

CANTERBURY PARK LOCATION
1100 CANTERBURY ROAD, STE. 100
SHAKOPEE, MN 55379
TELEPHONE: 952-496-7950
FAX: 952-496-7954
WWW.MRC.STATE.MN.US



RUNNING ACES LOCATION
15201 ZURICH STREET, STE. 212
COLUMBUS, MN 55025-7908
TELEPHONE: 651-925-3951
FAX: 651-925-3953
WWW.MRC.STATE.MN.US

MINNESOTA RACING COMMISSION
Full Commission Teleconference Meeting
Thursday, April 15, 2021
4:00 PM CDT
Call in number: +1 651-395-7448
Phone Conference ID: 662 311 957#

AGENDA

- 1) Call to Order
- 2) Roll Call
- 3) Adoption of Agenda
- 4) Approval of Minutes from March 18, 2021 Commission Meeting
- 5) Committee Reports
 - A. Racing Committee
- 6) Action Items
 - A. Approval of Chief State Steward
 - B. Approval of Running Aces Racing Official
 - C. Approval of Canterbury Park Requests for Modified Pools and Racing Officials
 - D. Updates to the Uniform Classification Guidelines
 - E. Approval of Split Sample Laboratories
 - F. Approval of Concussion Protocol for Canterbury Park and Running Aces
 - G. Approval of Research Grant Proposals
 - H. Approval of License Fee Adjustments for 2020 Simulcast Dates
- 7) Thoroughbred and Quarter Horse Breeders' Fund Update
- 8) Status Reports
 - A. Running Aces Casino and Racetrack
 - B. Canterbury Park Entertainment
- 9) Chief Veterinarian's Report
- 10) Deputy Director's Report
 - A. ADW Report
- 11) Executive Director's Report
 - A. COVID-19 Update
 - B. Contract Approvals
 - C. Personnel Update
 - D. Licensing Report
 - E. Rules Update
 - F. State and Federal Legislative Update
 - G. Other
- 12) Other Matters
- 13) MNHBPA/MQHRA/MTA/MHRI Updates
- 14) Announce Future Meetings
 - A. Full Commission – May 17, 2021, 4:00 p.m.
- 15) Adjourn

Please notify the Racing Commission if you need special accommodations for this meeting, i.e., sign language interpreter amplification device, large print materials, Braille materials, audio cassette materials, readers, or other special accommodations. The Racing Commission can be reached at 952-496-7950; 800-627-3529 (TTY/Voice Relay Service)

AGENDA ITEM

4

**Minnesota Racing Commission Meeting
Thursday March 18, 2021, 4:00 p.m. CDT
Microsoft Teams Teleconference**

MINUTES

Call to Order: Chair Lane called the meeting to order at 4:05 p.m. CDT. The meeting was conducted by teleconference.

Welcome Commissioner Raymond Dehn: Chairman Lane welcomed Commissioner Raymond Dehn to the Commission.

Roll Call: Present – Commissioners Colombo, Dehn, Erhart, Idelkope, Goodman, Johnson, Lane, and McArdle. A quorum was present.

Adoption of Agenda: Commissioner Colombo made a motion to adopt the agenda as presented. Second by Commissioner Johnson. Motion carried.

Approval of Minutes: Commissioner Erhart made a motion to approve the minutes of the February 18, 2021 Commission meeting. Second by Commissioner Johnson. Motion Carried.

Administration Committee Report: Commissioner Idelkope stated that an Administration Committee meeting was held on March 4, 2021 to consider a set of legislative proposals. Steve May gave an update on these proposals.

Finance Committee Report: Steve May reported on the Finance Committee meeting that was held on March 15, 2021. He summarized items that were discussed including: simulcast dates fees reimbursement for Canterbury Park and Running Aces Casino, Hotel, and Racetrack (“Running Aces”), Fiscal Year 2021 budget review and spending plan, and requests from Running Aces to amend 1) its Plan of Operations related to its Player Pool minimum and maximum balance, and 2) its Plan of Operations relating to the maximum number of player stations for the dealer-assisted card tables. He said the Committee asked for Commission staff to conduct a detailed review of the request for an increased number of these player stations and bring findings back to the Finance Committee.

Racing Committee Report: Commissioner McArdle said the Racing Committee met immediately prior to this Commission meeting to review recommendations for remaining judges, stewards and veterinarians.

Action Items:

With Racing Committee recommendation, Commissioner McArdle made a motion to appoint Michael Hall as an additional associate judge for the 2021 Board of Judges at Running Aces Casino, Hotel and Racetrack. Second by Commissioner Colombo. Motion carried unanimously by roll call vote.

With Racing Committee recommendation, Commissioner McArdle made a motion to appoint Gregory Hosch as a third steward and Heriberto (Eddie) Arroyo and Randy Blaseg as “fill-in” stewards for the 2021 Board of Racing Stewards at Canterbury Park. Second by Commissioner Johnson. Motion carried unanimously by roll call vote.

With Racing Committee recommendation, Commissioner McArdle made a motion to appoint Melissa Adelman-Lusignan, DVM and Tyne Hovda, DVM as additional contract veterinarians for 2021. Second by Commissioner Johnson. Motion carried unanimously by roll call vote.

Deputy Director Robert Schiewe, with staff recommendation, requested the distribution of Standardbred Breeders’ Fund purse supplements and Minnesota bred bonuses in 2021 of amounts up to \$375,000.

Commissioner Colombo made a motion to approve the request. Second by Commissioner Erhart. Motion carried unanimously by roll call vote.

Steve Carpenito, Director of Racing at Running Aces Casino, Hotel and Racetrack presented Running Aces' 2021 live racing requests. Commissioner Johnson made a motion to approve Running Aces' application for pari-mutuel pools, export locations, and seasonal racing officials as presented. Second by Commissioner Erhart. Motion carried unanimously by roll call vote.

Andrew Offerman, Vice President of Racing Operations at Canterbury Park presented their live racing requests. Commissioner McArdle made a motion to approve their request for pari-mutuel pools, seasonal racing officials and export locations as presented. Second by Commissioner Colombo. Motion carried unanimously by roll call vote.

Chief Veterinarian's Report:

Chief Commission Veterinarian Lynn Hovda, said there will be a live Facebook video presentation by Krishona Martinson and Brian S. Burks DVM, Dipl. ABVP on March 26 on equine herpesvirus (EHV). Dr. Hovda requested that the video be added to the Commission's website. Dr. Hovda also reported that the University of Minnesota College of Veterinary Medicine will be submitting research grant requests to the Commission soon.

Problem Gambling Awareness Month Presentation:

Susan Sheridan Tucker of Northstar Problem Gambling Alliance gave a presentation to the Commission to highlight the important work that the non-profit does to combat problem gambling. She noted that the organization has been operating since 2001 and works to improve the lives of those impacted by problem gambling through advocacy, education, training and research.

Status Reports:

Canterbury Park – Andrew Offerman, Canterbury Park Vice President of Racing Operations, said he has been encouraged to see business returning to pre-Covid-19 simulcast and card room operations. Offerman also explained he is still working with the state to understand current restrictions on capacity limits for live racing and that a preparedness plan will be available when they receive more guidance. He also noted the challenges in promotion and the marketing tactics that were recently deployed to help bring more participants to Minnesota, including a new incentive plan. He also noted that he expects stall application numbers to be strong. Mr. Offerman said Canterbury Park is working with Inspired Athletx to develop a concussion protocol and will submit it to the Commission by the end of March. He also noted that the new Track Superintendent, Ramiro Flores will be on site and the training track will be open on May 1, 2021.

Running Aces Casino, Hotel and Racetrack –Steve Carpenito said Running Aces' stall applications have exceeded capacity and they were looking into recommendations to how the stalls should be allocated. He noted that the backside will open on May 2, 2021. Mr. Carpenito stated he will be on site of Running Aces on April 29, 2021. He updated the Commission on projected improvements to security on the backside, including additional training for security officers and security cameras, based on recommendations from Presiding Judge Robert Corey.

Deputy Director's Report: Mr. Schiewe reported that ADW handle in February was \$4,945,000. He said that it was slightly lower than January handle, but was a 40% increase over ADW handle from February 2020. Mr. Schiewe also noted that the ADW regulatory fee account earned \$98,900. He reported that Driver and Assistant Trainer Steve Wisemen had recently passed away and gave his condolences.

Executive Director's Report: Steve May gave a COVID-19 update to the Commission. He said that he has been engaging with the Minnesota Fusion Center and the county health departments in Anoka and Scott counties to exchange information related to the control of COVID-19. Mr. May noted that both racetracks have continued to do a tremendous job of protecting the public with the measures they are taking. He stated that new executive orders have been released from the governor's office that pertain to indoor and outdoor capacities and that these restrictions will continue to change. Mr. May reported on

personnel and said there has been an interest in the early retirement program offered by the state and that adequate staffing needs will still be met. He said that interviews continue to be held for the Contract Procurement and Rulemaking Assistant position at Running Aces and that he hopes to have that filled soon. Mr. May gave a licensing update to the Commission and said that all association employees were licensed before the deadline of March 1, 2021. He said that meetings continue to be held with the racetracks to prepare for racing licensing. Mr. May gave a rules update and said the process is moving along very well. He updated the Commission on state and federal legislative updates. He said that staff continues to monitor proposed sports wagering bills introduced at the state level. He reported that on the federal level, the Nominating Committee of the Horseracing Integrity and Safety Agency ("HISA") is in the final stages of naming the board members.

