

Laminitis
Musculoskeletal



Reproduction
Infectious Diseases

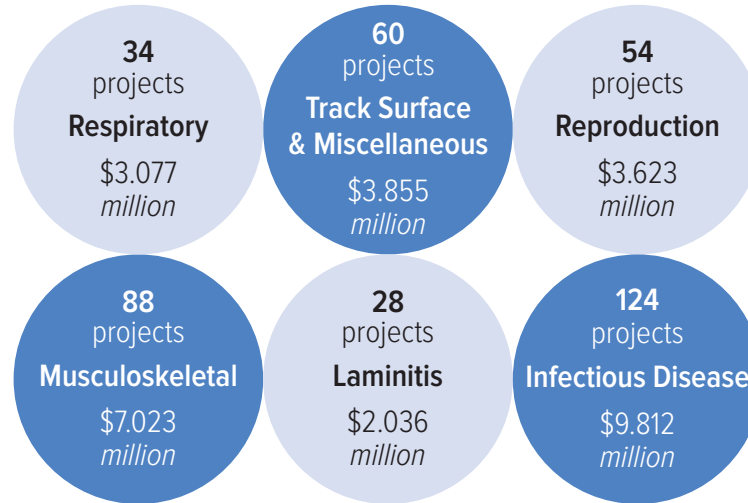
EQUINE **RESEARCH** 

Respiratory  Colic Track & Arena Surfaces

2020 ANNUAL REPORT

Grayson-Jockey Club Research Foundation

WHERE THE DOLLARS GO



Funding over \$29.1 Million on 384 Projects at 45 Institutions

“ The process of moving bench-top research to clinical practice can take a long time. In humans it can take easily over a decade to get the research out of the lab and into a clinical setting. We are fortunate to have the Grayson-Jockey Club Research Foundation available to help researchers transfer new understandings of disease mechanisms gained in the laboratory into the development of new methods for diagnosis, therapy and prevention. Without the generosity of the foundation research on infectious diseases would not have been possible in a clinical setting. ”

Nathan Slovis DVM, Dipl. ACVIM
Director McGee Medical Center
Hagyard Equine Medical Institute

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The original Grayson Foundation was formed in 1940 and named in honor of Admiral Cary Grayson who was the personal physician to President Woodrow Wilson and the chairman of the American Red Cross, as well as a horseman himself. The foundation's first grant was made as a \$1,000 donation to the University of Pennsylvania School of Veterinary Medicine to continue its work on periodic ophthalmia.

From the beginning, the aim was to support research at existing institutions through funding rather than carry out the research itself. William Woodward Sr, chairman of The Jockey Club, stated that the formation of the foundation is "the result of the conviction of a large number of persons devoted to the raising and breeding of horses that there is a positive need for further research in veterinary medicine and in the breeding, raising, and handling of horses." In 1940, the horse and mule were still deeply involved in military defense, and the scope of the foundation's efforts went far beyond the Thoroughbred, to all breeds, although the impetus came from leaders in Thoroughbred racing. Over nearly a half-century, the Grayson Foundation operated as a separate entity, fulfilling the purposes of its founders despite constant limitations on available funding.

The Jockey Club created a research foundation in 1984, and five years later this was merged with the Grayson Foundation, to be known since then as the Grayson-Jockey Club Research Foundation, Inc. (GJCRF, the Foundation). The merger has been fruitful in the funding of scientific advancements and the fundamental health of horses and in recent years it has been able to disperse more than \$1 million annually in grants.

Over the years there have been several major donors who were instrumental in enhancing the success of the foundation in fulfilling its mission. In 1991, the Robert J. Kleberg and Helen C. Kleberg Foundation donated \$2 million to Grayson-Jockey Club Research Foundation. Mr. Kleberg had studied genetics and as head of King Ranch, developed the Santa Gertrudis breed of cattle. He also was instrumental in development of the American Quarter Horse and the list of many excellent Thoroughbreds he bred includes 1946 Triple Crown winner Assault.

