

Horses strive to  
be our champions...  
We can always  
be theirs.



“ Each grant awarded has enormous impact. . .  
The ripple effects from each individual  
research project are long lasting. ”

--- Dr. Noah Cohen, *Professor, Texas A & M*

## WHO WE ARE

Since 1940 Grayson-Jockey Club Research Foundation has been a leading, non-profit charitable organization that any horse lover can join. We are committed to the advancement of horses of all breeds by funding the very best veterinary research at universities worldwide.

Grayson has no alliance with any one university, so the foundation is free to fund the best research regardless of where it takes place.



The foundation has funded more than \$1 million annually the last four consecutive years to projects that are rigorously evaluated by Grayson's 32-person Research Advisory Committee, which reviews an average of 60 applications each year.

## REVIEW OF PROJECTS



The Research Advisory Committee is a rotating group of 32 individuals representing various research specialties and veterinary practices from across North America.

The goal of the review process is to identify scientifically well founded projects with the greatest impact on both the horse industry and the problem being studied.

Four committee members are assigned to each grant, two who are best qualified to judge the science and two to judge the impact or relevance of the project to the industry. The entire 32-person committee joins in evaluating and ranking each project.



## PUBLICATIONS

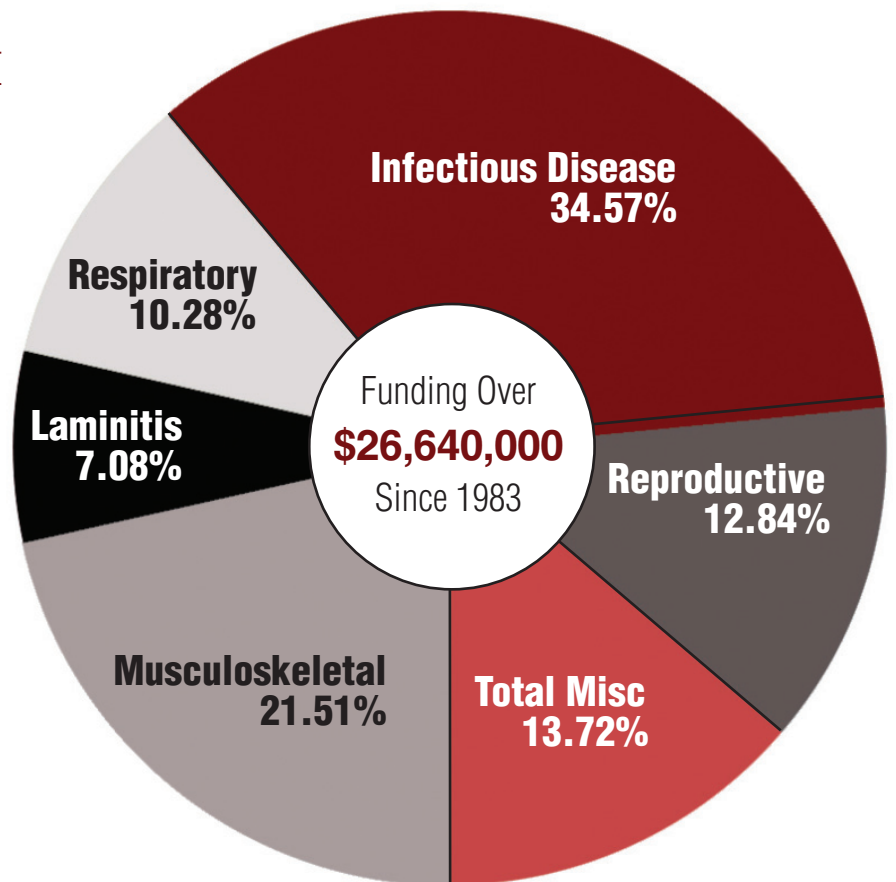
*Grayson funded research has resulted in the publication of 297 scientific papers in peer-reviewed journals. All other funded projects are scheduled for additional publications.*

## TARGETED RESEARCH



Each year funded research focuses on the impact and the quality of the science for a wide range of equine health issues.

The Chart at the right depicts the various categories funded since 1983.



## PRODUCING CREDIBLE RESULTS

Research is the key to better health for all horses and there is no better way to demonstrate that point than with results:

*Grayson supported the cryotherapy that likely minimized the devastating effect laminitis could have had on Lady Eli's hooves.*

*The efforts of the foundation have supported funding for multiple laminitis projects and had a direct impact in helping Team Brown save Lady Eli's life, racing career and legacy.*





Grayson-Jockey Club Research Foundation's board of directors has approved an allocation of over \$1.2 million for equine research in 2018. The funds will underwrite a slate of 11 start-up projects and seven continuing proposals. In addition the foundation is funding two Career Development Awards.

(comments by researchers)

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

*C. Wayne McIlwraith, Colorado State University*

This study will improve the industry's understanding of the significance of sesamoiditis, ultrasonographic suspensory branch changes, and stifle lucencies in sales yearlings and 2-year-olds.