Other Matters:

Chair Lane said that the MRC 2019-2020 Biennial Report to the governor and members of the state legislature had been published and is available for distribution. He thanked MRC staff, particularly Rebecca Roush, for their good work in compiling and producing the report.

Commissioner Goodman asked about summer meeting dates, and Mr. May said that Mondays at 4:00 pm CDT throughout the live racing season appear to work best for the majority of Commission members.

Industry Updates:

- a. Minnesota Harness Racing, Inc. ("MHRI"). Patty Strand said that MHRI is working with Running Aces to finalize the race schedule and condition book and expects this will be distributed by the end of April. She also gave her condolences for the late Steve Wisemen. She said he was a big supporter of the racing program and that he was a great asset to the racing family at Running Aces.
- b. Minnesota Horsemen's Benevolent and Protective Association ("HBPA"). Mike Cronin spoke about the benevolent program coming back that will include a tutoring program and a mental health program on the backside of Canterbury Park. He also said the HBPA will donate about \$75 per winner's share of race at Canterbury Park to the Permanently Disabled Jockey Fund in 2021.
- c. Minnesota Quarter Horse Racing Association. No representatives were present.
- d. Minnesota Thoroughbred Association ("MTA"). Kay King said the MTA is taking nominations for their Stallion Auction Stakes race that will take place on June 23 and the 2021 Yearling Sale will take place on August 28 and 29 with previews available on August 28. She said that each MTA member will donate \$10 at the end of the 2021 meet to the distaff program at This Old Horse.

Future Meetings: The next Commission meeting will be via teleconference at 4:00 p.m. Thursday, April 15, 2021.

Adjournment. Chairman Lane adjourned the meeting at 5:45 p.m. CDT.

ADOPTED this ____ day of _____, 2021, BY A QUORUM OF THE MINNESOTA RACING COMMISSION.

AGENDA ITEM

6A

MEMORANDUM

To: Minnesota Racing Commission Racing Committee Members

From: Steve May, Executive Director

Date: April 7, 2021

RE: Recommendation for Chief State Steward for 2021 Live Racing Season

At the February 18, 2021 Minnesota Racing Commission ("Commission") meeting the Commission approved a staff request to name David Smith Chief State Steward for the 2021 live racing season. Subsequent to that meeting, Mr. Smith informed Commission staff that he would not be able to fulfill those duties for the 2021 live racing season.

At this time the Commission has approved the following officials for the 2021 live racing season:

- Eddie Arroyo
- Randy Bleseg
- Gregory Hosch
- Stan Bowker

Mr. Arroyo has indicated that he does not wish to officiate races on a full-time basis, although Mr. Bleseg has indicated that he is willing to work on a full-time basis throughout the live racing season.

After careful consideration, taking into account number the number of years of experience as a racing official, experience as a jockey and a trainer, and experience working in the racing office, Commission staff recommends naming Randy Bleseg the Chief State Steward for the 2021 live racing season at Canterbury Park.

AGENDA ITEM

6B

March 22, 2021

Steve May, Executive Director
Minnesota Racing Commission
15201 Zurich St., Suite 212
Columbus, MN 55025

Subject: MRC Rules 7877.0110 subp. 4
Running Aces 2021 Racing Official Submission

Dear Steve:

North Metro Harness Initiative, LLC d/b/a Running Aces Casino, Hotel and Racetrack, respectfully submits for your review and approval employees with responsibilities related to the 2021 Live Racing season.

These Running Aces employees are:

- Kyle Winkler – Mutuel Manager

We appreciate your consideration of Running Aces Racing Officials for the 2021 Live Racing Season.
Please contact me with any related questions, concerns or comments at 651-925-4532.

Sincerely,



Taro Ito, President & CEO



KW

KIEL WINKLER

KWINKLER1976@YAHOO.COM | (651) 261-6249

OBJECTIVE

Submitting for racing official paperwork.

SKILLS

Experienced in customer service. Skilled with time management. Well versed with variable experiences within the casino industry.

EXPERIENCE

ASSISTANT MUTUEL MANAGER • RUNNING ACES HARNESS TRACK • APRIL 2009 – PRESENT

Running day to day operations. Assisting customers with wagering. Responsible for completion of daily paperwork including W2G's and W-9s. Responsible for hiring and scheduling seasonal and permanent staff. Managing variable number of tellers both off season and during live racing season. Maintaining betting machines and tote/AV equipment.

RACE AND SPORTSBOOK SUPERVISOR • PRIMM VALLEY RESORTS • JANUARY 2002 – JANUARY 2009

Assisting with day to day operations. Set up betting lines. Helped customers with questions. Assisting tellers.

EDUCATION

HIGH SCHOOL DIPLOMA • 1994 • PARK HIGH SCHOOL

AGENDA ITEM

6C



April 6, 2021

Steve May
Executive Director
Minnesota Racing Commission
1100 Canterbury Road
Shakopee, MN 55379

Dear Mr. May,

Pursuant to MRC Rules 7873.0100 and 7877.0110 Subp. 4 Racing Officials, Canterbury Park Entertainment, LLC respectfully requests that the following items be placed on the agenda for consideration at the April 15, 2021 meeting of the Minnesota Racing Commission.

1) Modification of Application for Pari-Mutuel Pools

- a) Exhibit A is a revised calculation method for the previously approved Pick 6 Pool.

2) Approval of Racing Officials for 2021 Live Racing Season

- a) Exhibit B is a supplemental list of additional Canterbury Park's 2021 Racing Officials.

Thank you for your consideration on these issues. Please let us know should you need additional information.

Respectfully submitted,

Andrew Offerman
Vice President of Racing Operations
Canterbury Park Entertainment, LLC

Exhibit A

A. \$1 Minimum	Pick N – 6 Races (Pick Six) will be offered on select races throughout the entire card (typically the final 6 thoroughbred races). Calculation of the pool shall follow 7873.0196 Method 1 with 75% being the carryover percentage in the event no tickets correctly identify all six winners. Carryovers will be made from day-to-day as opposed to the next subsequent pool.
B. Takeout Rates	Canterbury Park will use the following takeout rates in 2021: Win, Place & Show – 17% Pick 5 & Pick 6 – 10% All Other Exotic Wagers – 23%

Exhibit B

Pursuant to MRC Rule 7877.0110 Subp. 4 Racing Officials, Canterbury Park requests the approval of the following supplemental officials for its 2021 Live Racing Season:

Claims Clerk	Lexie Morrison ^{1**}
Horseperson's Bookkeeper	Lexie Morrison ^{1**}
Outriders	Vicki Warhol ^{1**}

¹ Indicates the individual that would serve as the primary official in this capacity (in the case of multiple officials being listed for one job). Any variations would be discussed with the stewards in advance of the racing day for which the substitution would be made.

* Indicates an official that returns to Canterbury Park in 2021.

** Indicates an official new to Canterbury Park in 2021. A resume follows on the following page.

Note, there are additional positions still open that will be brought to the MRC for approval in April 2021.

Should you require more information about any of these individuals, please let us know.

ALEXIS MORRISON

Contact

612.716.4107

lexiemorrison1@gmail.com

Relatable Skills

- Knowledge of Microsoft and Adobe Programs: Word, Excel, PowerPoint, Audition, Illustrator, Indesign, Photoshop & Constant Contact
- Strong communication and organizational skills
- Innovative problem solver
- Solid customer service skills
- Excellent writing and editing ability

Academic Qualifications

BACHELOR OF LIBERAL ARTS

Winona State University, Minnesota

Mass Communications - Public Relations

BACHELOR OF SCIENCE - MINOR

Winona State University, Minnesota

Business Administration

Awards & Scholarships

2015 Recipient, College of Business
Scholarship-Winona State University

2013 Recipient, National Residence Hall
Honorary Recognition-Winona State University

2013 Recipient, Student Council Service Award
Scholarship-Prior Lake High School

2013 Recipient, Norex Inc.- Dollars for Scholars
Scholarship-Norex Inc.

Leadership

- + **COLLEGE OF BUSINESS - DEANS ADVISORY BOARD - SECRETARY-** APRIL 2016 - MAY 2017
- + **PUBLIC RELATIONS STUDENT SOCIETY OF AMERICA**
AUGUST 2015 - MAY 2017
- + **AMERICAN MARKETING ASSOCIATION**
January 2015 - May 2017
Vice President of Advertising: April 2016 - May 2017

Experience

- + *Gryskiewicz Twin Cities Cosmetic Surgery*
Burnsville, MN - October 2018 - Present

SURGERY SCHEDULER & PATIENT COORDINATOR

November 2020 - Present

- Schedules surgery for patients and Coordinates all necessary steps
- Runs transactions for surgical, clinic and SPA procedures
- Maintains Doctor's schedules
- Edits, Formats, and Manages New Doctor's Board Cases
- Creates and Edits instructions for patients following surgery
- & Maintains all duties of a Patient Coordinator

PATIENT COORDINATOR

May 2020 - November 2020

- Conveys and Oversees all communications with current patients via Constant Contact
- Answers phones and Schedules patients appointments
- Creates and Manages all social media accounts
- Creates and Manages all marketing material
- Spearheads all IT solutions with IT department
- Assists with website edits
- Develops and Maintains training materials for in office new hires
- Manages all of COVID screening protocols for incoming patients