In 1993, the foundation received another major gift when Paul Mellon donated the \$1 million bonus that his Kentucky Derby winner Sea Hero won in the Chrysler Triple Crown Challenge. Mr. Mellon requested that double that amount be raised in response, and this endowment drive was successfully concluded during the 1995/96 fiscal year. The \$1 million was double-matched, as members of The Jockey Club and other contributors donated more than \$2 million. Mellon passed away in 1999, leaving \$2.5 million to the foundation's endowment. In 2000, the foundation created the Rokeby Circle as the designation for those who contribute \$10,000 or more in a given year. Rokeby is the name of Mr. Mellon's beloved Virginia estate.

In 2004, the Oxley Challenge was initiated. Under the direction of foundation board member John C. Oxley, his family's Oxley foundation pledged \$1 million over four years contingent on the foundation's raising a like amount from new income sources. The Foundation was successful in that match, and so received \$250,000 from the Oxley Foundation in each of four years.

In collaboration with The Jockey Club, the foundation coordinated and underwrote the first Welfare and Safety of the Racehorse Summit (summit) in 2006. That meeting, and a second gathering of industry experts in 2008, generated a number of recommendations that the industry has embraced to a large extent. The Jockey Club's Thoroughbred Safety Committee endorsed recommendations of the summit, and the National Thoroughbred Racing Association's Safety and Integrity Alliance program is based in part on those recommendations. Also, the Equine Injury Database, which is designed to provide the industry much needed epidemiological analysis of trends, aimed at improving injury rates nationally, evolved from the summit. All additional summits have been held at Keeneland, in 2010, 2012, 2014, 2015, 2016 and 2018. In 2020 the summit was held as a webinar.

Grayson reached a milestone for funding more than \$1 million in research for the first time in 2007, and 2020 is the sixth-straight year that more than \$1 million has been approved.

RESEARCH HIGHLIGHTS SINCE 1940

First Equine Influenza Vaccine

Virus Abortion Vaccine

Equine Infectious Anemia Study

Development Of The Field Of Biomechanics

Defined The Cause Of Colitis X

Control Of The Shaker Foal Syndrome

Defined Nature Of Wobbler Syndrome

Equine Viral Arteritis Vaccine

Study Of Risk Of Injury From Front Toe Grabs

Equine Protozoal Myeloencephalitis Study

Gene Therapy For Equine Arthritis

Cause And Diagnosis Of Placentitis In Mares

New Vaccination Approaches Against R. Equi Pneumonia

Muscular Factors Influencing Airway Size In Exercising

Dietary Implications For Colon Impaction

Equine Viral Arteritis Vaccine

New Protocols For Alleviating Buck Shins

Study Of Bacteria Associated With MRLS

Studies Of Immunity To EPM

Developing "Physiological Trim" Promoting Healthy Hooves

Laminitis Study Leading To Cryotherapy Treatment Protocols

Initiated Primary Work On Piroplasmiasis

EIPH Study

PET Scan Project

Messenger RNA Molecule to Treat Rhodococcus equi

Bisphosphonate Research



Since 1940, Grayson-Jockey Club Research Foundation has been a leading source of private funding for equine medical research that benefits all breeds of horses. The year 2020 proved to be challenging, but the foundation continued its commitment to fund significant equine research at institutions worldwide.

Research

In 2020, the board authorized expenditure of \$1,389,637 to fund 17 new projects at 13 universities, four continuing projects, and the Storm Cat Career Development Award. One of the projects funding the sample collection, storage, and cataloging of tissue related to nocardioform placentitis for future submitted research, was accepted because it directly affected the 2020 Kentucky foal crop.



The foundation also filled the special call for detection of bisphosphonates in Thoroughbreds with two grants: Vinnie and Teresa Viola's St. Elias Stables' project submitted by Dr. Heather Knych at the University of California-Davis and a project from Cornell University submitted by Dr. Heidi Reesink which received support from the Racing Medication and Testing Consortium (RMTC) and the Klein Family Foundation.

