SPORT HORSE RESEARCH FOUNDATION

Sport Horse Virtual Research Summit 2021

Public Summary Report | February 2021

For additional information on the Sport Horse Virtual Research Summit, please contact:
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Executive Summary

The Olympic disciplines continue to progress and innovate to improve equine performance as well as enhance health and wellness. Despite this, there are multiple gaps in knowledge including the effect of FEI stabling on stress, health and performance; how to safely return to competition after injury; how to peak horses for major championships; and appropriate soft tissue injury treatments, to name a few.

The Sport Horse Research Foundation organized the Sport Horse Virtual Research Summit to engage key stakeholders from the equestrian community and identify what research questions were the most meaningful to the attendees. The summit included a group of expert riders, trainers, owners, grooms, veterinarians, farriers, and researchers. Feedback from the summit discussions will ultimately be used to draw attention to the topics that need to be examined by researchers.

Held over two evenings, the Sport Horse Virtual Research Summit featured vibrant discussion about the knowledge gaps in equestrian sports today and potential approaches to address these questions.

The Sport Horse Research Foundation would like to sincerely thank all those who participated in this summit.

Summit Purpose

The purpose of the Sport Horse Virtual Research Summit was to bring together key stakeholders in equestrian sport with the goals of:

1) Identifying current knowledge gaps in sport horse management
2) Informing future researchers objectives focused on health, athletic performance, as well as career longevity and encouraging researchers to focus their effort in these areas
3) Determining a list of research priorities that can be used to raise awareness through social media campaigns

Summit Findings

Based on input from the attendees, the following five research priorities were voted to be the most important to address. The complete list of research questions posed by the attendees can be found in Appendix 1.

Top 5 Research Priorities

1) Does competing or training on varied footings have a positive effect on career longevity, reducing generalized soreness, and injury prevention?

2) Can we measure the effect of different training programs (e.g. frequency of competing, time spent in the paddock, schedules, types of work, and so on) on performance, health and career longevity?

3) What are the evidence-based recommendations for giving elite sport horses a break from work (e.g. length, time of year, etc) depending on a horse's individual characteristics?

4) Can we establish a data collection platform that will allow for the analysis and sharing of information between riders, vets, grooms, and therapists?

5) What is the effect of FEI stabling on stress, health and performance?

Next Steps

The information from the Sport Horse Virtual Research Summit will inform the development of the following:

- The strategic research priorities supported by the Sport Horse Research Foundation
- Working groups tasked with creating specific objectives to be addressed for each research priority
- Engaging leading researchers to begin studying these questions
- A targeted fundraising campaign to obtain financial resources to enable high-impact research projects
- Publishing of the summit findings in the form of a press release and through social media to further promote the importance of sport horse research and funding

About The Sport Horse Research Foundation

The Sport Horse Research Foundation (SHRF) is a public charity with tax-exempt status under section 501(c)(3) of the Internal Revenue Code. We seek to advance, and direct scientific research and education to enhance the health, athletic potential, and career longevity of sport horses. Contributions donated to the Sport Horse Research Foundation are fully tax-deductible retroactive to the founding of the organization on July 14, 2016.

Members

Dr. Sarah Puchalski
Founding Director, Chairman of the Board, CEO

Dr. Richard Wheeler
Founding Director, Treasurer

Dr. Philippe Benoit
Director

Dr. Timothy Ober
Director

Dr. Tim Worden
Director

Megan McDermott
Director of Marketing and Development

Alexandra Strandberg
Secretary

Mission

Our mission is advance and direct scientific research and education that will enhance the health, athletic performance, and career longevity of sport horses.

Vision

The Sport Horse Research Foundation was established to facilitate the funding of much needed research that will provide breakthrough medical advancements for equine athletes.
Currently it is difficult to obtain research funding specifically for sport horses and sport horse medicine. Until now, equine athletes and the sport horse industry have been underserved by research. SHRF seeks to ***change*** this by facilitating the knowledge and advancements research has again and again proven to yield.

We seek a future where a marriage of knowledgeable equine sport horse stakeholders with professional researchers guide effective research that measurably improves the health, athletic potential, and career longevity of sport horses around the world.

Goals

Much needed research will facilitate more accurate and early diagnosis, more effective treatment, and directed rehabilitation of sport horse injury to increase career longevity and better inform industry stakeholders. In the future, we hope this will lead to a better understanding of sport horse injury risk and risk management to thereby enhance injury prevention.

SHRF has the potential to change the way everyone interacts with sport horses – from the management, training, showing, diagnoses, and treatment, to the rehabilitation of equine athletes. In a vain similar to the evolution of human medicine that has come to embrace a holistic view of how to achieve optimal health and performance, the research we fund has unlimited potential to revolutionize the sport horse industry and equine athletes.

Initially, SHRF will focus funding research specifically targeted on show jumping and dressage sport horse disciplines. In the future, we envision funding meaningful research for the benefit of each sport horse discipline.
Stakeholder Engagement

The success of SHRF necessarily entails working proactively with external stakeholder partners. The ability to best identify and address issues can only be accomplished by bringing together the expertise, knowledge and passion of many organizations and individuals. Only by working cooperatively with stakeholders can SHRF achieve the greatest possible positive impact for sport horses and the industry as a whole. Our stakeholders include:

- Professional and amateur riders
- Sport horse owners
- Sport horse trainers
- Veterinarians, farriers, therapists and other health professionals
- Research scientists and institutions

APPENDIX 1 | Complete List of Research Questions

Does riding / working on varied footings have a positive effect on career longevity, reducing generalized soreness, and injury prevention?

Is there an optimal arrangement, size and number of studs for certain surfaces?