SOCIAL MEDIA COORDINATOR-REMOTE

October 2018 - May 2020

- Managed Facebook account - 24% follower increase
- Managed Instagram account - 45% follower increase
- Updated and Created all printed marketing material

+ SOCIAL MEDIA CONTENT CREATOR- REMOTE

Barb Kuester, Edina Realty

Prior Lake, MN - August 2019 - June 2020

- Create and Manage all social media accounts

+ DIRECTOR OF ENGAGEMENT

Minnesota Racehorse Engagement Project

Shakopee, MN - June 2019 - March 2020

- Create and Manage all social media, marketing and events

+ CONTRACT SOCIAL MEDIA CREATOR-REMOTE- ENVIDA, SCOTTSDALE, AZ- OCTOBER 2018 - MARCH 2019

+ COMMUNICATIONS SPECIALIST & LICENSING LEAD- MINNESOTA RACING COMMISSION, SHAKOPEE, MN- MAY 2016 - OCTOBER 2018

+ INTERN- WINONA CHAMBER OF COMMERCE, WINONA, MN- OCTOBER 2016 - MAY 2017

March 11, 2021

Vicki Warhol

17825 N 7th St., Lot 9
Phoenix, AZ 85022

To: Management at Canterbury Park

Dear Sirs and/or Madams

I would like to apply for the Outrider position at Canterbury Park for the upcoming meet.
I thoroughly enjoy outriding and have done so for quite some time.
I am hoping you'll consider me to the position that I love in the industry I love!

I have been an outrider at Turf Paradise, both on the Main Track and Training Track. I have also been an Outrider at Arapahoe Park (four years), as well as Prairie Meadows and Canterbury Park.

I have been a Horsewoman for 40 years and come from a strong racing family. I am a retired Jockey and am married to another retired jockey, and racing is in my blood! After retiring from the Jockey's Room, I also ponied horses. I did both jobs (pony girl and Jockey) at multiple tracks, including Turf Paradise, Minnesota, Iowa, Nebraska, Florida California, New York and Alabama.

I am well stocked with Outriding horses, considerably well mounted. I have always kept my ADOG license current and remain in good standing with the State, including the stewards. I know most all of the Horsemen, including jockeys and Pony staff. I am well versed in the rules and regulations of the State and the Racetrack. I am available for all shifts that are asked of me.

I also have recently completed a CPR class and received my certification.

I look forward to hearing from you, am excited at the opportunity to start my working relationship with Canterbury Park! I hope for an interview, if necessary, to discuss the position.

I may be reached at (602) 483-7155

Sincerely,

Vicki Warhol

References:

Leanda (Bucky) Huff, Horsemen's Bookkeeper/Paymaster, Turf Paradise 602-803-8515

Kevin Eikleberry, Trainer, Ctby, TUP, New Mexico, Iowa 480-540-5030

Mandy Hagan, Outrider, Pony Girl, Trainer, various tracks 915-345-9994

AGENDA ITEM

6D

Substance	Classification/Penalty	Comments
Alpha-pyrrolidinovalerophenone (also known as Alpha-PVP)	1/A	Potent stimulant that is a derivative of the synthetic cathinone 3,4 methylenedioxypyrovalerone (MDVP)-a DEA Schedule 1 substance. Alpha-PVP is also the psychoactive agent in Khat. Exerts its effect by inhibiting norepinephrine-dopamine reuptake. Also sold as Bath Salts. Confirmed finding AORC-2019. 1/A is consistent with 3,4 methylenedioxypyrovalerone.
Aripiprazole	2/A	FDA approved for human use as Abilify. Atypical antipsychotic; used to treat schizophrenia, bipolar I disorder, and major depressive disorder. It is also used to treat Tourette syndrome and irritability caused by autistic disorder. Confirmed finding AORC-2019. 2/A is inconsistent with other anti-psychotics, e.g. clozapine, risperidone.
Arsenic	3/B with ability to mitigate to 3/C if there is credible evidence for environmental exposure (e.g. through cribbing or wood chewing behavior).	No FDA-approved products. Arsenic is a component of CaCo Copper a compounded product having historical use in horses as an appetite stimulant and in the treatment of anemia. Arsenic-containing veterinary products are commercially available in other countries (e.g. Jurocyl® [Ceva] at 50 mg/ml sodium arsinilate). Arsenic is present in pressure-treated lumber designated for non-residential use. Cribbing or wood chewing may result in exposure sufficient to result in concentrations in excess of the screening limit. Findings for arsenic warrant investigation into the route of exposure with mitigation to 3/C recommended when there is compelling evidence for environmental exposure rather than deliberate administration.
Diisopropylamine	2/B	There is an Australian product with approval for veterinary use: DADA 250 (Ceva, Australia: https://www.ceva.com.au/Products/Products-list/DADA-250-Injection). The CEVA website states that it is a “detoxifier and vasodilator to increase blood flow to brain and peripheral tissues.” Confirmed finding AORC-2019. As Hugin, it is a human pharmaceutical with indications for the treatment of conditions angina pectoris, myocardial infarction, peripheral vascular disease, cerebrovascular disease and cerebral thrombosis and cerebral embolism, retinopathies, and hypertension. Confirmed finding AORC-2019. 2/B is consistent with nitroglycerin.
Etofenamate	4/B	. No FDA approved products. NSAID. In a human study, when administered IM was determined to be similarly effective to HA. (Savas, G., et al., Effectiveness of etofenamate for treatment of knee osteoarthritis: a randomized controlled trial, Ther Clin Risk Manag. 2016; 12: 1693–1699). Confirmed finding AORC-2019. 4/B is consistent with other NSAIDs lacking FDA approval.
Flufenamic Acid	4/B	NSAID lacking FDA-approval. NSAIDs are assigned Class 4. Those with FDA-approval for use in the horse or other species are assigned Penalty Class C. Those lacking FDA-approval are assigned Penalty Class B.
Harpagoside	4/B	No FDA-approved product. Glycoside isolated from Devil’s Claw plant, but also synthesized as a pure compound. Used as therapy for treatment of pain and osteoarthritis in human patients. Has historic use in horses but lacks scientific support for efficacy. Marketed in multiple OTC joint supplement products, with ingredient labelled as Devil’s Claw. Huang, T., et al., Harpagoside suppresses lipopolysaccharide-induced iNOS and COX-2 expression through inhibition of NF-kappa B activation, J Ethnopharmacol, 2006 Mar 8; 104(1-2): 149-55. Axmann, S., et al., Pharmacokinetics of harpagoside in horses after intragastric administration of a Devil’s claw (Harpagophytum procumbens) extract, J Vet Pharmacol Therap., 42(1). https://doi.org/10.1111/jvp.12716 . 4/B is consistent with NSAIDs lacking FDA approval.
Hypoxia-inducible factor (HIF) activators	1/A	Blood doping agents. Should be classified consistent with Erythropoietin, Darbepoetin, etc.
Hypoxia-inducible factor (HIF) stabilizers (e.g. IOX-2)	1/A	No products with FDA-approval. Blood doping agents. No indication for use in the horse. 1/A is consistent with other blood doping agents.
Molidustat	1/A	No FDA-approved products. No indication for use in the horse. HIF stabilizer; blood doping agent. 1/A is consistent with Roxadustat, another HIF-stabilizer.

Norethisterone (norethindrone)	4/B all genders	No FDA approved products. Oral progestin used in birth control pills, menopausal hormone treatments, and gynecological disorders. No indications for use in the horse. Confirmed finding AORC-2019. FDA-approved progestogen Altrenogest (Regumate) is assigned 4/C when detected in horses other than intact females. However, there is no indication for use of this non-FDA approved product in horses of any gender, thus the recommendation of 4/B
Oliceridine	1/A	Opioid agonist with FDA-approval for intravenous use in treating moderate to severe pain in human patients. It is a DEA Schedule II substance. 1/A is consistent with oxycodone and other DEA Schedule II opioids.
Oripavine	2/A	DEA Schedule II substance; no FDA-approved products. Opioid and major metabolite of thebaine (2/A), also a DEA Schedule II substance. Toxicity can result in seizures and death. Confirmed finding AORC-2019.
Parecoxib	4/B	No FDA-approved products. NSAID, selective COX-2 inhibitor. Prodrug for valdecoxib. There were valdecoxib-containing human products with FDA-approval, but the product was withdrawn due to risk of heart attack and stroke. Confirmed finding AORC-2019. 4/B is consistent with other NSAIDs lacking FDA approval.
Pregabalin	3/B	A gabapentanoid with FDA approval for human use (Lyrica™) in the treatment of neuropathic pain and fibromyalgia, nerve damage due to diabetes or Shingles, anxiety, as well as some types of seizures. Confirmed finding AORC-2019. 3/B is consistent with gabapentin.
Tapentadol	1/A	DEA Schedule II substance. FDA-approved human product (Nucynta™). Centrally acting opioid analgesic, μ -opioid receptor agonist and norepinephrine reuptake inhibitor. Similar to tramadol (2/B) in action. Analgesic efficacy in humans comparable to oxycodone (1/A). While there are indications for tramadol in equine veterinary medicine there is no literature supporting the use of tapentadol in the horse. Confirmed finding AORC-2019. 1/A to be consistent with oxycodone, in consideration of DEA Scheduling, and lack of indication for use in the horse.
Trometamol (Also known as tris-hydroxymethyl aminomethane [THAM])	3/B	Alkalinizing agent used as an alternative to sodium bicarbonate in the treatment of metabolic acidosis in human patients. 3/B is consistent with TCO2 violation--evidence of administration of an alkalinizing agent.
Valdecoxib	4/B	Correct to Class 4 to be consistent with all NSAIDs. While an FDA-approved product did exist, the penalty classification for this drug was augmented due to the health risks associated with its use and the availability of far safer NSAID alternatives.