Membership and Development

Through the horsemen's bookkeeper at each track, jockeys can donate \$1 from each mount to the foundation. More than \$15,000 in support came from jockeys who participated from the following venues California Racing Fairs, Del Mar Thoroughbred Club, Delaware Park, Gulfstream Park, Keeneland, Los Alamitos Race Course, Oaklawn Racing Casino Resort, Prairie Meadows, Remington Park, Santa Anita Park and Zia Park.



The Tribute program continued to see growth in 2020, and the foundation introduced a new Heritage Society designed to assist donors with making planned giving decisions.



Since 2006, in collaboration with The Jockey Club, the foundation coordinated and underwrote the Welfare and Safety of the Racehorse Summit (summit), gathering industry experts to generate recommendations in the industry. Eight summits have been held at Keeneland. In lieu of an in-person event in 2020 due to the impact of the COVID-19 pandemic, Grayson hosted a series of weekly online seminars on equine health and safety topics.

The virtual Welfare and Safety of the Racehorse Summit kicked off May 12 with a presentation by Dr. Katherine Garrett of Rood & Riddle Equine Hospital, who discussed the uses and advantages of different imaging modalities. She also highlighted common injuries to the fetlock.

On May 19, Dr. Dionne Benson, chief veterinary officer of The Stronach Group, moderated a panel consisting of Dr. Ryan Carpenter, a private veterinarian in California; Dr. William Farmer, the equine medical director for Churchill Downs Incorporated; and Dr. Scott Palmer, the equine medical director for the New York State Gaming Commission. The group emphasized the importance of transparency in medical records throughout a horse's racing career.

The May 26 webinar featured Dr. Mick Peterson, executive director of the Racing Surfaces Testing Laboratory and professor of Biosystems and Agricultural Engineering at the University of Kentucky. Dr. Peterson focused on the Maintenance Quality System, which monitors track conditions. His presentation also included interviews with Glen Kozak, the New York Racing Association's senior vice president of Operations & Capital Projects; Jim Pendergest, general manager of The Thoroughbred Center and director of Surfaces at Keeneland; Dr. Stephanie Bonin, biomedical engineer at MEA Forensic; and Dennis Moore, track superintendent at Del Mar and Santa Anita.

The fourth webinar was moderated by Dr. Jennifer Durenberger, The Jockey Club steward for NYRA, on June 2. This session featured a presentation by Dr. Sue Stover, professor of Surgical and Radiological Sciences at UC Davis School of Veterinary Medicine. Stover delved into findings from the California Horse Racing Board's postmortem program. She noted that catastrophic injuries are the result of pre-existing conditions and tend to occur in predictable locations.

The last presentation was delivered by Dr. Tim Parkin, professor of Veterinary Epidemiology at the University of Glasgow, and the webinar was moderated by Dr. Mary Scollay, executive director and chief operating officer of the RMTC. Parkin described risk factors for fatal injury in Thoroughbred racehorses based on data from the Equine Injury Database. Risk factors included history of previous injury, time spent on the vet's list, increased age at first start, changing trainers and time spent with a trainer, track surface and condition, race distance, and racing in claiming races.

Sponsorship and Education

In May the foundation was highlighted on Thursday Night Live on America's Best Racing (ABR). ABR's Dan Tordjman and Penelope Miller interviewed Dr. Andrew Van Eps, professor at the University of Pennsylvania, and Dr. Sara Langsam, veterinarian at Teigland, Franklin and Brokken DVM, in a webinar about laminitis along with foundation president, Jamie Haydon.

Many scheduled events and sponsorships were disrupted in 2020. The foundation had been named the charity for the 2020 Land Rover event, which was cancelled. Other events were postponed as well, but Grayson was able to participate in some events: The United States Dressage Festival of Champions, The National Horse Show, The Palomino Horse Breeders' Association World Championships and The AQHA Kentucky Fall Classic World Show.



The foundation also found ways to promote our message by creating a new VET Chat series. The hour-long webinars began with Dr. Stephen Reed of Rood & Riddle Equine Hospital who discussed equine protozoal myeloencephalitis and wobbler syndrome.

