily diagnosed, healing can be followed with objective measurements to evaluate efficacy, and the injury does not heal without intervention. Thus, it is an excellent tendon to study in a clinical trial. Regenerative therapies aim to accelerate and promote healing through tissue regeneration rather than scarring. There are several types of cells that promote healing, including platelets from blood and stem cells from adipose tissue. Platelets from blood can be concentrated and used as a vehicle for stem cells. Adipose tissue can either be a source of concentrated adipose stem cells (ASC) grown in a cell culture facility or can be used to prepare a mixture of various cells called the stromal vascular fraction (SVF). We propose to conduct the first randomized controlled clinical trial evaluating the effectiveness of stem cell and platelet therapy for the treatment of naturally occurring injury in dogs. Further this will be the first study to directly compare efficacy of intratendinous injection of ASC versus SVF, both of which are currently commercially available despite having limited scientific evidence of efficacy. Demonstrating an effective treatment for supraspinatus tendon injury will have profound impact on the treatment of musculoskeletal conditions as well as other types of injuries affecting dogs.



Grant Objectives:

To evaluate the effectiveness of stem cell and platelet therapy for the treatment of naturally occurring tendon injury in dogs and to compare efficacy of two different types of regenerative therapies.

Publications:

None at this time.

Report to Grant Sponsor from Investigator:

We are actively recruiting canine patients (all breeds and mixed breeds) with unilateral lameness originating at the shoulder, with no signs of osteoarthritis on radiographs.

If you or someone you know has a dog with primary unilateral lameness originating at the shoulder please consider participating and contact CHF or the contacts below for more information.

In this study, platelet rich plasma (PRP) will be combined with one of two types of cell therapy: concentrated adipose stem cells (ASC) and a mixture of adipose-derived cells called the stromal vascular fraction (SVF). This clinical trial is blinded and placebo-controlled.

Contact

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Please note: This study takes place at Veterinary Orthopedic & Sports Medicine Group, Annapolis Junction, MD. Cell processing will be done off-site at the Equine Medical Center in Leesburg, VA.