

Grayson-Jockey Club Research Foundation has authorized expenditure of \$1,835,879 to fund 13 new projects and 13 continuing projects at 16 universities, as well as, three career development awards. The 2026 slate of research brings Grayson's totals since 1940 to more than \$45.8 million to underwrite more than 466 projects at 50 universities.



## Grayson-Jockey Club Research Foundation Fueling the Future of Equine Health—2026 Projects Announced

### NEW PROJECTS

#### INFECTIOUS DISEASE

##### **Immunopeptidomic Profiling Of R. Equi Infections**

*Jeroen Pollet, Baylor College of Medicine*

This study uses a cutting-edge method called immunopeptidomics to understand how horse lung cells respond to the harmful bacteria, *Rhodococcus equi*; the results will help in vaccine development.

##### **Hyperimmune Plasma Decreases Rhodococcal Pneumonia**

*Macarena Sanz, Iowa State University*

This study aims to rigorously evaluate the efficacy of R. equi-specific hyperimmune plasma in preventing pneumonia to reduce disease incidence and development of antibiotic resistance strains.

##### **Use Of Equine IFNL3 mRNA For Prevention Of EHV-1 And EHM**

*Gisela Soboll Hussey, Michigan State University*

This study proposes to develop IFNL3 (*gene that encodes anti-viral defense*) mRNA administration in horses as a treatment for EHV-1 and EHV-1 myeloencephalopathy and as an adjuvant for EHV-1 vaccination.

##### **Phage Therapy Platform For Equine Wound Infections**

*Lia Danelishvili, Oregon State University*

This proposal aims to develop an innovative, targeted phage-based therapy to prevent and treat chronic, hard-to-heal wound infections in horses, ultimately improving recovery rates, reducing complications, and enhancing overall equine health outcomes.

#### MUSCULOSKELETAL

##### **Tendon Elastin And Lubricin: Biology And Mechanics**

*Sushmitha Durgam, Texas A&M AgriLife Research*

Elucidating the underlying biology and mechanical roles of tendon interfascicular matrix proteins, elastin and lubricin, is essential to identify overuse injury mechanisms and develop novel therapies.

##### **Navigated Trigeminal Rhizotomy In Horses**

*Christoph Koch, University of Bern*

*ISME Equine Clinic - Switzerland*

The project assesses safety and effectiveness of a novel surgical treatment for trigeminal-mediated headshaking, a debilitating condition in horses for which current treatments are often ineffective.

## MISCELLANEOUS STUDIES

### **Definitive Antemortem And Postmortem Diagnostics For NAD**

*Carrie Finno, University of California-Davis*

The goal of this study is to develop diagnostic tests for eNAD / EDM, Equine Neuroxoanal Dystrophy / Equine Degenerative Myeloencephalopathy.

### **ECG Findings And Performance In Thoroughbred Racehorses**

*Sian Durward-Akhurst, University of Minnesota*

This study will use ECGs to improve diagnosis of cardiac-related poor performance allowing for increased monitoring to reduce the frequency of exercise-associated sudden death in all our equine athletes.

### **Is Gastric Hyperacidity Significant In Horses?**

*Allison Stewart, The University of Queensland*

By investigating rebound acid hypersecretion in horses, this research would fill a critical knowledge gap and set foundations for improvement of management and anti-ulcer treatment practices.

### **The Effect Of Feed On Gastric PH In The Exercising Horse**

*Stephanie Bond, The University of Queensland*

This study will determine the effect of different pre-exercise feed protocols on gastric pH during exercise, to inform optimal regimens and reduce the risk of equine squamous gastric disease.

## REPRODUCTION

### **Bile Acids: Linking Metabolic Syndrome To Infertility**

*Callum Donnelly, Cornell University*

This study tests whether bile acids drive infertility in mares with Equine Metabolic Syndrome and if ursodeoxycholic acid (UDCA) can improve ovarian function in EMS affected animals.

### **Novel Method For Diagnosis Of Nocardioform Placentitis-Phase II**

*Shavahn Loux, Louisiana State University*

This project is designed to create a sensitive and specific diagnostic test for Nocardioform Placentitis.

### **Rapid Diagnostic Tools For Contagious Equine Metritis**

*Smriti Shringi, Texas Tech University*

This study focuses on the development of a rapid field test and confirmatory laboratory assay for the detection of *Taylorella equigenitalis*, enabling early diagnosis and improved outbreak control of contagious equine metritis. If proven accurate, could also reduce time and complications of shipping requirements for breeding animals.