The second webinar in the series featured Drs. Anthony Bliklager and Amanda Ziegler of North Carolina State College of Veterinary Medicine, who talked about colic. While in the next webinar, Dr. Lauren Schnabel of North Carolina State University discussed therapeutic use of stem cells for tendon and ligament injuries.

Dr. Ben Sykes at Massey University presented information on equine gastric ulcer syndrome in the fourth webinar while Dr. Arthur Frampton of University of North Carolina-Wilmington reviewed equine herpes virus in the fifth chat.



The final webinar in 2020 featured Dr. Noah Cohen of Texas A & M University and Dr. Jeroen Pollet of Baylor College of Medicine, who presented information on rhodococcus equi and treating it with inhalation therapy.

Marketing and Awareness

To further our mission and expand awareness of the foundation, Grayson engaged Wrigley Media to produce a commercial that is shown at horseshows, during racing broadcasts, and at other equine-related events. Both a 30-second and 60-second commercial were created.

The Research Spotlight was produced twice in 2020, with the spring newsletter published in the April edition of BloodHorse magazine. Grayson also continued to contribute articles to the magazine's monthly Health Zone. The foundation's online newsletter, Equine Research News, published the 12th annual Stallion Durability and Soundness Statistics. Grayson also produced two special research updates on laminitis and colic.

Grayson partnered with several groups to create a series of handicapping events in 2020 to raise donations and awareness.



The "Grayson Grass Challenge," sponsored by Indiana Grand Racing & Casino, was a five-week handicapping contest spanning August 10- September 7, in which participants submitted selections on two specified turf races each week. Indiana Grand provided each contestant \$100 to wager on specific races. At the end of the five weeks, nearly \$4,000 of the remaining bankroll plus winnings from the contestants went to Grayson.

On Sunday, October 25, 11 two-member teams participated in the 1/ST Charity Handicapping Challenge. Sponsored by Santa Anita Park, \$4,500 was raised for the foundation.

Little Red Feather Racing and Equibase Company participated in the "Gamble for Grayson Handicapping Challenge." This contest held on November 28-29, spanned five graded stakes races held that weekend at Del Mar Thoroughbred Club and raised over \$2,600 for Grayson.

Despite the cancellation of the Elizabeth Locke jewelry trunk show, held annually at Keeneland during the Keeneland September Yearling Sale, Elizabeth Locke Jewels held an online version and once again donated a percentage of the proceeds to Grayson.



The Research Advisory Committee evaluates research proposals and advises the Foundation's board of directors on the basis of the needs of the industry and scientific quality of each project. For the 2020 grants allocation, the committee was composed of the following persons who served the Foundation without compensation.

Chairman

Stephen Reed, DACVIM

Internal Medicine & Shareholder, Rood & Riddle Equine Hospital;
Emeritus Professor, The Ohio State University and
Adjunct Professor, Gluck Center, University of Kentucky
Rood & Riddle Equine Hospital • Lexington, KY
Graduate - The Ohio State University

Consultant

Johnny Mac Smith, DVM

Founding Partner
Peterson & Smith Equine Hospital • Ocala, FL
Graduate - Auburn University

Members of the Board of Directors

Rick Arthur, DVM

Equine Medical Director
California Horse Racing Board • Sierra Madre, CA
Graduate - University of California, Davis

Larry Bramlage, DVM, MS, DACVS

Surgeon and Shareholder
Rood & Riddle Equine Hospital • Lexington, KY
Graduate - The Ohio State University

A. Gary Lavin, VMD

Private Practice
Louisville, KY
Graduate - University of Pennsylvania

Amanda Adams, DVM, PhD

Immunologist, Gluck Equine Research Center
University of Kentucky • Lexington, KY
Graduate - University of Kentucky

Scott Bailey, DVM, DACT

Associate Professor, Theriogenology
North Carolina State University • Raleigh, NC
Graduate - Kansas State University

