

--- Today's Date ---

06/29/2023

--- Name of 501(c)(3) Organization ---

Grayson Jockey Club Research Foundation

--- Federal Tax-Exempt ID# ---

61-6031750

--- Year Established ---

1940

--- Amount Requested ---

25,000

--- Name of Executive Director ---

Holly White

--- Mailing Address ---

821 Corporate Drive
Lexington, KY
40503

--- Email address ---

hwhite@jockeyclub.com

--- Work Phone # ---

+15857399676

--- Organization's website ---

<https://www.grayson-jockeyclub.org/default.asp>

--- Upload Organization's most recent filed IRS Financial Statements (#990) ---

<https://www.terfusa.org/wp-content/uploads/wpforms/809-8fba8c278fa5e5fb5fb2cbe55842a214/Grayson-2021-990-PDC-5fefa85eae35380379005f1c746e5638.pdf>

--- 1. Brief mission statement and describe the distinguishing features of your organization that supports the mission of TERF and the relevance to this proposal. ---

Grayson-Jockey Club Research Foundation is a leading, non-profit charitable organization that exists to help all horses by funding excellent and significant veterinary research at universities throughout North America and beyond and are committed to the advancement of horses of all breeds. Our mission is aligned closely with TERF as we support the thoroughbred's health and welfare through excellent equine research leading to protocols and treatments to improve the safety of racing and the welfare of our athletes.

--- 2. Briefly outline 3-5 goals for the requested funds and how these goals support your mission. ---

Goal A Education through Veterinary Medicine: This study will determine if viable neotissue implants generated from stem cells will augment current therapies to treat debilitating tendon injuries in equine athletes.

Goal B Importance to the Equine Industry: Tendon and ligament injuries are a leading cause of lost training days and early retirement among equine athletes.

Goal C Proper Care of Horses: The ultimate goal of this work is to create a reproducible mechanism to generate tendon tissue implants that can be clinically applied to facilitate healing and restore normal limb function in equine athletes and companions.

--- 3. Provide a detailed description of the proposed project, how it is related to the mission of TERF and how it will impact the health and welfare of the horse. (Note: research applications should be understandable to a non-scientific audience and include sufficient detail and rigor for the scientific reviewers.) ---

STEM CELL NEOTISSUE IMPLANTS FOR EQUINE TENDON HEALING Mandi J. Lopez, Louisiana State University –Two Year Grant This study will determine if viable neotissue implants generated from stem cells will augment current therapies to treat debilitating tendon injuries in equine athletes and companions.

Tendon and ligament injuries are a leading cause of lost training days and early retirement among equine athletes. In adults, local cells rarely go to the injury to assist with healing. This explains, in part, the slow and incomplete healing that frequently occurs. Recent research shows that implanted stem cells direct tendon tissue stem cells to go to the injury and produce healthy tissue instead of scar tissue. Currently, there are limited ways to apply stem cells to tendon and ligament injuries or to keep them at the injury site during the healing process. We propose to overcome some of the hurdles to cell therapies for tendon injuries by turning stem cells into tendon cells that produce normal tendon tissue around them. Specifically, we developed a unique system that stimulates stem cells to become tendon cells and produce tissue after 21 days in highly customized fluid flowing through chambers that contain the cells on collagen templates. The proposed studies will confirm generation of tendon cells in new tissue that can be stored and shipped frozen so that it can be used promptly whenever and wherever necessary. The ability of the tissue to promote tendon healing will also be confirmed in equine tendon injuries. The ultimate goal of this work is to create a reproducible mechanism to generate tendon tissue implants that can be clinically applied to facilitate healing and restore normal limb function in equine athletes and companions.

The results of this proposal will establish a way to create healthy tendon cells and tissue from stem cells and prove that the cells remain in a tendon injury to accelerate healing. Tendon and ligament injuries account for a large majority of musculoskeletal injuries that are responsible for up to 72% of lost training

days and 14% of retirements by equine athletes. Among injuries, superficial digital flexor tendon and suspensory ligament injuries are the most common, comprising up to 46% of all limb injuries. Tendons and ligaments have poor healing capacity, and poor or abnormal tissue repair contributes to a reinjury rate as high as 67% within 2 years. Direct injection of stem cells into tendon injuries to augment natural healing has mixed results, and the cells may not always stay at the site of tissue damage. We propose to overcome the current limitations of stem cell tendon therapies in adult horses with tendon tissue produced by adipose tissue stem cells grown in conditions designed to create tendon cells. Confirmation that the implanted cells remain at the treatment site and do not change may help overcome some of the current regulatory restrictions on stem cell use. Additionally, confirmation that the new tissue is not damaged by freezing will make it possible for the treatment to be available to all horses. Overall, the work in this proposal will significantly advance regenerative therapies for tendon injury in a host of equine companions and athletes plagued by an all-too-common musculoskeletal problem.

