

RESPIRATORY

Grayson-Jockey Club Research Archives



Viral respiratory infections are common in horses; most notable are equine herpesvirus infection, equine influenza, and equine viral arteritis. Grayson has funded many studies in this area that are listed under Infectious Diseases.

The aim of this research is for optimal airway passage, including improving the environment of the horse, the study of equine asthma and treatments for EIPH.

Grayson is proud to have funded the following projects:

[Asthma Performance and Omega-3s in Racing Thoroughbreds](#)

Purdue University, *Principal Investigator : Laurant Couetil*

Co-PIs: Carla Olave, John Burgess, Laura Murray, Jae Hong Park, George Moore, Jeff Blea (Von Bluecher, Blea & Hunkin, Inc.), Drs. Hay & Langsam (Teigland, Franklin and Brokken DVM's, Inc), Clayton McCook (Equine Sports Med)

The main purpose of this study was to investigate the variability of asthma severity in horses racing across the US, its effect on performance and determine if omega-3 PUFA supplementation is beneficial.

Years: 2020-2021 TOTAL - 210,016

[Effect Of Nebulized Lidocaine In Treating Equine Asthma](#)

Tufts University, *Principal Investigator: Melissa Mazan*

Co-PIs: Daniela Bedenice, Jill Minuto, Bettina Wagner (Cornell)

This proposal evaluates the efficacy of inhaled lidocaine in equine asthma in reducing airway inflammation and hyper-responsiveness by promoting an anti-inflammatory lung environment.

Years: 2020-2021 TOTAL - \$129,040

[Effects of Low-Dust Forage On Lung Health of Athletic Horses](#)

Purdue University, *Principal Investigator: Laurent Couetil*

Co-PIs: Jae Hong Park, George Moore, Kathleen Ivester, Calra Olave, Laura Murray, John Burgess, Abhijit Mukhopadhyay

This project was designed to provide a non-pharmaceutical solution to the widespread problem of equine asthma by evaluating the benefits of low-dust forage to racing Thoroughbreds.

Year: 2018-2019 TOTAL - \$126,457

[Is EIPH A Consequence Of High Left Atrial Pressures?](#)

Washington State University, *Principal Investigator: Warwick Bayly*

Co-PIs: Raymond Sides; James H Jones (UC Davis); Renaud LeGuillette (U of Calgary-CA)

This study was to test the theory that EIPH occurs because very high pressures in the left side of the heart during exercise result in pressures in the lungs' smallest vessels that cause them to break and bleed.

Year: 2017 TOTAL - \$144,036

Thyro-Hyoid Muscle Training to Treat DDSP

Cornell University, *Principal Investigator: Normand Durchame*
Co-PIs: Marta Cercone; Jonathan Cheetham; John Hermanson;
Richard Piercy & Justin Perkins (Royal Vet)

This project was to gain better knowledge of DDSP(Dorsal Displacement of the Soft Palate) and create new treatment options and prophylactic training methods to prevent or reduce the occurrence of DDSP in young horses starting training.

Year: 2016-2017 TOTAL - \$217,728

Efficacy of Furosemide Dosed 4– VS 24–Hours Period

University of California – Davis, *Principal Investigator: Heather Knych*
Co-PIs: Michelle Mitchell; Linda Harrison (Willow Oak)

This study was designed to test the suggestion that the therapeutic levels of furosemide, necessary to reduce the increases in physiological parameters associated with strenuous exercise and EIPH, are maintained for as long as 24 hours post-administration to racehorses.

Years: 2015 TOTAL - \$183,839

Mitigating EIPH if Race Day Medication is Banned

Washington State University, *Principal Investigator: Warwick Bayly*
Co-PIs: Debra Sellon; Fairfield Bain; Nicolas Villarino; Carolina Lopez; Ray Sides

The purpose of this study was to identify treatments that can be given before race day and still reduce the severity of EIPH without endangering the horses' health.

Years: 2015 TOTAL - \$148,196

Pulmonary Microvascular Function and EIPH

Michigan State University, *Principal Investigator: Frederik Derksen*
Co-PIs: William Jackson; Kurt Williams; N. Edward Robinson; Alice Stack

Years: 2012-2013 TOTAL -\$123,219

Early Diagnosis of Recurrent Laryngeal Neuropathy

Cornell University, *Principal Investigator: Jonathan Cheetham*
Co-PIs: Amy Yeager; Margret Thompson; Norm Ducharme; Hussni Mohammed

Years: 2011-2012 TOTAL - \$87,920

Pulmonary Vein Remodeling in EIPH

Michigan State University, *Principal Investigator: Frederik Derksen*
Co-PIs: Kurt Williams; Alice Stack; Jeffery Gandy; Lorraine Sordillo; N. Edward Robinson;
H. de Feijter-Rupp

Years: 2010-2011 TOTAL - \$131,596

Mapping Pulmonary Venous Occlusion in EIPH

Michigan State University, *Principal Investigator: Frederik Derksen*
Co-PIs: Kurt Williams; Edward Robinson; David Todem
Years: 2008-2009 TOTAL - \$124,644

Environmental Particulates and Airway Mucus in Racehorses

Michigan State University, *Principal Investigator: N. Edward Robinson*
Co-PIs: Susan Holcombe; Frederik Derksen
Years: 2006-2007 TOTAL - \$151,248

Efficacy of Furosemide in Treatment of EIPH

The Ohio State University, *Principal Investigator: Kenneth Hinchcliff*
Co-PIs: Alan Guthrie - Took over project; Paul Morley; Richard Sams
Years: 2006-2007 TOTAL - \$98,000

Blood-induced Pulmonary Fibrosis in Horses

Michigan State University, *Principal Investigator: Frederik Derksen*
Co-PIs: Bruce Uhal; Edward Robinson; Kurt Williams
Years: 2005-2006 TOTAL - \$113,479

Clara Cell Protein in Recurrent Airway Obstruction

University of Guelph, *Principal Investigator: Dorothee Bienzle*
Years: 2004-2005 TOTAL - \$53,000

Role of Neurokinin-A in Equine Obstructive Pulmonary Disease

Louisiana State University, *Principal Investigator: Changarm Venugopal*
Co-PIs: Rustin Moore; Gary Wise
Years: 2003-2004 TOTAL - \$106,920

Effect of Airway Inflammation and Mucus on Racehorse Performance

Michigan State University, *Principal Investigator: Susan Holcombe*
Co-PIs: N. E. Robinson; Frederik Derksen; John Kaneene; Elizabeth Carr; Ron Genovese
Years: 2002-2003 TOTAL - \$83,261

Furosemide Continuous Rate Infusion in the Horse

North Carolina State University, *Principal Investigator: Sarah Gardner*
Co-PI: Clarke Atkin
Year: 2002 TOTAL - \$14,987

The Effect of the Hyoepiglotticus Muscle on the Epiglottis in the Horse

Michigan State University, *Principal Investigator: Susan Holcombe*
Year: 2000 TOTAL - \$16,884

Does Cytokine Production Correlate with Reversible Airway Obstruction in COPD and SPAOPD Horses?

Louisiana State University, *Principal Investigator: David Horohov*

Co-PIs: Thomas Seahorn; Ralph Beadle

Years: 1999-2000 TOTAL -\$106,810

Neuromuscular Basis for Dorsal Displacement of the Soft Palate

Michigan State University, *Principal Investigator: Susan Holcombe*

Co-PI: N.E. Robinson

Year: 1999 TOTAL - \$51,047