Jennifer Barrett, DVM, PhD, DACVS, ACVSMR

Theodora Ayer Randolph Professor of Equine Surgery
Virginia Tech, Marion duPont Scott Equine Med. Center
Leesburg, VA
Graduate - Cornell University

Warwick Bayly, BVSc MS PhD DACVIM

Internal Medicine and Exercise Physiology
Washington State University • Pullman, WA
Graduate - Washington State University

Alicia Bertone, DVM, PhD, DACVS, ACVSMR

The Trueman Chair in Equine Clinical Medicine & Surgery
The Ohio State University • Columbus, OH
Graduate - Cornell University

Jeff Blea, DVM

Racetrack Practitioner
Von Bluecher, Blea, Hunkin Inc. • Sierra Madre, CA
Graduate - Colorado State University

Daryl Bonder, DVM

Private Practice Equine Surgery and Sports Medicine
Toronto Equine Hospital • Toronto, ON Canada
Graduate - Ontario Veterinary College,
University of Guelph

Etta Bradecamp, DVM, Dipl. ACT, Dipl. ABVP

Theriogenology and Equine Practice
Rood & Riddle Equine Hospital • Lexington, KY
Graduate - Auburn University

Steven Brinsko, DVM, PhD

Professor & Associate Department Head for Academic Programs,
Theriogenologist
Texas A & M • College Station, TX
Graduate - University of Florida

Carol Clark, DVM, Dipl. ACVIM

Private Practice
Peterson & Smith Equine Hospital • Ocala, FL
Graduate - Texas A & M

Michele Coleman, DVM, ACVIM, PhD

Epidemiology, Infectious Disease, Clinical and Research
Texas A & M • College Station, TX
Graduate - University of Georgia

J. Barry David, VMD, PhD, DACVIM*Associate*

Hagyard Equine Medical Institute • Lexington, KY
 Graduate - University of Pennsylvania

Carrie Finno, DVM, PhD, DACVIM*Assistant Professor and Researcher*

University of California, Davis • Davis, CA
 Graduate - University of Minnesota

Kelsey Hart, DVM, PhD, DACVIM (LAIM)*Associate Professor, Large Animal Internal Medicine*

University of Georgia • Athens, GA
 Graduate - Cornell University

Scott Hay, DVM*Private Practice*

Teigland, Franklin and Brokken • Fort Lauderdale, FL
 Graduate - Kansas State University

Jorge Hernandez, DVM, MPVM, PhD*Epidemiologist- Disease Diagnostics*

University of Florida • Gainesville, FL
 Graduate - University of Baja California

Susan Holcombe, VMD, MS, PhD, DACVS, DACVECC*Professor*

Michigan State University • East Lansing, MI
 Graduate - University of Pennsylvania

Jennifer Janes, DVM, PhD, Dipl. ACVP*Assistant Professor of Anatomic Pathology*

University of Kentucky • Lexington, KY
 Graduate - University of Tennessee

Christopher Kawcak, DVM, PhD, DACVS*Professor of Orthopedics*

Colorado State University • Fort Collins, CO
 Graduate - Colorado State University

Heather Kynch, DVM, PhD, DACVCP*Associate Professor of Clinical Veterinary Pharmacology*

University of California-Davis • Davis, CA
 Graduate - University of California-Davis

Sara Langsam, VMD*Private Practice*

Teigland, Franklin, and Brokken • Elmont, NY
 Graduate - University of Pennsylvania

Mathilde Leclère, DVM, PhD, DACVIM (LAIM)*Assistant Professor*

University of Montreal • Montreal, QU Canada
 Graduate - University of Montreal

Ernie Martinez, DVM*Private Practice*

Hagyard Medical Institute • Lexington, KY
 Graduate - Oklahoma State University

Margaret Mudge, VMD, DDACVS, DACVECC*Associate Professor*

The Ohio State University • Columbus, OH
 Graduate - University of Pennsylvania

Heidi Reesink, VMD, ACVS, PhD*Comparative Biomedical Sciences Researcher*

Former Storm Cat Award Recipient
 Cornell University • Ithaca, NY
 Graduate - University of Pennsylvania