ARCI Version Date Drug/Substance Notes 14.2

September 2020 Medroxyprogesterone Replaced methoxyprogesterone as probable typo 14.2

September 2020 Medroxyprogesterone Added as Drug Class 3, Penalty Class B. 14.2

September 2020 Methoxyprogesterone Removed as drug does not exist 14.2

September 2020 Methoxyprogesterone Removed

Medroxyprogesterone Acetate

Medroxyprogesterone (MPA) administration to horses has been associated with adverse events including anaphylactic reactions and sudden death. The United States Equestrian Federation established MPA as a prohibited substance as of December 1, 2019

(<https://www.usef.org/media/press-releases/usef-board-of-directors-prohibits-use-of>).

In 2019, the American Association of Equine Practitioners issued the following statement in regarding the use of MPA in competition horses:

Medroxyprogesterone acetate (MPA) is a synthetic progestin hormone administered to mares off-label in an attempt to suppress behavioral estrus. However, a controlled research study found that MPA was not effective at suppression of behavioral estrus. (1) Many veterinarians believe MPA modifies behavior by producing a calming effect in the horse and does not have a therapeutic benefit that goes beyond this behavior modification. Therefore, the AAEP recommends that MPA should not be administered to horses in competition.

1. Gee EK, C DeLuca, JL Stylski, PM McCue. Efficacy of medroxyprogesterone acetate in suppression of estrus in cycling mares. J Equine Vet Sci 2009;29:140-145.

- 1) Altrenogest (Regumate) has FDA-approval for use in the suppression of estrus and its use is permitted in fillies and mares in training and racing.
- 2) There is no evidence for efficacy of MPA in suppressing estrus.
- 3) There is no indication for the administration of MPA as a therapeutic medication.
- 4) There is evidence for risk to horses in the administration of MPA.

AGENDA ITEM

6E

Minnesota Racing Commission
2021 Approved Split Sample Labs

Texas A and M Veterinary Medical Diagnostic Laboratory

Travis Mays, Section Head

483 Agronomy Rd

College Station, TX 77840-4471

- | | |
|--|--------------|
| • NSAIDs (phenylbutazone, flunixin and ketoprofen) | \$450/sample |
| • Furosemide quantitation (serum/plasma) | \$850/sample |
| • LC-MS/MS qualitative testing (serum & urine) | \$650/sample |
| • LC-MS/MS quantitative testing (serum & urine) | \$850/sample |

University of California Davis

Ben Moeller, PhD, DABT, Analytical Chemist

K.L. Maddy Equine Analytical Chemistry Lab

620 W. Health Sciences Drive

Davis CA 95616-5270

- | | |
|------------------------------|--------------|
| • Blood NSAIDs | \$500/drug |
| • Most other “regular” drugs | \$1250/drug |
| • EPO, darbepoetin, others | Case by case |

University of Florida

Cindy Cole, Director of Racing Laboratory

Dirk Hunt, Associate Director of Racing Laboratory

University of Florida

1200 SW 34th St

Gainesville, FL 32607

- | | |
|--|---------------|
| • Any quantitative analysis (including NSAID stacking) | \$1000/drug |
| • Multiple desperate analytes in same sample | \$800/analyte |

University of Pennsylvania

Mary Robinson, VMD, PHD, Acting Laboratory Director

PETRL

382 West Street Road

Kennett Square, PN 19348

- | | |
|---|---------------|
| • Any quantitative drug analysis (blood OR urine sample) | \$1200/drug |
| • Any quantitative drug analysis (blood AND urine sample) | \$2400/drug |
| • <u>Both</u> parent drug and metabolite in same sample | \$2400/sample |

NOTE: ALL laboratories require use of the RMTC split sample request form and a call prior to sending to ensure they can accept and process the sample(s).

AGENDA ITEM

6F

MEMORANDUM

To: Minnesota Racing Commission Racing Committee Members

From: Steve May, Executive Director

Date: April 8, 2021

RE: Approval of Racetrack Concussion Protocols

Minnesota Rule 7870.0480, Subpart 2 reads as follows:

Subp. 2. Concussion protocol. Beginning April 1, 2021, a licensed racetrack shall adopt, publicly post, and implement a written protocol for the management of concussions in jockeys and drivers. The protocol and any subsequent amendments must be approved by the commission. Before a jockey or driver races at a licensed racetrack, the licensed racetrack shall obtain a written acknowledgment from the jockey or driver that the jockey or driver has been made aware of the requirements of the concussion protocol. At a minimum, the concussion protocol shall contain the following elements:

- A. each jockey or driver must provide the licensed racetrack with documentation of having completed a valid Sport Concussion Assessment Tool prior to racing at the licensed racetrack;*
- B. the licensed racetrack shall establish and enforce guidelines requiring a jockey or driver who has suffered a concussion, or suspected concussion, to be cleared by a qualified medical professional before returning to racing; and*
- C. the licensed racetrack shall ensure that the stewards are notified in writing when a jockey or driver is not permitted to ride and when a jockey or driver has been cleared to resume riding.*

For purposes of this subpart, the term "jockey" includes a jockey and an apprentice jockey.

Both racetracks have provided to Minnesota Racing Commission ("Commission") staff documentation for what they plan to use for a concussion protocol. The Racing Committee is being asked by Commission staff to review the protocols to provide a recommendation as to whether the protocols are in compliance with Minnesota rules and whether the Commission should approve the protocols pursuant to Minnesota Rule 7870.0480, Subpart 2.



March 27, 2021

Steve May
Executive Director
Minnesota Racing Commission
1100 Canterbury Road
Shakopee, MN 55379

Dear Mr. May,

Pursuant to MRC Rules 7870.0480 Subp. 2 Concussion Protocol, Canterbury Park Entertainment, LLC respectfully requests that the following item be placed on the agenda for consideration at the April 15, 2021 meeting of the Minnesota Racing Commission.

1) Canterbury Park 2021 Concussion Protocol

Canterbury Park has engaged Inspired Athletx, 2155 Niagara Ln N, Plymouth, MN 5447 to assist in the creation and implementation of a Concussion Protocol for the 2021 Racing Season. Under the guidance of Dr. Molly King, DPT, ATC, the attached protocol (Exhibit A) has been prepared for your consideration.

Additionally, we have included a one-page summary (Exhibit B) that will be the summary page available for quick review and educational purposes for all parties as we roll out this protocol beginning in 2021. Although not outlined in the proposed protocol, Dr. King will be responsible for working with our paramedics to provide the necessary training.

Obviously, this is something new to all parties in 2021 and we acknowledge that we will have to revise and improve these procedures as we go, especially with COVID-19 adding additional challenges over the course of 2021. Thank you for your consideration on these issues. Please let us know should you need additional information.

Respectfully submitted,

Andrew Offerman
Vice President of Racing Operations
Canterbury Park Entertainment, LLC

CC:

Bryan Lingen, Canterbury Park Director of Risk Management
Jeff Johnston, Jockeys' Guild Regional Manager

Canterbury Park Concussion Protocol

Proposal March 2021

Return-to-play decisions are complex and will vary from athlete to athlete and concussion to concussion. An athlete may be cleared to return to competition only when the athlete is free of all signs and symptoms of a concussion at rest and during sport-specific exercise. Once free of symptoms and signs of concussion, a stepwise, symptom-free exercise process is required before an athlete can return to competition (i.e. racing).

Each step requires a minimum of **24 hours**. The athlete can proceed to the next level only if he/she continues to be free of any symptoms and/or signs at the current level. If any symptoms or signs recur, the player will stop current level exercise prescription and return to the previous level.

The return to play after a concussion follows a stepwise process:

Step	Exercise	Objective	Description	Contact
1. Rest	Full assessment by PT/ATC. No activity until symptom free 24 hours	Diagnosis Recovery/symptom resolution	No activity until symptom free for 24 hours	In person assessment PT/ATC - at Inspired Athletics or CBY
2. Light Aerobic Exercise	Light aerobic exercise without risk of fall/2nd impact to head	Increased heart rate to <75% max effort	30 min walk/jog or stationary bike	Virtual* or in person with PT/ATC *If virtual, required to have video evidence or supervision by onsite medical staff that activity was completed
3. Groundwork	Higher intensity/complexity exercise with no risk of fall/impact to head	Increase heart rate to <85% max effort with sport specific movement, strength, balance	Ground work, barn work, cleaning stalls 30-45 min mod-high intensity biking, running, weight lifting	Virtual* or in person with PT/ATC *If virtual, required to have video evidence or supervision by onsite medical staff that activity was completed
4. Light Riding	All exercise in a careful,	Increase heart rate,	Walk/trot safe horse for 30	Virtual* or in person with PT/ATC

	controlled manner	coordination, balance, and cognition Increase heart rate to <95% of maximum	minutes, off track in a controlled space 6x60 second max effort bike or running sprint	*If virtual, required to have video evidence or supervision by onsite medical staff that activity was completed
5. Non-Contact Exercise Ride	All exercises in a careful, controlled manner	Sport specific coordination, balance, cognition at a higher intensity	Exercise ride (no breezing) during morning workout with no other horses or riders present on track	Virtual* or in person with PT/ATC *If virtual, required to have video evidence or supervision by onsite medical staff that activity was completed
6. Full Contact Training	Familiar horse	Restore confidence and assess sport specific skills	Full exercise ride, may include breezing, completed during morning workout. Release to full sport activities.	In person with PT/ATC at CBY
7. Race*	Return to competition	Eligible to compete in a race	Released to full participation	No contact necessary unless symptoms return

* If athlete is symptom free within 24 hours of initial injury and remains symptom free throughout the protocol, he/she will return to racing one week after initial injury. Return in one week is not guaranteed.