--- 4. Provide a timeline detailing the expected progress of the project and specific milestones. ---

All research projects at Grayson require that each year in year one and two we receive progress reports from each researcher to be sure there are no delays in the project milestones. And that a manuscript will be produced in year three and then follow with an abstract in year four. We would be happy to supply a project specific timeline for investigation if requested at a later date.

--- 5. Provide a detailed budget for the projected use of the funds. (Note: no funds will be provided for administrative overhead or capital spending; TERF reserves the right to modify funding based on Foundation requirements). Attach budget to submitted proposal as needed. ---

Budget Category	1st Year	2nd Year	Totals
*Personnel (Salary & Fringe Benefits)	\$0	\$25,000	\$25,000
Consultant Costs	\$0	\$0	\$0
Supplies	\$14,479	\$4,225	\$18,704
**Domestic Travel	\$0	\$1,000	\$1,000
**Foreign Travel	\$0	\$0	\$0
Other Expenses	\$41,173	\$6,296	\$47,469
10% of Allowable Overhead Based On This Sub Total	\$55,652	\$11,521	\$67,173
10% Indirect cost	10%	10%	
Total for Entire Proposed Period	\$61,217	\$37,673	\$98,890

--- 6. Provide a list of all other sources of funding and the amount(s) received. ---

At this time the balance of the projects funding will be supported by the corpus of the Grayson endowment.

--- 7. Briefly summarize your charity's past public education and research efforts. ---

Our 2022 Brand Awareness guide does a great job at outlining our past public education and research efforts and can be found at this link: <https://www.grayson-jockeyclub.org/resources/22media.pdf>

--- 8. If you received funding from TERF previously, describe how these funds were used and outcomes achieved. Include any relevant publicity your charity received relating to the funding. (i.e.: media coverage, such as news articles, scientific publications, provide links to copies, as appropriate). ---

In 2022, TERF sponsored a grant conducted by Dr. Susan Stover - Motion of the proximal sesamoid bones on uneven footing.

In her recent correspondence with us she explained that aim 1 and aim 2 of the project have been completed. Aim 3 is in the data collection and analysis phase and should be done and submitted to the Journal of Biomechanics very soon. Dr. Stover also said that Dr. Schaefer will present the findings at the 2023 AAEP Convention this winter.

--- 9. List other organizations or major contributors that have provided funding to your organization in the last calendar/fiscal year. For research grant applications, provide a list of all current funding relating to your current proposal. ---

Churchill Downs

Great American Insurance

John William Pope Foundation

Keeneland Foundation

New York Thoroughbred Horsemen's Association Oak Tree Racing Association Thoroughbred Education Research Foundation United States Eventing Association The Viola Foundation WinStar Farm Joseph Allen, Allen Foundation Ashford/Coolmore Mrs. Barbara Banke Ramona & Lee Bass The Perry R. Bass II Foundation Peter Brant The Brunetti Foundation Alexander G. Campbell Jr.

Connolly Family Foundation

Isabelle H. de Tomaso

Mrs. Lucy Y. Hamilton

Dell Hancock

Mr. & Mrs. Seth W. Hancock

Ian Highet

Gretchen Jackson

The Tucker Foundation

The Kingsbury Foundation

Klein Family Foundation Inc

Beau & Gail Lane

The Lewis Family Charitable Fund

Mrs. Jacqueline B. Mars

Robert E. Meyerhoff

Miller Charitable Lead Annuity Trust

Raymond & Elizabeth Montgomery

Ocala Breeders' Sales Co., Inc.

Mr. & Mrs. John M.B. O'Connor

Mr. & Mrs. Paul F. Oreffice

Mrs. Audrey W. Otto

Mr. & Mrs. John C. Oxley

Dr. Hiram C. Polk Jr. & Dr. Susan Galandiuk Carl Pollard Amanda Pope Daisy Phipps Pulito Robert S. Evans, R.S. Evans Foundation, Inc.

Rood & Riddle Equine Hospital

Mr. & Mrs. Barry Schwartz

Mrs. Maury Shields

Spendthrift Farm

Summer Wind Equine

Tampa Bay Downs
Mrs. Virginia G. Valentine
Charlotte C. Weber
William M. Backer Foundation
The William T. Young Foundation Inc.

--- 10. Name a responsible person with whom TERF may communicate regarding specific questions and who will be responsible for follow-up information regarding the project. ---

Dr. Johnny Mac Smith

--- 11. Provide appropriate references to support the proposed research. ---

If funding is approved we would be happy to request a project update from the investigators to answer any questions TERF might have.

--- 12. How many Executive Staff and Board of Directors does your organization have? ---

26

--- 1. Name - Job Title ---

Jamie Haydon - President

--- 1. Duties ---

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.

--- 2. Name - Job Title ---

Holly White - Director of Development

--- 2. Duties ---

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.

--- 3. Name - Job Title ---

Dr. Johnny Mac Smith - A. Gary Lavin Veterinary Chair

--- 3. 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.

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

Resia Ayres - Operations Manager

--- 4. Duties ---

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.

--- 14. Add additional Information and Notes: ---

Complete list of Board of Directors here:

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