Brett Sponseller, DVM, PhD, Dipl. ACVIM*Associate Professor*

Iowa State University • Ames, IA
 Graduate - Cornell University

Ramiro Toribio, DVM, MS, PhD, ACVIM*Clinician/Researcher, Endocrinology & Internal Medicine*

The Ohio State University • Columbus, OH
 Graduate - Universidad Nacional de Rio Cuarto (Honors)

Regina Turner, VMD, PhD*Theriogenologist*

University of Pennsylvania • Kennett Square, PA
 Graduate - University of Pennsylvania

Andrew Van Eps, BVSc, PhD*Associate Professor*

University of Pennsylvania • Kennett Square, PA
 Graduate - The University of Queensland

**Grayson has funded
 over \$1 million in
 grants each year
 for the last 6 years.**



The board of directors of Grayson-Jockey Club Research Foundation has authorized expenditure of \$1,506,764 to fund 18 new projects at 13 universities, four continuing projects, and the Storm Cat Career Development Award.

NEW PROJECTS

Passive Immunization Of Foals With RNA-AB Against R Equi

Jeroen Pollet, Baylor College Of Medicine

By inhalation therapy, we intend to deliver the genetic code for a protective antibody against rhodococcus equi into the lung cells of newborn foals, to rapidly protect them against infection.



Improving Fungal Diagnosis In Horses

Soon Hon Cheong, Cornell University

Developing a diagnostic test that can rapidly detect, identify, and determine the antifungal susceptibility profile of clinical equine samples to improve treatment outcomes of fungal infection in horses.

Bisphosphonates And Fatal Musculoskeletal Injury

Heidi Reesink, Cornell University

Determining the prevalence of bisphosphonate use in racehorses and whether bisphosphonates are associated with fatal musculoskeletal injury is essential to equine welfare and the future of racing.

*additional funding for this project from **Klein Family Foundation & RMTC***

Novel Treatment For Recurrent Exertional Rhabdomyolysis

Stephanie Valberg, Michigan State University

Determining if a potent antioxidant coenzyme q10, not subject to withdrawal times, can benefit horses with tying up by replenishing diminished muscle coq10 levels and decreasing oxidative stress.

Enhancing The Efficacy Of MSCs For Tendon Healing

Lauren Schnabel, North Carolina State University

This proposal examines the tendon inflammatory environment following acute injury and the effect of such an environment on mesenchymal stem cells (MSCs), with the goal of improving MSC treatment efficacy.

AMPK Agonist Combination Therapy & ID In Horses

Teresa Burns, The Ohio State University

By completing this work, we hope to characterize a combination therapy to improve equine insulin resistance that is administered orally and well tolerated.

SDFT Adaptation In Thoroughbred Racehorses

Sushmitha Durgam, The Ohio State University

The impact of training and racing on (mal)adaptations in superficial digital flexor tendon hierarchical structure will be evaluated to delineate the pathophysiology of this common injury in racehorses.

Dynamics Of Vitamin D In Hospital Foals

Ramiro Toribio, The Ohio State University

Critically ill foals often have low blood levels of vitamin D; the goal is to investigate if their levels over time are associated with the severity of their disease and mortality.



Asthma, Performance And Omega-3s In Racing Thoroughbreds

Laurent Couetil, Purdue University

Investigating the variability of asthma severity in horses racing across the United States, its effect on performance and determine if omega-3 pufa supplementation is beneficial.

Anti-Pnag Plasma For Preventing R. Equi Foal Pneumonia

Noah Cohen, Texas A&M University

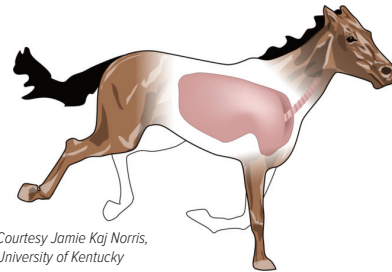
Transfusion of plasma is the only licensed product for preventing rhodococcus equi pneumonia, and demonstrate that we have developed a plasma product superior to that available currently.



