

# MISCELLANEOUS (OTHER)

## Grayson-Jockey Club Research Archives

*Pharmacology, radiology, and DNA mapping are just a few of the many types of research studies that would fall into this category.*

*Grayson is proud to have funded the following projects:*



### Wearable Monitoring Device

American Association of Equine Practitioners

A study on wearable monitoring devices for horses use biometric and movement sensors to track vital signs, gait, and activity levels, providing real-time data to owners and vets for early detection of lameness, improved training, and injury prevention.

Year: 2025 TOTAL- \$130,000

### Ketodoxapram as a Treatment For Atrial Fibrillation

Ghent University, Principal Investigator: Annelies Decloedt

*Co-PIs: Gunther van Loon, Lize-Maria Verhaegh, Ingrid Vernemmen, Glenn Van Steenkiste, Eva Buschmann, Saar Van Beirs*

This study is to determine if Ketodoxapram is a promising novel treatment method for horses with atrial fibrillation.

Years: 2024-2025 TOTAL- \$103,400

### Validation of Biomarkers for Equine Neurodegeneration

University of California- Davis, Principal Investigator: Carrie Finno

*Co-PIs: Sharmila Ghosh, Amy Johnson- UN of Penn, Steve M. Reed, Rood and Riddle Equine Hospital*

A study to improve the diagnosis of spinal cord disease in horses.

Years: 2023-2024 TOTAL \$97,365

### Fentanyl Matrix Patches In Horses

University of Georgia, *Principal Investigator: Rachel Reed*

*CO-PIs: Londa Berghaus, Heather Knych (UC- Davis)*

The aim is to show that fentanyl administered via patches placed on the skin is well absorbed and represents a promising means of providing clinically relevant continuous pain relief to horses.

YEARS: 2022-2023 TOTAL- \$ 32,105

### **Pharmacokinetics of Oral Mycophenolate Mofetil in Horses**

The Ohio State University, *Principal Investigator: Gwendolen Lorch*

*CO-PIs: Riley Thompson, Christianne Magee, Gerrit Bouma, Budhan Pukazhenti (Smithsonian Cons. Bio)*

This proposal will evaluate the pharmacokinetics of orally administered mycophenolate mofetil as a safe, effective and inexpensive immunosuppressant drug for management of equine immune-mediated.

Year: 2022 TOTAL - \$ 65,029

### **Mitigation of Equine Recurrent Uveitis Through SOCS**

University of Florida, *Principal Investigator: Joseph Larkin*

*CO-PIs: Wesley Smith, Sonal Tuli, Daniel Gibson, Caryn Plummer, Jorge Hernandez*

This project seeks to design a topical eye drop, using a natural protein, which helps to prevent pain and blindness associated with equine recurrent uveitis.

Years: 2021-2022 TOTAL - \$ 150,610

### **Predicting Exercising Arrhythmias With Resting ECGS**

University of Minnesota, *Principal Investigator: Molly McCue*

*CO-PIs: S. Durward-Akhurst, Anna Lytle, K Jeevaratnam- University of Surrey, C Marr, Rossdale Vet Surgeons*

This project will use at rest ECGs to identify horses with irregular heart rhythms at exercise that can cause sudden cardiac death (SCD), allowing for increased monitoring and improved understanding of SCD.

Years: 2021-2022 TOTAL - \$ 119,477

### **Thoroughbred Sales Radiology-Ultrasonography Study**

Colorado State University, *Principal Investigator: C. Wayne McIlwraith*

*Co-PIs: Chris Kawcak, Frances Peat, David Frisbie, Kurt Selberg, Jeffrey Berk, EQ Med Associates- KY*

This study was designed to improve the industry's understanding of the significance of sesamoiditis, ultrasonographic suspensory branch changes, and stifle lucencies in sales yearlings and two-year-olds.

Year: 2018-2019 TOTAL - \$143,624

### **Unraveling Complex Traits by Defining Genome Function 2**

University of California- Davis, *Principal Investigator: Carrie Finno*

*Co-PIs: Rebecca Bellone, Nicole Kingsley, Erin Burns, Ted Kalbfleisch (UN of Louisville), Jessica Peterson, (UN of Nebraska)*

This project is designed to create an atlas of gene regulation in the horse.

Year: 2018-2019 TOTAL - \$199,990

### **Novel Analgesic Combination in Horses Part II**

University of Minnesota, *Principal Investigator: Alonso Guedes*

*Co-PIs: Troy Trumble; Prathibha Mangedarage*

A study to develop a medication strategy for joint inflammation/pain to provide pain relief as well as help protect the joint cartilage from damage caused by chemical mediators of inflammation.

Year: 2018 TOTAL - \$69,130

### **Predicting the Risk of Equine Fatal Injury During Racing**

University of Glasgow, *Principal Investigator: Tim D. Parkin*

*Co-PI: Stamatis Georgopoulos*

The project used the Equine Injury Database (EID) to better predict and identify horses at greatest risk of fatal injury during racing and provide measures to further reduce the number of horses dying on North American racetracks.

