

The Grayson-Jockey Club Research Foundation announces a special mid-year call for research proposals on Exercise Induced Pulmonary Hemorrhage.

The Problem:

Exercise Induced Pulmonary Hemorrhage (EIPH) is an increasingly important issue within North American racing, and between North America and international racing and international breeding organizations. A better understanding of the disease, the various management approaches and the pathophysiology as related to those management approaches is a critical need for the increasingly global racehorse industry.

The Opportunity:

At the end of the 2014 Emerald Downs racing season four horses that were confirmed “bleeders” were offered by their trainer for lease for the investigation of EIPH. A pilot project was conducted under the supervision of Dr. Warwick Bayly of Washington State University.

A randomized 4X4 study was undertaken with the horses at maximum exercise level on a treadmill. The four groups were 1) saline 4 hours pre-exercise (control) 2) furosemide 4 hours pre-exercise 3) furosemide 24 hours pre-exercise, the horses were allowed maintenance water and 4) hypertonic saline 24 hours pre-exercise, the horses were allowed maintenance water.

All horses bled; furosemide at four hours and at 24 hours were both effective at reducing EIPH. Hypertonic saline was also helpful, but less than furosemide. Importantly, the pilot project suggested furosemide at 24 hours prior to exercise was equal to, and in some parameters better than furosemide at 4 hours pre-exercise. The finding of 24 hour furosemide efficacy was consistent with anecdotal evidence provided by senior veterinary racetrack practitioner advisors.

The Research Advisory Committee of the Grayson-Jockey Club Research Foundation believes this pilot project provides justification for a new avenue of investigation and an important opportunity for research into the disease process of EIPH. The fact that the diuresis caused by furosemide ceases within 1-2 hours, and the elimination half-life of furosemide is 5½ hours raises the question: “Why did the effect on EIPH persist for at least 24 hours?” Understanding of this 24 hour effect could open new avenues into the management and possible prevention of the perplexing problem of EIPH in the racehorse.

The Call:

The Grayson-Jockey Club Research Foundation is issuing a call for proposals to further investigate approaches to managing EIPH in the racehorse. The Research Advisory Committee is particularly interested in new approaches to manage EIPH and the description of their pathophysiologic effects with particular attention on the short-term and long-term health of the horse. The investigative approach will be left up to the investigator. Even though scientific integrity is the predominant factor in the grant selection process, if the investigator is not familiar with the Grayson-Jockey Club

Research Foundation grant evaluation process they need to pay particular attention to the importance placed on “impact” in the grant scoring process.

The proposals are due at the Grayson-Jockey Club Research Foundation office June 1, 2015. This special call for research EIPH proposals will use the standard Grayson-Jockey Club Research Foundation grant proposal format found <http://www.grayson-jockeyclub.org/default.asp?section=2&area=GRANTHOLD&menu=2>. Grant selection will be through the standard grant selection procedures of the Grayson-Jockey Club Research Advisory Committee.

The Grayson-Jockey Club Research Foundation (GJCRF) is committed to funding research to enhance the health, safety, soundness and welfare of the horse.