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[EXTERNAL]
--- Name of 501(c)(3) Organization ---
Grayson Jockey Club Research Foundation
--- Today's Date ---
03/29/2022
--- Year Established ---
1940
--- Amount Requested ---
10000
--- Name of Executive Director ---
Jamie Haydon
--- Mailing Address ---
821 Corporate Drive
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--- Contact Information - Name and Title ---
Holly White - Director of Development
--- Work Phone ---
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--- Email ---
hwhite@jockeyclub.com
--- Website / URL ---
https://www.grayson-jockeyclub.org/default.asp
--- Brief Mission Statement ---
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Grayson-Jockey Club Research Foundation exists solely to fund veterinary research beneficial to promoting the health and soundness of all horses.

--- In brief, what is your proposed use of the grant you are applying for? Please include 3 to 5 goals you expect to achieve with the funding. ---

The grant will be applied toward the 2022 cycle of funded research projects recommended by our Research Advisory Committee and approved by our Board. One project that specifically is relative to the mission of TERF would be that of University of California Davis where Sue Stover will study "THE MOTION OF THE PROXIMAL SESAMOID BONES ON UNEVEN FOOTING". The total project cost is \$34,763.

This two year grant proposes to determine how hoof conformation, shoeing, and uneven racetrack surfaces could contribute to fetlock breakdowns.

Fractures of bones in the fetlock are some of the most common fatal and non-fatal injuries that occur during racing. Proximal sesamoid bone fracture is one of the most common fatal fractures worldwide. It causes 44% of all fatal injuries in California Thoroughbred racehorses, 55% of fatal injuries in South African racehorses, and 37% of fatal injuries in Australian racehorses. Fracture of the lateral side of the cannon bone, at the end that articulates with the proximal sesamoid bones, is one of the most common non-fatal injuries and the second most common fatal injury. This cannon bone fractures accounts for 10-25% of racehorse deaths. Both proximal sesamoid bone and cannon bone condylar fractures have typical fracture configurations that indicate they result from specific limb loading circumstances.

Motions of the P1 and of the proximal sesamoid bones relative to the cannon bone outside of fetlock flexion and extension are consistent with these fracture configurations that occur in Thoroughbred racehorses. Medial proximal sesamoid bone fracture is associated with development of a weak spot against the opposing cannon bone that is the likely consequence of a specific limb loading condition that promotes rotation of the medial proximal sesamoid bone into the cannon bone.

We have observed this motion during fetlock extension at gallop loads in our laboratory. We believe this motion will be exacerbated by unbalanced hoof trimming, lateral wedge horseshoes, and uneven race surfaces (such as banked racetracks and unharrowed footing). Racetrack surfaces in the United States are banked in the straights for drainage and in the turns. If the hypothesis of this project is supported, hoof trimming, shoeing, and racetrack design recommendations could be made to prevent fetlock injuries.

The outcomes of this project will support new horse management practices and track surface design and management protocols to prevent injuries to racing stock and protect many other countless thoroughbred horses for years to come.

--- If you received a grant from TERF (Thoroughbred Education and Research Foundation) previously, please describe how those funds were used. ---

In 2019, Grayson received a grant which was used towards the general funding of the 2019 approved slate of research that year. That year we had four projects specifically related to the health and safety of the thoroughbred racehorse:

Standing PET of the Racehorse Fetlock

Mathieu Spriet, University of California-Davis This research involves validation of a PET technology for early detection of fetlock lesions in standing horses to prevent catastrophic breakdowns in racehorses.

Training Programs for Prevention of Fetlock Injury Sue Stover, University of California-Davis This study is designed to predict proximal sesamoid bone fracture in racehorses from a calibrated computational model that incorporates training programs, track surface properties, and bone's reparative processes.

Racehorse Stride Characteristics, Injury and Performance Chris Whitton, University of Melbourne By identifying changes in stride characteristics of racehorses over time, researchers can identify those parameters that can be used as an early indicator of injury or that are key to injury development.

Robotic CT for Assessing of Bone Morphology Kyla Ortved, University of Pennsylvania This study strives to prevent catastrophic injuries in the Thoroughbred racehorse by screening fetlock joints using standing robotic CT and biomarker analysis.

--- Please list the other organizations or major contributors that have provided funding to your organization within the last calendar year. ---

The United States Eventing Association, The John William Pope Foundation, United States Equestrian Trust, Temple Gwathmey Steeplechase Foundation, Inc., Thoroughbred Charities of America, The Keeneland Foundation, New York Thoroughbred Horsemen's Association and others have supported equine research.

--- Please describe your charity's public education/research efforts. ---

Publication of Research Spotlight distributed through our mailing and emailing list to donors, universities, farms, researchers etc. Also placed in "Blood Horse" magazine.

Welfare and Safety of the Race Horse Summit will be held in JUNE 2022 at Keeneland and open to the public, as well as being made available through online video. Information available from these summits on our website.

Our Vet Chat series explains current research in a way that applies to horse owners and our recorded live and available on our YouTube page.

We have produced an equine handbook - a printed, pocket size handbook aimed at introducing and explaining common issues faced by horses. Not a substitute for veterinarian care, but an aid to the horse owner.

We continue to distribute our Hoof DVD, demonstrating proper foot care as well as our Trainer Study Guides.