Effect Of Nebulized Lidocaine In Treating Equine Asthma

Melissa Mazan, Tufts University

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



Courtesy Jamie Kaj Norris, University of Kentucky

Bisphosphonate Effects on Biomarkers

Heather Knych,

University of California-Davis

This study will allow for development of sensitive and alternate methods for detection of bisphosphonates.

Funded by



Effect Of NSAIDs On Anion Transport In The Equine Colon

David Freeman, University of Florida

This proposal is designed to improve management of horses with right dorsal colitis, an insidious life-threatening form of colic for which all horses on phenylbutazone are at risk.

Protein Based In Vivo Diagnostic For Endometrial Biofilm

Mats Troedsson, University Of Kentucky

Successful management of bacterial biofilms in the uterus requires an accurate diagnostic in vivo assay that we propose to develop.

Novel Delivery Of Antimicrobials Into Equine Joint

Simon Bailey, University of Melbourne

The development and testing of, a novel (gel) carrier formulation for the antibiotic Cefuroxime, injection into horses' joints for application as a treatment of jointinfections.



Diagnostic Assay For Recurrent Exertional Rhabdomyolysis

Molly McCue, University Of Minnesota

Identify a comprehensive set of genetic markers that allow RER risk prediction before horses tie-up and preemptive management to decrease the frequency and severity of clinical disease.

Sponsored by **WINSTAR**

Inhibiting EHV-1 With Anti-Inflammatory Drugs

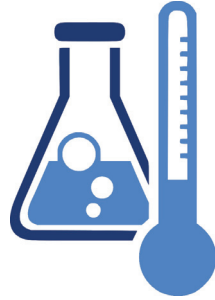
Arthur Frampton, University Of N.Carolina Wilmington

Using a tissue culture model system to test the ability of specific drugs to reduce the damaging hyper-inflammatory response that is observed in EHV-1 infected horses suffering from equine herpesvirus myeloencephalopathy (EHM).

Nocardioform Placentitis

University of Kentucky

Sample collection and storage of tissue for future research and testing for nocardioform placentitis.



CONTINUING PROJECTS

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.

Sponsored by  

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.

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.

Sponsored by  OAKLAWN

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.



2020 CAREER DEVELOPMENT AWARD

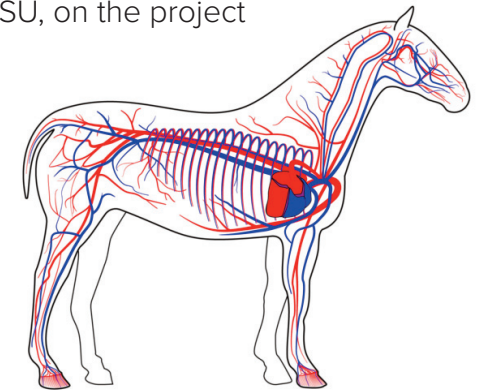
A single Storm Cat Career Development Award was given in 2020.

The first award in 2006 was a \$15,000 grant designed to encourage an individual considering a career in equine research. It is underwritten annually by Mrs. Lucy Young Hamilton, a GJCRF board member whose family stood the champion stallion Storm Cat at Overbrook Farm. This year's award winner is:

Sherry Johnson

Colorado State University

She is currently working with Dr. Melissa King, (the 2009 Storm Cat Award recipient) an assistant professor of Equine Sports Medicine & Rehabilitation at CSU, on the project "Validation of Blood Flow Restriction Training in Horses."



Courtesy Jamie Kaj Norris, University of Kentucky

Drs. Gary Lavin and Larry Bramlage reorganized the foundation's process of evaluating grants in 1999. Instead of having separate committees of academicians and practicing veterinarians, a single Research Advisory Committee (RAC) was created. The RAC includes 32 individuals representing various research specialties and veterinary practices from across North America. The RAC convenes in January to evaluate all proposals submitted by the research community, spending three days poring over the projects, rating them and recommending the best to the board of directors who determines how many projects can be funded in that year.