Supervision of Protocol

Trackside assessment following a blow to the head during live racing or training will be performed by onsite paramedics. The paramedic, with on-call access to a doctor of physical therapy or certified athletic trainer (PT/ATC), will determine if a concussion is likely and if the jockey is to return to racing that day. If a jockey is pulled from racing with a suspected concussion, they must be assessed and diagnosed by a PT/ATC prior to return to racing, ideally within 24 hours of injury.

Evaluation and diagnosis by PT/ATC (step 1) and clearance to return to racing (step 6) must be performed in person. Progression through steps 2-5 may be performed in person or virtually through phone or video chat. Jockey must provide video evidence or verbal report from a member of the onsite medical staff that they completed their prescribed activities for steps 2-5.

Baseline Testing

All jockeys must perform baseline testing with an onsite paramedic/EMT or PT/ATC prior to their first race at Canterbury Park. Testing will include:

1. SCAT-5 Assessment
2. Jockey-specific motor control exercises
 - a. In crouch position, able to achieve adequate neck extension to maintain eyes parallel to ground
 - b. Assess eye tracking in crouched position
 - c. Able to maintain crouch position with eyes closed for 15 seconds
 - d. Reach test in crouch position

Onsite Evaluation Protocol

To be performed by onsite paramedics or PT/ATC, if present.

1. SCAT-5 - Compare to baseline testing
2. Jockey specific - Compare to baseline testing
 - a. As listed above in baseline testing

Protocol in Action

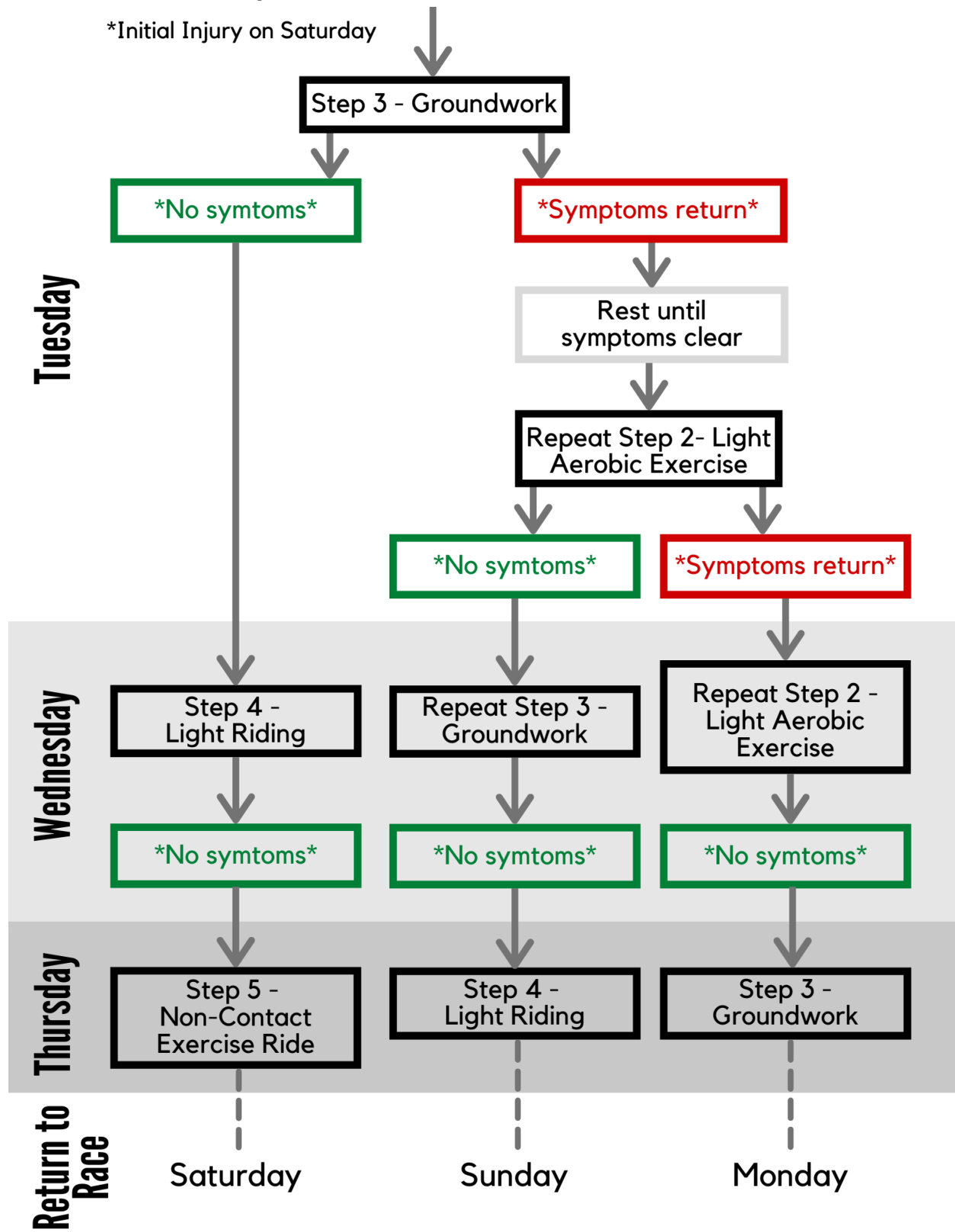
Ideal Recovery Process:

Day	Protocol Step	Activity
Saturday	Initial injury	Suffer blow to head. Paramedics assess and suspect a concussion, pulled from racing.
Sunday	1. Rest	Assessment by PT/ATC, confirm concussion diagnosis. Rest (physical and cognitive) until 24 hour symptom free.
Monday	2. Light Aerobic Exercise	Symptom free for 24 hours. 30 min jog. a. If symptom free, progress to step 3 b. If symptoms return with exercise, return to step 1
Tuesday	3. Groundwork	Performed 20 minute intense run and 3x10 push-ups, squats, lunges, sit ups, jumping jacks. Return to barn/ground work. a. If symptom free, progress to step 4 b. If symptoms return with exercise, return to step 2
Wednesday	4. Light Riding	30 minute walk/trot on safe horse, off-track in a secure and quiet environment. Perform 6x60second max effort sprints. a. If symptom free, progress to step 5 b. If symptoms return with exercise, return to step 3
Thursday	5. Non-Contact Exercise Ride	Exercise ride safe horse during morning workouts, no other horses or riders present. No breezing. a. If symptom free, progress to step 6 b. If symptoms return with exercise, return to step 4
Friday	6. Full Contact Training	Symptom free. Exercise ride familiar horse during morning workouts with other horses and riders present, breezing allowed.

		PT/ATC to perform final assessment and clear to return to racing. a. If symptom free, return cleared to return to racing the next day b. If symptoms return with exercise, return to step 5
Saturday	Return to Racing	*If symptoms return with competition, inform paramedics immediately

Non-Linear Recovery Process:

*Initial Injury on Saturday





Canterbury Park Concussion Protocol

As of the start of the 2021 race meet, all jockeys at Canterbury Park are required to comply with the following concussion protocol:

All jockeys must complete baseline testing with an onsite medical professional prior to their first race at Canterbury Park.

Return-to-play decisions are complex and will vary from athlete to athlete and concussion to concussion. An athlete may be cleared to return to competition only when the athlete is free of all signs and symptoms of a concussion at rest and during sport-specific exercise. Once free of symptoms and signs of concussion, a stepwise, symptom-free exercise process is required before an athlete can return to competition (i.e. racing).

Each step requires a minimum of **24 hours**. The athlete can proceed to the next level only if he/she continues to be free of any symptoms and/or signs at the current level. If any symptoms or signs recur, the player will stop current level exercise prescription and return to the previous level.

Step	Objective	Description
1. Rest	Diagnosis, Recovery/symptom resolution	No activity until symptom free for 24 hours
2. Light Aerobic Exercise	Increased heart rate to <75% max effort	30 min walk/jog or stationary bike
3. Groundwork	Increase heart rate to <85% max effort with sport specific movement, strength, balance	Ground work, barn work, cleaning stalls 30-45 min mod-high intensity biking, running, weight lifting
4. Light Riding	Increase heart rate to <95%, coordination, balance, and cognition	Walk/trot safe horse for 30 minutes, off track in a controlled space 6x60 second max effort bike or running sprint
5. Non-Contact Exercise Ride	Sport specific coordination, balance, cognition at a higher intensity	Exercise ride (no breezing) during morning workout with no other horses or riders present on track, familiar horse.
6. Full Contact Training	Restore confidence and assess sport specific skills	Full exercise ride, may include breezing, completed during morning workout - Release to full sport activity
7. Race*	Eligible to compete in a race	Released to full participation

* If the athlete is symptom free within 24 hours of initial injury and remains symptom free throughout the protocol, he/she will return to racing one week after initial injury. Return in one week is not guaranteed.