### **Underlying Cause Of Recurrent Exertional Rhabdomyolysis**

*Stephanie Valberg, Michigan State University*

Stress-induced modification to the skeletal muscle calcium release channel forms the basis for tying up in Thoroughbreds and pinpoints a target for development of effective new treatments.

### **Firocoxib Properties In Equine Pregnancy & Placentitis II**

*Margo Macpherson, University of Florida*

This project should provide a fundamental step toward determining if specific drugs (including firocoxibs) are performing expected functions, such as resolving inflammation, in pregnancies threatened by placentitis.

### **Effects Of Low-Dust Forage On Lung Health Of Athletic Horses**

*Laurent Couetil, Purdue University*

This proposal seeks to provide a non-pharmaceutical solution to the widespread problem of equine asthma by evaluating the benefits of low-dust forage for horses engaged in athletic activity.

### **Investigating Metabolic Stress And Viral Hepatitis**

*Sabine Mann, Cornell University*

We will study metabolic pathways and hepatic viral infection to find a relationship with maladaptation to training syndrome/high GGT to help improve the health and performance of race-horses.

### **Novel Analgesic Combination In Horses**

*Alonso Guedes, University of Minnesota*

We are developing a medication strategy for joint inflammation/pain that can provide pain relief as well as help protect the joint cartilage from damage caused by chemical mediators of inflammation.

### **Ampk Agonists And Insulin Dysregulation In Horses**

*Teresa Burns, The Ohio State University*

This project directly impacts the treatment of equine metabolic syndrome by assessing the efficacy of two drugs, metformin and acetylsalicylic acid, in the treatment of equine insulin dysregulation.

### **Host Factors Involved In EHM Pathogenesis And Latency**

*Gisela Soboll Hussey, Michigan State University*

The development of tools to protect horses from EHV-1 infection, compare the immune responses in old and young horses to identify the mechanisms causing clinical EHM.

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

*Carrie Finno, University of California-Davis*

Developing an atlas of gene regulation in the horse.



### **Development Of Limited View 3D Imaging**

*Chris Kawcak, Colorado State University*

The goal of this proposal is to develop a point-of-care, 3-dimensional imaging technique that can be used to better characterize and prevent injuries in racehorses.

### **Epidemiology Of Drug-Resistant R. Equi At Horse Farms**

*Steeve Giguere, University of Georgia*

We will determine if isolates of *Rhodococcus equi* highly resistant to antibiotics are widespread at horse breeding farms in Kentucky.

## **CONTINUING PROJECTS**

### **Endocrinopathic Laminitis: Pathophysiology And Treatment**

*James Belknap, The Ohio State University*

This study will determine if continuous digital hypothermia is effective and therefore indicated in the management of endocrinopathic laminitis, the most common form of the disease.

### **Platelet Lysate Therapy In Infectious Arthritis**

*Lauren Schnabel, North Carolina State University*

This proposal examines the antibacterial properties of platelets to treat joint infections in horses more effectively than conventional therapies, with the goal of reducing morbidity and mortality.

### **Evaluation Of Kisspeptin And Pregnant Mares**

*Christianne Magee, Colorado State University*

This proposal will allow us to gain insight as to how kisspeptins are involved in equine pregnancy and if they can serve as a biomarker for pregnancy compromise.

### **Bone Marrow Mononuclear Cells For Equine Joint Therapy**

*Linda Dahlgren, Virginia Maryland CVM*

The results from this study will pave the way to investigate a new cell therapy from equine bone marrow as a targeted regenerative therapy for horses suffering from arthritis.

### **Predicting The Risk Of Equine Fatal Injury During Racing**

*Tim Parkin, University of Glasgow*

The use of the Equine Injury Database 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.

### **Cytotoxic T-Cell Immunity To Equine Herpesvirus Type 1**

*Doug Antczak, Cornell University*

This research will develop critically needed knowledge about how the horse immune system responds to equine herpesvirus type1 vaccination and infection.

### **Host-directed Control of R. equi Foal Pneumonia- Part II**

*Angela Bordin, Texas A&M University*

We propose to use an inhaled product applied directly into the lungs to increase immune responses to protect foals against *Rhodococcus equi*, a bacterium that causes severe pneumonia in foals.



**“If it weren’t for Grayson, less than half of what’s been done in equine research would have been accomplished.”**

--- David Horohov, *Ph.D*  
*Director of Gluck Equine Research Center,*  
*University of Kentucky*



**GRAYSON-JOCKEY CLUB  
 RESEARCH FOUNDATION**  
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 because of your partnership with us.

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**GRAYSON-JOCKEY CLUB RESEARCH FOUNDATION**  
 821 Corporate Drive • Lexington, KY 40503  
 859 224-2850 • grayson-jockeyclub.org • [contactus@grayson-jockeyclub.org](mailto:contactus@grayson-jockeyclub.org)

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