



Grayson-Jockey Club Research Foundation

# RESEARCH SPOTLIGHT

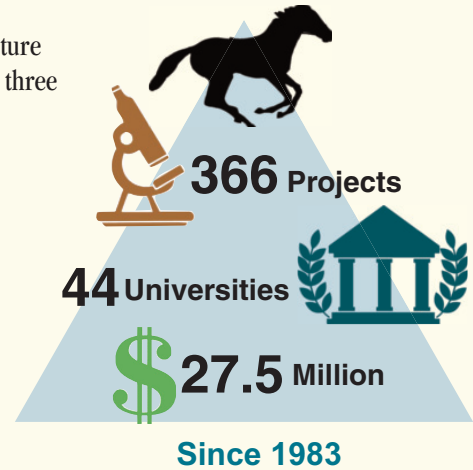
Spring Edition 2019

## MORE THAN \$1 MILLION IN FUNDING APPROVED FOR EQUINE RESEARCH IN 2019

The board of directors of Grayson-Jockey Club Research Foundation has authorized expenditure of \$1,338,858 to fund eight new projects at seven universities, nine continuing projects, and three career development awards to fund veterinary research to benefit all horses. This is the fifth straight year that more than \$1 million has been approved.

*"We thank our generous donors who recognize the value of veterinary research for enhancing equine health and wellness," said Jamie Haydon, president of the foundation. "From studying a racehorse's stride to predict injury to testing an intrauterine antibiotic treatment, we are excited to see the results of these studies and how they may help horses of all breeds in the future."*

Oaklawn Park and WinStar Farm will each be donating \$50,000 in 2019 to sponsor research projects pertaining to health in racehorses. They are participants in Grayson's new corporate membership program, whereby organizations can contribute to Grayson-funded projects. Those interested in the program should contact the foundation.



*2019 projects listed on next page*



## JOHN C. OXLEY TO RECEIVE THE DINNY PHIPPS AWARD

We proudly announce that John C. "Jack" Oxley, a longtime Thoroughbred owner and supporter of Grayson, will be presented with the Dinny Phipps Award at a celebration of The Jockey Club's 125th anniversary in New York City on Thursday, June 6.

Earle Mack, an active participant in Thoroughbred racing and breeding for more than five decades, created the award in 2017 in memory of Phipps to honor an individual or individuals who have demonstrated dedication to equine health. Previous winners of the Dinny Phipps Award are the Phipps family and Frank Stronach.

"Jack's dedication to equine health and wellness epitomizes the spirit of the Dinny Phipps Award, and I am pleased to bestow this honor on such a deserving individual," said Mack.

"I'm very flattered and humbled to receive this award," said Oxley. "I'm extremely honored because Dinny Phipps was a great friend, and I think he did more for racing and Grayson than any other man in the sport."

*If you wish to pay tribute to Mr. Oxley's dedication to the horse, you may donate in honor via our website or simply mail a check to the foundation to commemorate the impact he has made to our industry.*



*“For veterinarians, research is the currency we trade in, and every day we use information these researchers generate.”*  
 Dr. Larry Bramlage, partner, Rood & Riddle Equine Hospital, and a member of Grayson’s Research Advisory Committee.

 **NEW PROJECTS IN 2019**

**Training Programs For Prevention Of Fetlock Injury**

*Sue Stover, University of California-Davis*

Predicting proximal sesamoid bone fracture in racehorses from a calibrated computational model that incorporates training programs, track surface properties, and bone’s reparative processes.



**Standing Pet Of The Racehorse Fetlock**

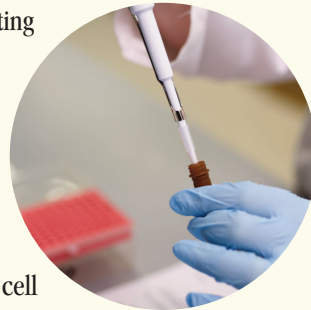
*Mathieu Spriet, University of California-Davis*

Validation of a PET technology for early detection of fetlock lesions in standing horses to prevent catastrophic breakdowns in racehorses.

**Antimicrobial Properties Of Equine MSCS**

*Laurie Goodrich, Colorado State University*

This study is expected to impact the equine industry by validating TLR activated equine mesenchymal stem cells as an effective, novel therapy in treating multi-drug resistant infections.



**Uncovering The Blood B Cell Immune Response To EHV-1**

*Tracy Stokol, Cornell University*

By sequencing individual blood B cells, we will identify changes in B cell immunity after EHV-1 vaccination and will generate a sequencing database that will uncover new antibodies against EHV-1.