For more information:

Dr. Molly King, DPT, ATC

Inspired AthleTx | (952)322-7383 | molly@inspiredathleTx.com

Running Aces Concussion Protocol

Proposal April 2021

Return-to-play decisions are complex and will vary from athlete to athlete and concussion to concussion. An athlete may be cleared to return to competition only when the athlete is free of all signs and symptoms of a concussion at rest and during sport-specific exercise. Once free of symptoms and signs of concussion, a stepwise, symptom-free exercise process is required before an athlete can return to competition (i.e. racing).

Each step requires a minimum of **24 hours**. The athlete can proceed to the next level only if he/she continues to be free of any symptoms and/or signs at the current level. If any symptoms or signs recur, the player will stop current level exercise prescription and return to the previous level.

The return to play after a concussion follows a stepwise process:

Step	Exercise	Objective	Description	Contact
1. Rest	Full assessment by PT/ATC. No activity until symptom free 24 hours	Diagnosis Recovery/symptom resolution	No activity until symptom free for 24 hours	In person assessment PT/ATC - at Inspired Athletics or Running Aces
2. Light Aerobic Exercise	Light aerobic exercise without risk of fall/2nd impact to head	Increased heart rate to <75% max effort	30 min walk/jog or stationary bike	Virtual* or in person with PT/ATC *If virtual, required to have video evidence or supervision by onsite medical staff that activity was completed
3. Groundwork	Higher intensity/complexity exercise with no risk of fall/impact to head	Increase heart rate to <85% max effort with sport specific movement, strength, balance	Ground work, barn work, cleaning stalls 30-45 min mod-high intensity biking, running, weight lifting	Virtual* or in person with PT/ATC *If virtual, required to have video evidence or supervision by onsite medical staff that activity was completed
4. Light Driving	All exercise in a careful,	Increase heart rate,	Walk/trot safe horse for 30	Virtual* or in person with PT/ATC

	controlled manner	coordination, balance, and cognition Increase heart rate to <95% of maximum	minutes, off track in a controlled space 6x60 second max effort bike or running sprint	*If virtual, required to have video evidence or supervision by onsite medical staff that activity was completed
5. Non-Contact Exercise Drive	All exercises in a careful, controlled manner	Sport specific coordination, balance, cognition at a higher intensity	Exercise drive (sub max intensity) during morning workout with no other horses or riders present on track	Virtual* or in person with PT/ATC *If virtual, required to have video evidence or supervision by onsite medical staff that activity was completed
6. Full Contact Training	Familiar horse	Restore confidence and assess sport specific skills	Full exercise drive, may include max intensity, completed during morning workout. Release to full sport activities.	In person with PT/ATC at RA
7. Race*	Return to competition	Eligible to compete in a race	Released to full participation	No contact necessary unless symptoms return

* If athlete is symptom free within 24 hours of initial injury and remains symptom free throughout the protocol, he/she will return to racing one week after initial injury. Return in one week is not guaranteed.

Supervision of Protocol

Trackside assessment following a blow to the head during live racing or training will be performed by onsite paramedics/EMTs. The paramedic/EMT will determine if a concussion is likely and if the driver is to return to racing that day. If a driver is pulled from racing with a suspected concussion, they must be assessed and diagnosed by a PT/ATC prior to return to racing, ideally within 24 hours of injury.

Evaluation and diagnosis by PT/ATC (step 1) and clearance to return to racing (step 6) must be performed in person. Progression through steps 2-5 may be performed in person or virtually through phone or video chat. Driver must provide video evidence or verbal report from a member of the onsite medical staff that they completed their prescribed activities for steps 2-5.

Baseline Testing

All drivers must perform baseline testing with an onsite paramedic/EMT or PT/ATC prior to their first race at Running Aces. Testing will include:

1. SCAT-5 Assessment
2. Driver-specific motor control exercises
 - a. In driving position, able to achieve adequate neck flexion to maintain eyes parallel to ground
 - b. Assess eye tracking in driving position
 - c. Able to maintain driving position with eyes closed for 15 seconds
 - d. Reach test in driving position

Onsite Evaluation Protocol

To be performed by onsite paramedics or PT/ATC, if present.

1. SCAT-5 - Compare to baseline testing
2. Driver specific - Compare to baseline testing
 - a. As listed above in baseline testing

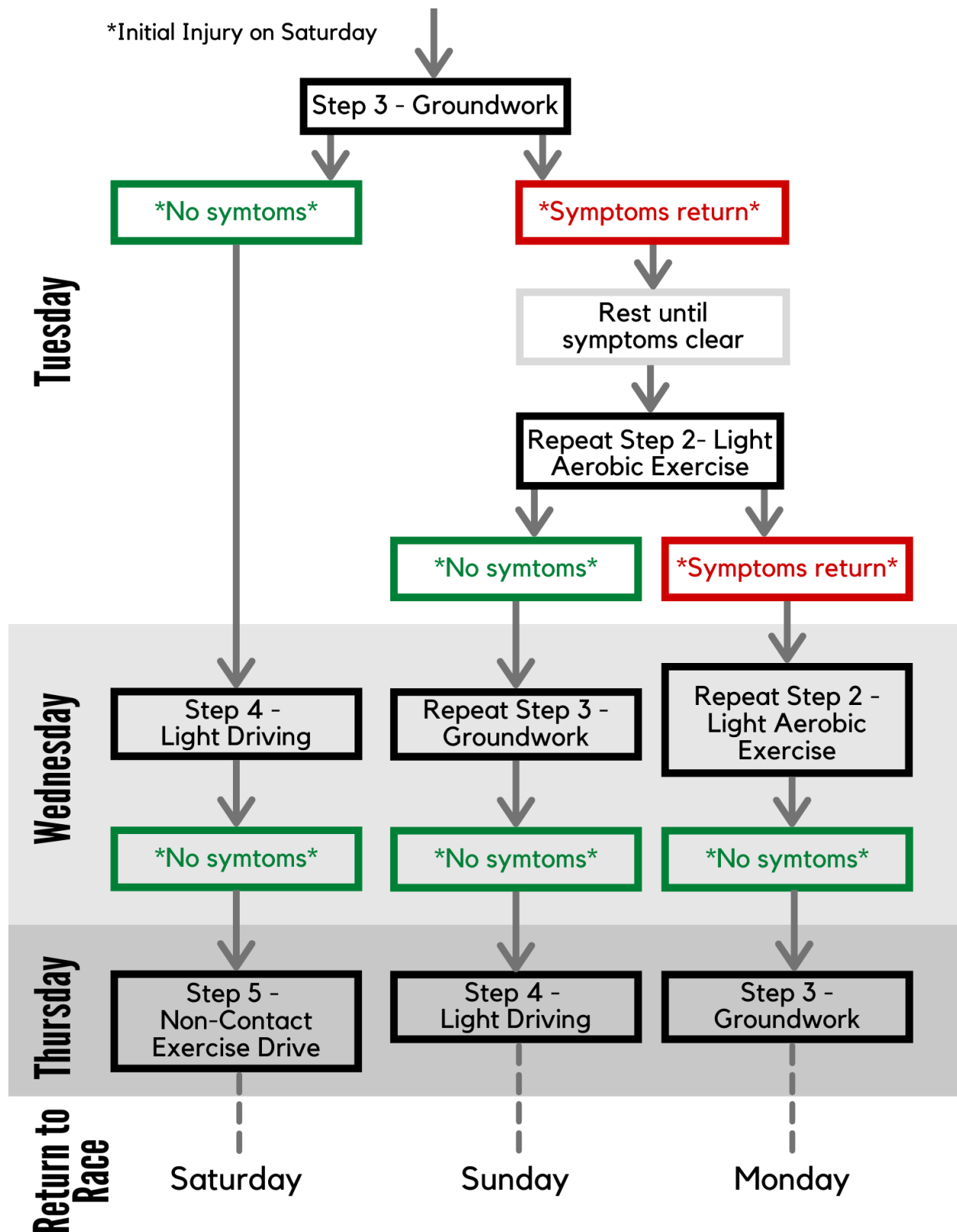
Protocol in Action

Ideal Recovery Process:

Day	Protocol Step	Activity
Saturday	Initial injury	Suffer blow to head. Paramedics assess and suspect a concussion, pulled from racing.
Sunday	1. Rest	Assessment by PT/ATC, confirm concussion diagnosis. Rest (physical and cognitive) until 24 hour symptom free.
Monday	2. Light Aerobic Exercise	Symptom free for 24 hours. 30 min jog. a. If symptom free, progress to step 3 b. If symptoms return with exercise, return to step 1
Tuesday	3. Groundwork	Performed 20 minute intense run and 3x10 push-ups, squats, lunges, sit ups, jumping jacks. Return to barn/ground work. a. If symptom free, progress to step 4 b. If symptoms return with exercise, return to step 2
Wednesday	4. Light Driving	30 minute walk/gentle trot with safe horse, off-track in a secure and quiet environment. Perform 6x60second max effort sprints. a. If symptom free, progress to step 5 b. If symptoms return with exercise, return to step 3
Thursday	5. Non-Contact Exercise Drive	Exercise safe horse during morning workouts, no other horses or drivers present. No max effort. a. If symptom free, progress to step 6 b. If symptoms return with exercise, return to step 4
Friday	6. Full Contact Training	Symptom free. Exercise drive familiar horse during morning workouts with other horses and drivers present, full intensity allowed.