We also will travel and sponsor many events to educate the public including: The United States Pony Club Equine Research Fair, The United States Eventing Association Annual Meeting, The United States Hunter Jumper Association Annual Meeting, US Equestrian Annual Meeting, Equine Affaire as well as many horse shows and racing events where we sponsor various awards such as The Best Turned Out award at the United States Dressage Festival of Champions Vet Inspection and The USEF Model Pony Awards.

--- Please describe any publicity your charity has earned within the last calendar year. Copies of news articles or a brief summary of news coverage are acceptable. ---

Each year we publish a building awareness guide which outlines all of our news coverage, events and other outlets and mediums for educating the public on Grayson, it can be found here: https://www.grayson-jockeyclub.org/resources/2021Awareness.pdf

Another exciting event in 2022, most recently was the installation of a PET Scanner at Rood and Riddle Hospital here in Lexington, KY. Grayson funded the first project on this science in 2015 and in 2019 the continuing project on PET that year as well!

Read more here: https://paulickreport.com/horse-care-category/rood-riddle-equine-hospital-installs-standing-pet-scanner/?fbclid=IwAR1ErAooNH7_ai03_g1CDbVvNeQbo6nz4KABKIeDMcK-GefTHJcsaF4_AG0

- --- List 2-3 things that distinguishes your organization and why TERF should fund this proposal. ---
- 1: Grayson-Jockey Club Research Foundation has no alliance with any one university, so the Foundation is free to fund the best research regardless of where it takes place. Since the early 1980s, the Foundation has funded 412 specific research projects at the 45 universities.
- 2: The research today is helping recruit and train the researchers for tomorrow, giving extra impact from the Foundation's funding. Aside from such staff assistance, however, the Foundation does not pay the Principal Investigator's salary or other overhead, therefore directing the dollars right on the target of research.
- 3: Grayson supports the future of equine research through funding young investigators and supporting careers in the research field. The generosity of the Klein Family allows us to award The Elaine and Bertram Klein Development Award, a competitive program intended to promote development of promising investigators by providing a one year salary supplement of \$20,000. Through Ms. Lucy Young Hamilton's commitment to young researchers the Storm Cat Career Development Award is given each year. The award is designed to introduce young researchers to equine sciences. The program has established itself as an elite incubator for young minds with novel ideas and unique approaches for advancing equine health. We have given 27 awards since 2006 and 23 individuals are still working in equine medicine.
- --- Space for Additional Information and Notes ---

University Videos on past and current research and all Vet Chat sessions https://www.grayson-jockeyclub.org/default.asp?section=2&area=TESTIMONIALS&menu=1

Welfare and Safety Summit at Keeneland <a href="https://www.grayson-jockeyclub.org/WelfareSafety/default.asp?WelfareSafety/default.asp.g.welfareSa

Current Research Spotlight newsletter and other articles https://www.grayson-jockeyclub.org/default.asp?section=2&area=Media&menu=3

Facebook with numerous links to events https://www.facebook.com/GraysonJockeyClub

--- Please list your Officers with their Titles ---

Jamie Haydon President, Administrator and Fund Raising Resia Ayres Secretary, Operations Manager Laura Barillaro, Treasurer Holly White, Director of Development and Major Gifts Shannon Kelly, Development Manager and Events Dr. Johnny Mac Smith, Veterinary Consultant

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--- How many Directors/Trustees does your organization have? ---
22
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Mr. Louis Cella

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--- Director Name (12) ---
Mrs. Lucy Young Hamilton
--- Director Address (12) ---
2351 Delong Road
Lexington, KY
40515
--- 1. Name - Job Title ---
Jamie Haydon - President
--- 1. Duties ---
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Execute all activities, including interfacing with chairman and other board members to plan and implement short- and long-term strategies for the foundation and assess those strategies to ensure they are in support of the foundation's mission statement. Develop and manage the foundation's operating budget. Provide leadership for the foundation and oversee the foundation's operations to ensure goals are met in support of the foundation's business plan.

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--- 2. Name - Job Title ---
Holly White - Director of Development and Major Gifts
--- 2. Duties ---
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Responsible for the vision, development and implementation of all fundraising initiatives, including developing and managing marketing/solicitation plans and collateral, online marketing solicitations and stewardship and donor recognition, grant writing and corporate partnerships, developing and managing volunteer structures and integrating the Grayson brand into external events and programs whenever possible

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--- 3. Name - Job Title ---
Resia Ayres - Operations Manager
--- 3. Duties ---
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Execute all activities related to the production of foundation promotional items, including website maintenance, brochures, annual reports, newsletters, stewardship mailings, email and social campaigns, signage, and other promotional and educational materials. Also, maintain database donor information and all foundation bookkeeping activities.

--- 4. Name - Job Title ---

Shannon Kelley - Development Manager and Events

--- 4. Duties ---

Execute all activities related to the production of foundation events, including venue selection, ticket sales and distribution, promotion, sponsorship solicitations, accounting, and event-day management

--- 5. Name - Job Title ---

Dr. Johnny Mac Smith - Veterinary Research Consultant

--- 5. Duties ---

Execute all activities of the Research Advisory Committee, including determining composite reviewer, designing primary review teams, determining conflicts, enforcing reviewer deadlines, identifying ad-hoc reviewers, and recruiting and orienting new members. Assist RAC chairman in presentation of recommended research projects to the board. Upon approval of funding, collect all final paperwork including the IACUC permit, track each of the grants including the collection of first-year reports, manuscripts, abstracts, and all published peer reviewed journals featuring Grayson-funded research.