How long do shoes need to be pulled in order to see positive benefits to the hoof and bony alignment?

What are the trimming and shoe placement protocols that optimize the relationship between flexion and extension moment arms to enhance movement efficiency?

What is the best footing to compete on?

Is it possible to study the relationship between footing characteristics and the prevalence of certain types of injuries?

How do the footing, shoes and hoof conformation impact the hoof-surface interaction?

What is the optimal design and method for fitting a saddle to match the horse's body and movements?

Can training be used to overcome difficulties posed by certain conformational weaknesses?

What is the effect of trans-costal travel and different climates on a horse's body?

Can we measure the effect of different training programs (e.g. frequency of competing, time spent in the paddock, schedules, types of work, etc) on performance, health and career longevity?

What amount of fitness is required for horses competing at different levels and how can we measure this?

How can we strengthen tendons and ligaments to help prevent injuries?

Can we produce evidence-based guidelines for recovery times after cross country, jumping and dressage competitions?

How should we assess overtraining and undertraining?

What are the pros and cons of various fitness tools and their suitability for specific situations?

Is there a way to measure the quality of a relationship between a horse and rider?

Is it possible to measure a horse's willingness to work or perform?

Can we develop guidelines to safely and efficiently rehabilitate sport horses after injury?

What are the recommendations for giving elite sport horses a break from work (e.g. length, time of year)?

The modern jumping horse is bred to be lighter, faster and more competitive, but also more fragile. How do we adapt training and vet practices to avoid injuries in this new type of horse?

How quickly should horses be brought along and developed for elite-level sport? What are the milestones sport horses need to meet at each age?

What is the long-term impact on health and performance of pushing horses too early in their lives?

Modern breeding methods include surrogates, embryo transfers, artificial insemination, etc. Are there any epigenetic effects that are affecting horses' performance?

How does age impact a horse's response to training and recovery?

What injuries are the most diagnosed based on MRI findings for each discipline?

Is there a correlation between imaging findings and the degree of pain and function in sport horses?

Can data from mobile health apps be used to prevent injury?

Can we establish a data collection platform that will allow for the analysis and sharing of information between riders, vets, grooms, and therapists?

Can we develop diagnostics that do not require anesthesia?

What is the feasibility of developing an insurance program that would reward users for maintaining better fitness levels and enhanced health?

How should the team (rider, veterinarian, trainer, farrier, groom, therapist) communicate to maximize horse health and performance?

Is diagnosis accuracy improved when veterinarians observe a horse more frequently?

Can we use data looking at diagnoses, their treatments options and their recovery times to gain more information on realistic prognoses and assist in making better-informed decisions for horses?

Are injury statistics correlated with how may shows horses go to, where they are showing, or in what division?

What are the signs and symptoms of a chronic injury that is about to turn into a major acute injury?

What are the most promising biologics and what situations should they be used in?

What are the nutritional requirements of a sport horse?

How do we decide when it is appropriate to use a new, experimental treatment that is not yet FDA approved (e.g. Tildren)?

What is the best way to disseminate research information and knowledge from experts to consumers in the equestrian community?

APPENDIX 2 | Attendees

DAY 1	DAY 2
Kenny Bark	Lindsay Archer
Daniel Bluman	Kenny Bark
Will Coleman	Philippe Benoit
Max Corcoran	Max Corcoran
Katie Dinan	Elizabeth Davidson
Sarah Gold	Sarah Gold
Danny Ingratta	Danny Ingratta
Nicole Lakin	Nicole Lakin
Beezie Madden	Beezie Madden
Richard Markell	Megan McDermott
Anne McCabe	Cristobal Navas de Solis
Megan McDermott	Tim Ober
Cristobal Navas de Solis	Tuny Page
Eric Navet	Sarah Puchalski
Tim Ober	Mark Revenaugh
Sarah Puchalski	Charles Schneider
Mark Revenaugh	Laura Stokes-Greene
Charles Schneider	Sue Stover
Richard Stevens	Alexandra Strandberg
Laura Stokes-Greene	Richard Wheeler
Sue Stover	Tim Worden
Alexandra Strandberg	
Richard Wheeler	
Cooper Williams	
Tim Worden	

APPENDIX 3 | Agenda

SPORT HORSE VIRTUAL RESEARCH SUMMIT
Presented by the Sport Horse Research Foundation

Purpose: To bring together key stakeholders (riders, trainers, owners, veterinarians, farriers, therapists, grooms, researchers) with the goals of:

1) Identifying current knowledge gaps in sport horse management
2) Informing future objectives and research priorities focused on health, athletic performance, and career longevity
3) Determining a list of research priorities that can be shared via social media and an online article to raise awareness

Dates: February 9th at 8:00 – 9:00 pm EST (5:00 – 6:00 pm PST)
February 16th at 8:00 – 9:00 pm EST (5:00 – 6:00 pm PST)

SUMMIT AGENDA

Day I

8 minutes – welcome remarks, housekeeping items, describe the flow of the summit.

33 minutes – identifying research needs *(each attendee has 3 minutes to describe what questions need to be answered through research to advance performance and / or improve health)*

15 minutes – group discussion and summarizing the list of research questions

4 minutes – closing remarks and next steps

***Between Day 1 and Day 2 we will ask attendees to choose the 10 research directions they feel are most important and to email us their selections. We will tabulate the votes and use this to form the list of 5 priorities.*

Day II

5 minutes – welcome remarks, housekeeping items, recap what happened on Day 1

5 minutes – present the top 5 priorities to the group

40 minutes – attendees will weigh in on the topics, the feasibility of studying these questions, and the potential impact on sport horses

5 minutes – recap, thank the attendees, and discuss next steps