		PT/ATC to perform final assessment and clear to return to racing. a. If symptom free, return cleared to return to racing the next day b. If symptoms return with exercise, return to step 5
Saturday	Return to Racing	*If symptoms return with competition, inform paramedics immediately

Non-Linear Recovery Process:



AGENDA ITEM

6G

MEMORANDUM

To: Minnesota Racing Commission Racing Committee Members

From: Steve May, Executive Director

Date: April 7, 2021

RE: Approval of Research Grant Proposals

Pursuant to 2020 Minnesota Statute 240.18, Subdivision 2 (see attached), 20 percent of the money collected for Thoroughbred and Quarter Horse categories in the Minnesota Breeders' Fund must be expended as follows:

- (1) *At least one-half in the form of grants, contracts, or expenditures for equine research and related education at public institutions of postsecondary learning in the state; and*
- (2) *The balance in the form of grants, contracts, or expenditures for one or more of the following:*
 - (i) *Additional equine research and related education;*
 - (ii) *Substance abuse programs for licensed personnel at racetracks in the state; and*
 - (iii) *Promotion and public information regarding industry and commission activities; racehorse breeding, ownership, and management; and development and expansion of economic benefits from racing.*

Pursuant to 2020 Minnesota Statute 240.18, Subdivision 3 (see attached), 20 percent of the money collected for Standardbred categories in the Minnesota Breeders' Fund must be expended as follows:

- (1) *One-half to supplement purses at non-pari-mutuel racetracks in the state; and*
- (2) *One-half of that amount as grants for equine research and related education at public institutions of postsecondary learning in the state.*

As of April 1, 2021, the following balances are available for expenditure:

• Quarter Horse Equine Research	\$ 8,872.55
• Thoroughbred Equine Research	\$ 94,716.94
• <u>Standardbred Equine Research</u>	<u>\$ 9,173.37</u>
TOTAL FOR ALL BREEDS	\$112,762.86

The Commission has received three research proposals. Below is a general summary of the requests:

Requesting Entity	Post-Secondary Institution	Horse Breed Impacted	Request Summary	Request Amount
University of Minnesota	Yes	Thoroughbred Standardbred	Improved identification of racehorses at risk of arrhythmias and sudden cardiac death	\$25,365.00
University of Minnesota	Yes	Thoroughbred Standardbred	Development of a Multi-Marker Genetic Assay to Predict RER Risk in Racehorses	\$84,301.50
Abijah's Hope Stables	No	Thoroughbred	Development of paddock at Canterbury Park for equine mental health for backside workers	\$25,000.00
TOTAL REQUESTED AMOUNT				\$134,666.50



January 21, 2021

Mr. Steve May
Executive Director
Minnesota Racing Commission
1100 Canterbury Road
Suite 100
Shakopee, MN 55379

Dear Mr. May,

Abijah's Hope Stables, in association with Horses for Mental Health, respectfully requests consideration for funding from the Minnesota Racing Commission Breeders Fund for the 2021 racing season at Canterbury Park.

Our organization is hoping to bring its mental health, equine-experiential model to the Canterbury Park stable area to provide substance abuse care to stable area workers. This model also uses off-track thoroughbreds as the center of their therapy. The funds requested fall in line with the MS 2401.18 as it will support backside workers as they navigate mental health related struggles such as addiction, anxiety, PTSD, eating disorders, etc. This will serve to help elevate the reputation of Canterbury Park and the Minnesota racing community, demonstrating commitment to both the horses & humans that power our sport.

Thoroughbreds will be used who can no longer run, creating a new 'value' to these horses as they help save lives. In total this first year, it is Abijah's Hope's plan to transition 10 retired Minnesota (MN) bred or raced off-track thoroughbreds into mental health, equine-experiential programs around the country. This will include 3 OTTBs who will make Canterbury their home serving their seasonal workers and Minnesotans as we all face a mental health crisis in this challenging time.

If funding is secured from the Minnesota Racing Commission, it is our plan to build a paddock area near the Chapel in which the equine-experiential mental health sessions will be facilitated. Following the Eagala Model standards, both a mental health professional (MH) and an equine specialist (ES) will join a client and an OTTB at each equine-experiential session. These sessions do not involve riding or horsemanship but will be facilitated entirely from the ground in a client-led, solution driven model. An example of the methods and efficacy of this model can be seen here- [Case Story](#).

Before serving stable area workers and utilizing OTTB's, the ES & MH will both undergo training to receive the "OTTB Saving Lives" specialty designation through Abijah's Hope in partnership with Acres for Life. This designation will prepare the MH & ES with an understanding of backside culture and its people, along with hands-on training in navigating the unique temperaments of OTTBs. Additionally, any program receiving a MN OTTB will also be required to receive the specialty OTTB's Saving Lives designation to ensure a smooth and optimal transition for our retiring thoroughbreds into equine-experiential mental health programs.

Horses for Mental Health is the non-profit umbrella supporting Abijah's Hope (a for profit company), facilitating fundraising, expansion, development, partnerships, and strategic planning that will enable a rapid expansion of the Off-Track Thoroughbreds Saving Lives programs to racetracks across the country, and eventually Europe.

Sally Mixon, CEO and founder of Abijah's Hope, will facilitate this effort. She has her MA in professional counseling and has worked as the Chief Development Officer for Acres for Life, a program in Forest Lake, MN who uses this proven model to facilitate over 2,500 sessions every year including veterans, first responders, children, family, and youth. Sally also is immersed in the stable area culture through her work with Bernell Rhone as an exercise rider for many years. Acres for Life has also been involved in the training of others in this model around the country for over 20 years.

To highlight:

- The program will be administered in the stable area at Canterbury Park.
- The program uses former Minnesota bred or raced thoroughbred racehorses.
- Those facilitating the sessions will consist of: Licensed mental health therapist and equine specialist who have acquired the Abijah's OTTB Saving Lives Designation and trained by Acres for Life in this modality.
- Canterbury Park has agreed to be the founding partner for a program designed to be initiated at racetracks across North America and Europe
- Work with the Minnesota Racehorse Engagement Project (MNREP) to place retired thoroughbred racehorses who would otherwise need sanctuary, with a second career in already established mental health, equine-experiential programs.

Financial Request:

- \$25k for establishment of program and substance abuse sessions for licensees of the Minnesota Racing Commission.

We look forward to working with the Minnesota Racing Commission and Canterbury in the creation of this visionary and foundational initiative to better the lives of the humans that make our industry possible while also improving the quality of life of our cherished post-racing thoroughbreds. Feel free to contact us with any questions. We look forward to hearing from you soon.

Sincerely,

Sally Jane Mixon

MA, Founder and CEO of Abijah's Hope Stables, Exercise Rider

Dani Palmer

Co-Founder, Horses for Mental Health

Abijah's Hope Stables
715-379-1370
PO Box 32
Forest Lake, MN 55-25



ABIJAH'S on the BACKSIDE
OFF-TRACK THOROUGHBREDS FOR MENTAL HEALTH

Bringing a New Era of
Sustainability
to the
Horse Racing Industry





I (Sally Mixon) was five when Winning Colors won the Kentucky Derby and six when I fell off a horse for the first time. Looking back, I guess these were the things that hooked me. The speed, the adrenaline, the dirt...apparently even eating dirt. All of it.

Little did I know, years later, my life would take me to:

Atoka, OK, chatting with David Burrage, who became the legal guardian of Jeff Lukas (the trainer of Winning Colors) after Jeff sustained a horrific accident. Sitting in Jeff's living room, laughing as he shared memories and spending countless hours learning of his story; on and off the track. Exercising horses at Canterbury Park (my favorite place) to where we are today.

Abijah's Hope / Abijah's on the Backside

Where the Purpose and Value of a Racehorse is Redefined

We are an **Abijah's Hope** led coalition between racetracks around the U.S. and Europe, and a global non-profit called **Horses for Mental Health** addressing the mental health crises of backside workers & the surrounding public providing purposeful retirement opportunities for off-track thoroughbreds utilizing Mental Health Equine-Experiential programs.



THE CHALLENGE

BACKSIDE WORKERS are in need of unique mental health services: Addiction, Depression, Anxiety, PTSD, etc.

OFF-TRACK THROUGHBREDS are in need of transition and 2nd careers that give them meaning and purpose where they can thrive post-racing - even those who can no longer carry weight.

The **RACING INDUSTRY** is in need of sustainable, positive PR

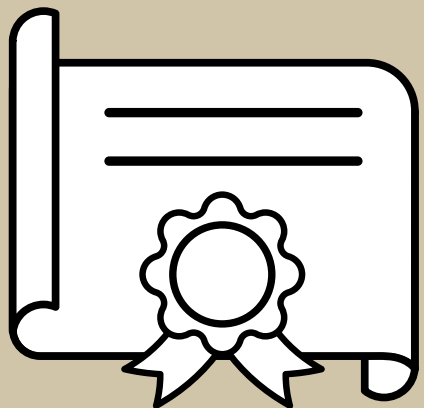


THE SOLUTION

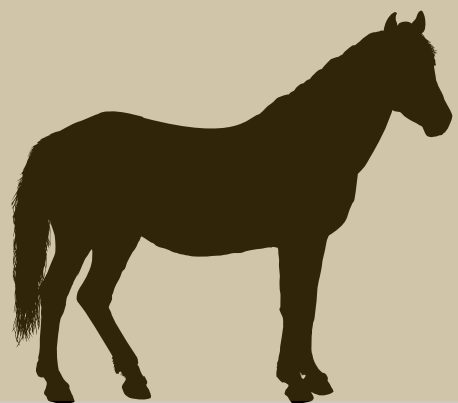
ABIJAH'S on the BACKSIDE ~ Off Track Thoroughbreds for Mental Health opens doors for thoroughbreds and backside workers bringing an unparalleled positive impact to the racing industry.