## CONTINUING PROJECTS

### INFECTIOUS DISEASE

#### **Chimeric VP7-VP4 MVA-Vectored Equine Rotavirus Vaccines**

*Mariano Carossino, Louisiana State University*

In this study novel chimeric vaccinia-vectored vaccines against equine rotavirus A G3 and G14, the leading cause of foal diarrhea, will be designed and evaluated in mice (proof-of-concept) and mares.

#### **Improving A VapA mRNA Vaccine For R. Equi In Foals**

*Noah Cohen, Texas A&M University*

The aim of this study is to improve the design of

a mRNA vaccine for foals to provide stronger, longer immunity against *Rhodococcus equi*, a leading cause of disease and death in foals worldwide.

#### **Development Of A Vectored Vaccine To Equine Rotavirus A**

*Mariano Carossino, Louisiana State University*

A novel viral vectored vaccine against equine rotavirus A (G3 and G14), the leading cause of foal diarrhea, will be designed and evaluated in mares and a neonatal mouse model as proof-of-concept.

### LAMINITIS

#### **Effects Of SGLT2i On**

#### **Triamcinolone-Induced Equine ID**

*Teresa Burns, The Ohio State University*

This proposal will evaluate the degree to which joint injections with triamcinolone worsen insulin dysregulation in horses with ID and if use of canagliflozin at time of injection mitigates it.

#### **Characterization Of Laminitis**

#### **Using PET**

*Dianne McFarlane, University of Florida*

This study will validate the use of PET scans for identifying disease pathology and progression in insulin associated laminitis in horses.

### MUSCULOSKELETAL

#### **Finite Element Analysis Of Superficial Digital Flexor Tendon (SDFT) Microdamage**

*Ali Nassiri, The Ohio State University*

This proposal will study the multi-scale finite element models (FEM) that predict equine superficial digital flexor tendon (SDFT) mechanical behavior that are essential to delineate microdamage mechanisms preceding clinical injury.

#### **Racehorse Stride Changes And Workload During Training**

*Peta Hitchens, University of Melbourne*

By determining whether the workload and changes in stride characteristics associated with injury during racing are also present during training, this project may identify injuries prior to race-day.

#### **Effects of Inflammatory Cytokines on Mesenchymal Stem Cells Homing**

*John Peroni, University of Georgia*

This study will investigate how mesenchymal stem cells traffic to injuries after delivery to the bloodstream to inform the best time to deliver cells relative to initial injury in future animal models.

#### **Synthetic Proteoglycan Replacement For Osteoarthritis**

*Kyla Ortved, University of Pennsylvania*

This proposal seeks to establish a new class of injectable, cartilage-penetrating compounds made from synthetic polyelectrolytes that replace proteoglycans that are critically lost in osteoarthritis.

Additional  
Funds  
Provided by



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Funds  
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## REPRODUCTION

### **Organoid Model For Equine Placentitis Research**

*Pouya Dini, University of California-Davis*

This project's aim is to develop an in vitro model of equine placentitis to advance the study of this condition, ultimately improving diagnostics, treatments, and pregnancy outcomes.

Funded  
by  **JOHN WILLIAM POPE**  
FOUNDATION

## MISCELLANEOUS STUDIES

### **Genetics Of Cervical Spine Malformations In The Horse**

*Carrie Finno, University of California-Davis*

This study will identify genetic causes for abnormal formation of the cervical spine in horses.

### **Pharmacokinetics And Efficacy Of Pregabalin In Horses**

*Heather Knych, University of California-Davis*

The study seeks to investigate the behavior of an analgesic agent approved for use in humans for the treatment of persistent pain, as a first step in assessing the utility of this drug for pain control in horses.

### **Characterization of Antibodies Against Equine IL-31**

*Rosanna Marsela, University of Florida*

This proposal aims to develop a new treatment for equine insect bite hypersensitivity (IBH) by targeting a key itch mediator, providing an alternative to steroids.

All Career Development Awards are competitive programs intended to promote development of promising investigators by providing a one year salary supplement of \$30,000.

### **Storm Cat Career Development Award**

#### **Charlotte Barton**

Colorado State University

*Faculty supervisor:*

*Laurie Goodrich*



“A novel gene therapeutic for osteoarthritis”

### **Elaine and Bertram Klein Career Development Award**

#### **Evelyn Hodgson**

The University of Queensland

*Faculty supervisor:*

*Stephanie Bond*



“Wireless gastric pH measurement in exercising horses”

### **Edward Bowen Career Development Award**

#### **Megan Palmisano**

North Carolina State University

*Faculty supervisor:*

*Rosemary Bayless*



“In vitro neutrophil response in equine sepsis”