Application

Since 1999 the foundation has funded 384 grants, averaging more than \$1.3 million annually in awards for the last six years. The average amount funded during the past six years has been \$109,645 per grant. For 2020, the foundation received 69 applications from 35 different institutions across eight countries.

All applicants must comply with the regulations pertaining to animal use in the proposed study, which is overseen by the INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC). The IACUC must review and approve the research project prior to funding.

RAC Scoring

The RAC is a mix of 32 equine scientists and practitioners capable of judging the merit of the most sophisticated proposals with clinical specialists from university clinics and private practices. The group includes representation of the major clinical disciplines such as surgery, internal medicine, and reproduction, along with the academic disciplines of pathology, immunology, microbiology, etc., with geographic diversity to reflect the importance of various local problems.

There is a multi-layered review process for each grant starting with the identification of experts on the subject matter and potential conflicts of interests within the RAC. Each grant is initially assigned four reviewers. The reviewers individually score the grant based on:

- (a) scientific approach
- (b) overall impression
- (c) impact,
- d) feasibility
- (e) budget

Each grant is scored numerically and given a written review. The RAC members assess and read all applications prior to the review meeting.

*In 2020
69 applications
averaging over
\$109,645
per request*



Final Review

During the RAC meeting, the essential activities are to discuss each proposal with the entire committee and to rank the order for all acceptable proposals. The group endeavors to reconcile mean scores between specialties to ensure that one discipline does not score significantly higher or lower than another discipline.

Once grants are ranked numerically to ensure that each grant is ranked correctly for its strengths and weaknesses, each grant is then compared to its neighboring grant. If a grant is moved in the ranking it must be reassessed at each placing, compared to its higher and lower neighbor, to ensure that the placing is correct within the consensus of the group.

Funding

The recommendations of the RAC are presented to the board of directors for final review, with announcement of awards typically near the first week of March. The funding cycle commences April 1, with three equal payments made through the year.

A timeline is incorporated into the application document so that all investigators are aware of the schedule. The applicant in the original application predicts a schedule of progress. A progress statement is required on November 1 of the original funding year so that any problems with the investigation are identified early and adjustments can be made. Satisfactory progress must be documented in order to continue receiving funding.

Second-year funding must be approved by the foundation board following recommendations from the foundation office.



Universities

The 2020 slate of research brings the Foundation's totals since 1983 to more than \$29.1 million to underwrite 384 projects at 45 universities.

Auburn University
Case Western Reserve
Colorado State University
Cornell University
Harvard University
Iowa State University
Kansas State University
Louisiana State University
Ludwig Maximilian University / Germany
Massachusetts Institute of Technology
Michigan State University
Mississippi State University
North Carolina State University
The Ohio State University
Oklahoma State University

Oregon State University
Purdue University
Southern Illinois University
Temple University
Texas A&M University
Tufts University
University of Bristol/UK
University of California-Davis
University of Edinburgh/UK
University of Florida
University of Georgia
University of Glasgow / UK
University of Guelph / Canada
University of Illinois
University of Kentucky

University of Maryland
University of Melbourne
University of Minnesota
University of Mississippi
University of Missouri
University of North Carolina -Wilmington
University of Oklahoma
University of Pennsylvania
University of Queensland / Australia
University of Saskatchewan / Canada
University of Tennessee
University of Wisconsin
Virginia Tech University
Washington State University



Research results are published in peer-reviewed journals. All funded projects are scheduled for additional publications, including those still with ongoing research, with 230 eligible projects for publication and 329 papers produced.

Currently there are

50 Open projects at
23 different institutions



On 3 continents



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Grayson-Jockey Club Research Foundation

821 Corporate Drive • Lexington, KY 40503 • (859) 224-2850

40 East 52nd Street • New York, NY 10022 • (212) 371-5970

grayson-jockeyclub.org • contactus@grayson-jockeyclub.org