Years: 2017- 2018 TOTAL - \$83,360

### **Unraveling Complex Traits By Defining Genome Function**

University of California, Davis, *Principal Investigator: Carrie Finno*

*Co-PIs: Jessica Peterson; Rebecca Bellone; Erin Burns; Katerine Hilburger; James MacLeod (UK); Ted Kalbfleisch (U of Louisville); Sara Nilson (U of Nebraska)*

This proposal was designed to define the critical next step to understand underlying mechanisms of disease by developing a database of tissue– specific gene expression and regulation in the healthy adult horse.

Year: 2016-2017 TOTAL - \$199,177

### **Novel Analgesic Combination In Horses Part I**

University of Minnesota, *Principal Investigator: Alonso Guedes*

*Co-PIs: Troy Trumble; Christophe Morisseau; Bruce Hammock (UC Davis)*

A study of a novel, likely more efficacious and potentially safer approach than currently available options to manage pain in horses.

Year: 2016-2017 TOTAL - \$92,099

### **Microsphere Encapsulated EPCs and Wound Vascularization**

Auburn University, *Principal Investigator: Anne Wooldridge*

*Co-PIs: Elizabeth Lipke; Fred Caldwell; Ning Cheng; Randolph Winter*

This study reviewed injectable hydrogel microsphere scaffolds containing endothelial progenitor cells for a potential novel therapy to decrease healing time in distal limb wounds in the horse.

Years: 2015-2016 TOTAL - \$76,226

### **Characterization of Intra–Articular Isoflupredone**

University of California – Davis, *Principal Investigator: Heather Knych*

*Co-PIs: Michelle Mitchell; Linda Harrison (Willow Oak)*

This study was designed to provide valuable information for establishing a threshold concentration and withdrawal time for intra-articular isoflupredone acetate in horses.

Years: 2014-2015 TOTAL - \$90,069

### **Pharmacodynamic Evaluation of Omeprazole**

University of Queensland, *Principal Investigator: Paul Mills*

*Co-PIs: Ben Sykes & Katja Sykes (BW Sykes Consultancy)*

The aim of this study was to review omeprazole and develop a revised set of treatment recommendations for the treatment of gastric ulcers in the horse.

Years: 2014 TOTAL - \$52,745

### **Factors Affecting Omeprazole Pharmacokinetics in Horses EPM**

University of Queensland, *Principal Investigator: Paul Mills*

*Co-PIs: Ben Sykes (BW Sykes Consultancy); C. McGowan (UN of Liverpool/UK)*

Year: 2013 TOTAL - \$19,640

### **Effect of CYP2D Genetic Polymorphisms on Drug Metabolism EPM**

University of California- Davis, *Principal Investigator: Heather Knych*

*Co-PIs: Carley Corado; Amy Young*

Year: 2013 TOTAL - \$81,647

### **Systemic Effects of Analgesic Combos in Horses**

University of Florida, *Principal Investigator: Linda Christine Sanchez*

*Co-PIs: Johanna R. Effenbein; Robert MacKay; Sheilah Robertson*

Years: 2010-2011 TOTAL - \$64,219

### **Ethyl Pyruvate & Endotoxemia in Horses**

Michigan State University, *Principal Investigator: Susan Holcombe*

*Co-PIs: Vanessa Cook; Andrew Brown; Eric Schroeder; Lorraine Sordillo*

Year: 2010 TOTAL - \$63,040

### **Pharmacokinetics/Pharmacodynamics of Quinapril**

North Carolina State University, *Principal Investigator: Jennifer Davis*

*Co-PIs: Babetta Breuhaus; Karin Kruger*

Year: 2010 TOTAL - \$31,553

### **Hydrocortisone Replacement Therapy in Septic Foals**

University of Georgia, *Principal Investigator: Michelle Henry Barton/*

*Co-PIs: Kelsey Hart; Amanda Martabano House; Michel Vandenplas; Steve Giguère;*

*Julia Flaminio (Cornell)*

Years: 2008-2009 TOTAL - \$49,306

### **Effect of Flunizin on Lidocaine Plasma Protein Binding**

Kansas State, *Principal Investigator: Butch KuKanich*

Year: 2008 TOTAL - \$8,217

### **Calcium/Magnesium & Hormones in Septic Foals**

The Ohio State University, *Principal Investigator: Ramiro Toribio*

Years: 2007-2008 TOTAL - \$37,600

### **Tramadol in Horses**

Auburn University, *Principal Investigator: Allison Stewart*

Year: 2007 TOTAL - \$20,000

### **Effect of Compounding and Storage on Drug Stability**

North Carolina State University, *Principal Investigator: Mark Papich*

Year: 2006 TOTAL - \$14,152

### **Development of a Maintenance Fluid for Horses**

Michigan State University, *Principal Investigator: Harold Schott II*

*Co-PI: Gary Carlson*

Years: 2005-2006 TOTAL - \$109,941

### **Effect of Fentanyl on Visceral & Somatic Nociception in Horses**

University of Florida, *Principal Investigator: Linda Christine Sanchez*

*Co-PIs: Cynthia Kollias-Baker; Sheilah Robertson*

Year: 2004 TOTAL - \$46,730

### **Electrical Cardioversion of Atrial Fibrillation in the Horse**

University of Guelph, *Principal Investigator: P. W. Physick-Sheard*

Years: 2002-2003 TOTAL - \$8,394