**Racehorse Stride Characteristics Injury And Performance**

*Chris Whitton, University of Melbourne*

By identifying changes in stride characteristics of racehorses over time we can identify those parameters that can be used as an early indicator of injury or that are key to injury development.

Sponsored by 



**Intrauterine Antibiotics May Augment Placentitis Therapy**

*Christopher Bailey, North Carolina State University*

This proposal will explore the potential for intrauterine antibiotic treatment to improve foal survival and health in mares with ascending placentitis.

**Robotic CT For Assessing Of Bone Morphology**

*Kyla Ortved, University of Pennsylvania*

Preventing catastrophic injuries in the Thoroughbred racehorse: screening fetlock joints using standing robotic CT and biomarker analysis.

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**Non-Invasive Evaluation Of Host-Microbiota Interactions**

*Canaan Whitfield-Cargile, Texas A&M*

This study aims to develop a non-invasive platform to serve as a diagnostic test for gastrointestinal inflammation prior to severe disease and to reveal how bacteria in the gut influence horse health.

 **SECOND YEAR PROJECTS IN 2019**

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

*Carrie Finno, University of California- Davis*



**Development Of Limited View 3D Imaging**

*Chris Kawcak, Colorado State University*

**Thoroughbred Sales Radiology-Ultrasonography Study**

*C. Wayne McClurath, Colorado State University*

**Investigating Metabolic Stress And Viral Hepatitis**

*Sabine Mann, Cornell University*



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

*Kelsey Hart, University of Georgia*

### Host Factors Involved In EHM Pathogenesis And Latency

*Gisela Soboll Hussey, Michigan State University*

### AMPK Agonists And Insulin Dysregulation In Horses

*Teresa Burns, The Ohio State University*

### Effects Of Low-Dust Forage On Racehorses' Lung Health

*Laurent Couetil, Purdue University*



### Host-Directed Control Of R. Equi Foal Pneumonia

*Angela Bordin, Texas A&M University*



### Lynn Pezzanite - Colorado State University

Dr. Pezzanite's project looks at the possible benefits of combining Mesenchymal stem cells, known to secrete antimicrobial peptides, into traditional antibiotic therapy for control of joint infections. If successful, this improves outcomes and reduces reliance on antibiotics to which infections are becoming increasingly resistant.

**The Elaine and Bertram Klein Development Award** is a competitive program intended to promote development of promising investigators by providing a one-year salary supplement of \$15,000. This program is restricted to one award per year and is named in honor of Elaine and Bertram Klein. The grant is funded by the Klein Family Foundation. The 2019 award winner is:

### Sian Durward-Akhurst - University of Minnesota

Dr. Akhurst's project looks at using whole genome sequencing (WGS) to create a catalog of genetic variation in the horse and quantify the number of variants predicted to have a detrimental effect on phenotype. Understanding of the genetic burden in the diverse population of the equine will help in diagnosing, determining prevalence and lead to ways of dealing with mutation caused diseases.



## CAREER DEVELOPMENT AWARDS IN 2019

**The Storm Cat Career Development Award**, inaugurated in 2006, is a \$15,000 grant designed as an early boost to an individual considering a career in equine research. It has been underwritten annually by Mrs. Lucy Young Hamilton, a Grayson-Jockey Club Research Foundation board member whose family stood the retired champion stallion Storm Cat at Overbrook Farm. This year there were two award winners:



### Holly Stewart - Colorado State University

Bone marrow lesions are known to be early indicators of structural deterioration of the fetlock joint. Dr Stewart's project looks to develop a dual energy cone beam CT scan of this area of maladaptive changes with the advantages of reduced scan times, reduced cost and improved spatial resolution compared to conventional MRI.



Grayson is the industry leader in publication of scientific papers in peer-reviewed journals. Since 1999, Grayson-funded research has resulted in over 300 published scientific papers and continues to grow each year. All other funded projects are scheduled for additional publications.

## Your donation will help protect horses today, tomorrow and into the future.

Name \_\_\_\_\_

(Corporate or Individual as you wish it to appear in Foundation publications- Please provide credit card billing address if different from address below)

Address \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

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Check is enclosed, payable to: Grayson-Jockey Club Research Foundation

Please charge to my:  Visa  MasterCard  American Express

Card # \_\_\_\_\_ Exp Date \_\_\_\_\_ Security Code \_\_\_\_\_

### We are happy to receive any size donations.

- \_\_\_ ROKEBY CIRCLE \$10,000 or more
- \_\_\_ Platinum Circle \$ 7,500 or more
- \_\_\_ Gold Circle \$ 5,000 or more
- \_\_\_ Silver Circle \$ 2,000 or more
- \_\_\_ Patron \$ 1,000 or more
- \_\_\_ Supporting Member \$ 500 or more
- \_\_\_ Sustaining Member \$ 200 or more
- \_\_\_ Annual Member \$ 100 or more
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We accept Paypal or Credit Cards online at [grayson-jockeyclub.org](http://grayson-jockeyclub.org)



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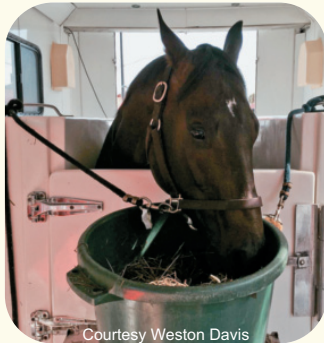
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# PROVEN RESULTS



Bal a Bali, the Brazilian Triple Crown winner, suffered from laminitis while on the Breeders' Cup Turf trail. He was treated by Dr. Weston Davis of Palm Beach Equine and Dr. Vernon Dryden of Rood & Riddle Equine Hospital. Cryotherapy was used successfully to treat the 7-year-old son of Put It Back in hopes he would race again in the Breeders' Cup Mile (G1T), but ultimately trainer Richard Mandella did not feel he was at the level he needed to be for that race. "We tried to get him back to his best," Mandella said of Bal a Bali, who won the Shoemaker Mile (G1T) and Frank E. Kilroe Mile (G1T), along with the 2015 American Stakes (G3T). Bal a Bali continued to have physical issues throughout his time with Mandella, and the decision to retire him was ultimately made. He joined the Calumet Farm stallion roster in 2017.



*Bal a Bali in his cold water spa at the Palm Beach Equine Clinic.*

*From the BloodHorse "Making of A Miracle" by Lenny Shulman:*

Dr. Wes Davis, a surgeon with experience working on foot problems, caught the case at Palm Beach Equine Clinic. Bal a Bali was still under quarantine conditions, so the clinic had to set up a makeshift quarantine facility in an isolated corner of a barn. "He wasn't too

bad when he got here,

but he got progressively worse in the next few days," Dr. Davis said. "He was in pain, and so we got aggressive in his care in the initial phases. He got anti-inflammatories immediately." [Anthony Manganaro, whom owned Rick Porter had brought in as a partner in Bal a Bali, had a cold-water spa at his Siena Farm, near Paris, Ky. He had been impressed at how much it had helped his horses.] Manganaro reacted quickly to the bad news.



*Dr. Wes Davis and Dr. Carla Muñoz with Bal a Bali at the Palm Beach Equine Clinic.*

"We talked to Dr. Dryden at Rood & Riddle about putting Bal a Bali in the spa and he thought it was a good idea," Manganaro said. "I started calling across the country and luckily found another one in Florida that they were able to move to the clinic," said Dr. Davis, "We stood him in that, doing continuous cryotherapy on him for three solid days when he was at his worst." Dr. Dryden was called in to assist from the outset. "At first presentation he seemed uncharacteristically dull for a colt," said Dr. Dryden. "By the next day he was in a full-blown laminitic episode.

We got him in the cold-water spa for eight hours at a time over the next 72 hours. I think that played a huge part in helping him out. "We also injected him with several doses of stem cells into the bone marrow, and harvested and grew more for further injections.

He had coffin bone displacement and rotation, the coffin bone rotating in a downward direction away from the hoof wall. It was pretty serious. I opened a big abscess on the bottom of his foot and saw the outline of his coffin bone. We treated that with sterile maggots to prevent him getting coffin bone sepsis. He also had some medical issues with his kidneys and dorsal colitis. He had a gamut of issues and was a pretty sick boy for a while. He was definitely a lucky guy to get through it."

With his 11 victories in Brazil — including four group 1 races — Bal a Bali's record stands at 15-1-4 from 26 starts, with more than \$1.2 million in earnings. He won four races in the U.S. and has four other placings in graded events.



*Bal a Bali began his stud career at Calumet in 2017.*

Grayson-Jockey Club Research Foundation always has placed a high priority on laminitis research funding 21 related projects during the last 20 years.



## Grayson-Jockey Club Research Foundation

The Grayson Foundation was named after Admiral Cary Grayson (photo, right) best known as the personal physician to President Woodrow Wilson and chairman of the American Red Cross. Founded in 1940 with the aim to support research at existing institutions through funding rather than carry out the research itself. The foundation is devoted to providing positive research in veterinary medicine and in the breeding, raising, and handling of all horses.

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