Partners with racetracks to facilitate on-site mental health, equine-experiential programs



Prepares Mental Health Equine - Experiential programs to receive ABIJAH'S on the BACKSIDE specialty designations



Transitions Off-Track Thoroughbreds, preparing them for meaningful careers in a Mental Health, Equine-Experiential Programs

THE FOUR TENANTS OF THE OF METHODOLOGY

(Founded in the Eagala model)



100% ON THE GROUND

The approach involves no riding or horsemanship, making it both safe and effective even for those in the racing industry.

CODE OF ETHICS

A strong code of ethics that upholds the highest level of standards for delivery of services and wellbeing of team members, both human and horse.

SOLUTION ORIENTED

Built on the premise that it's the clients who best determine the changes they need to make in order to improve their lives. The treatment team puts the model skillsets to work to meet the clients' goals by engaging the unique intuitive power of horses to help them understand their process and practice the changes they want to make in a safe, supportive setting

A TEAM APPROACH

There is always an Equine Specialist, a credentialed Mental Health Professional, and at least one horse.

WHY OFF-TRACK THOROUGHBREDS



"There is this odd stereotype in the equine world that thoroughbreds are in fact, "Crazy." No, they're not crazy... maybe misunderstood at times but who hasn't been?" ~ Sally Jane Mixon

WHY OFF-TRACK THOROUGHBREDS CONT.

They're incredibly intuitive and often reflect back struggles in ourselves or something going on in our lives.

They're big, powerful, and often cannot be contained which can bring up many emotions. In the therapeutic world, what could something big and powerful represent? Addiction? Love? Hope? Fear?

They're most healthy in a herd, just as we are most healthy in relationship



**An Unrivaled
Opportunity to Make a
Difference
Creating Sustainability
in the World of Horse
Racing**

A New Era of Horse Racing

Benefits to Backside Workers

Increased safety & overall wellbeing

Lessened career disruption, burn-out and turnover

Higher likelihood of long-term success of treatments



Benefits to Racetracks

Increased positive publicity

- Off-Track Thoroughbreds are **SAVING LIVES** at the track
- Media coverage / Viral video potential

Become known as a track where lives are transformed (horse and human)

Featured part of race-day tours

- Increases public awareness of the '**value**' of the thoroughbred and the racing industry

Benefits Cont.

- **Abijah's on the Backside** will start with three off-track thoroughbreds provided by This Old Horse's Racehorse Reimagined program
- Abijah's has developed two designations that each backside program will acquire.
 - The off-track thoroughbred designation
 - On-the-backside designation
 - Acres for Life (one the largest mental health, equine experiential programs in the world has partnered with Abijah's Hope to co-lead these trainings for the mental health practitioners facilitating the sessions on the backside.

Benefits Cont.

- Abijah's has committed to only use off-track thoroughbreds for this program
- The Canterbury Park program will be a prototype for establishing similar programs at racetracks across the U.S. and Europe
- Once this program is established for stable area workers, the program will be opened up to the community as a mental health and substance abuse program resource.
- As private mental health equine programs achieve the off-track-thoroughbred designation, this will open up more placement opportunities for these amazing animals to do this work all over the country and world.
- Canterbury will provide space in the stable area, office space in the chapel, stalls, construction of labor for paddock
- HBPA will provide funding for any session work beyond what is funded by the MRC up to an additional \$5,000

Budget

- Materials for construction of outdoor horse paddock/working ring for client and horses to interact
 - \$5,000
- Feed/Vet/Farrier for three off-track thoroughbreds
 - This Old Horse sponsors/horse owners cover this
- Session work: 50 sessions / 4 months at \$195/session
 - \$10,000



This is a collaborative effort with the thoroughbred industry and Canterbury Park has been chosen to be **THE FOUNDING TRACK** of this international program

Who We Are

Sally Jane Mixon, MA Professional Counseling, Exercise Rider

Sally is a dreamer at heart and believes 'big.' Through her own life experiences and almost losing her life to anorexia during her college years, she always knew that there was something special about horses, and wanted to work with them on a much deeper and richer level. In her roles as Chief Development Officer and Equine Trainer at Acres for Life (One of the largest Mental Health Equine - Experiential Programs in the world), Sally raises awareness of the power of this work through not only helping clients, but also through speaking, annually leading fundraising endeavors for Acres for Life and networking. Sally founded **Abijah's Hope Stables** in 2019, combining her expertise as a professional exercise rider at thoroughbred racetracks and her passion to bring hope to the racing industry. In 2020, Abijah's Hope partnered with the global organization, Horses for Mental Health (next page). The vision of Abijah's Hope is inspired by Sally's now passed friend, Jeff Lukas and David Burrage who took care of Jeff for over 20 years after his famous accident in 1993 with Tobasco Cat.

Dani Palmer

Dani has a long and extensive history of creating and developing non-profits and global movements such as raising \$1.5 million to support the building of the Global Poverty Project's "Global Citizen Festival," managing sponsor development and partnerships to the tune of 7 figures with Citibank, Coca-Cola, FedEx, and more. Dani managed the development team, coordinating and strategizing outreach for the largest companies in the world. As staff for GPP in it's nascent years, she also handled artist agreements with Alicia Keys, John Mayer, John Legend, Hugh Jackman, Rachel Brosnahan and more. She played a small role in building Deborah Lee-Furness & Hugh Jackman's charity, Hopeland. Dani ran charitable partnership development for the FilmRaise project which raised nearly \$1 million for charitable partners including the Mandela Foundation, the Malala Fund, Women for Women International, and many more. Dani also spent time supporting Lynn Thomas (see below) and the Equine Assisted Growth and Learning Association. During this time, she forged partnerships with equestrian corporate giants Dover Saddlery, SmartPak, Schneiders Tack, American Equus, Phelps Media Group and more. Dani's focus is now Abijah's Hope on the Backside.

Who We Are Cont.

Lynn Moore, MA in Professional Counseling, LADC

Lynn co-founded **Acres for Life** in 2001 with a passion for helping others experience the healing connection between people and animals. In addition, Lynn provides consulting services to many Mental Health Equine-Experiential programs and practitioners wanting to move their businesses to the next level. She holds a Bachelors Degree from the University of Wisconsin and a Master's Degree from Hazelden Graduate School of Addiction Studies. Lynn works closely with Lynn Thomas developing global trainings and serving as a mentor to those in this field. Lynn partnered with Abijah's Hope in becoming the mental health training arm for programs Abijah's will develop on the backside of tracks around the U.S. and Europe. She also has over twenty-five years of business marketing, consulting, online training and client relationship management experience.

Lynn Thomas, LCSW

Lynn received her Master's of Social Work from the University of Utah in 1995. She first developed a program integrating horses as a primary treatment component while serving as Executive Director of Aspen Ranch, a residential boarding school for troubled adolescents. In 1999, Lynn co-founded Eagala, the Equine Assisted Growth and Learning Association, providing training and certification in the Eagala Model of incorporating horses in psychotherapy. In the 21 years she served as CEO, Lynn built Eagala into the leading organization in the area of horses for mental health, and through her continued development of the Eagala Model, established Eagala as the thought leader and global standard. Thanks to the work of Lynn and her team, involving horses in psychotherapy sessions went from a little-known approach to a widely accepted and credible mental health option, backed by research. With the experience, vision and relationships developed by Lynn over the years, she co-founded **Arenas for Change** and a new global non-profit called **Horses for Mental Health** in 2021 to build on the momentum, expand the movement, and support programs worldwide to impact global mental health through horses.

Thank You

Be part of the solution. Canterbury Park will lead the industry in mental health support for backside workers while also engaging Off-Track Thoroughbreds in a new meaningful post-race career in the environment they all love.

Please direct any questions to

sallyjane@abijahshope.org

dani@palmercollaborative.com



Improved identification of racehorses at risk of arrhythmias and sudden cardiac death

Rationale. Approximately 500 apparently healthy racehorses die suddenly in the U.S. each year. Irregular heart rhythms (arrhythmias) leading to sudden cardiac death (SCD) are an important cause of these deaths, accounting for more than 20% of fatalities. As measures are put in place to reduce the risk of fractures and other life-ending orthopedic injuries, non-orthopedic related sudden deaths, including those caused by cardiac arrhythmias are becoming increasingly important as a cause of racehorse sudden death. Most horses that develop fatal arrhythmias at exercise have no visible abnormalities on at-rest cardiac examination (electrocardiogram [ECG] and echocardiography), making it virtually impossible to detect horses that will develop fatal arrhythmias before they occur. Arrhythmias in human athletes without underlying heart disease are almost exclusively caused by mutations in ion channel genes. These athletes frequently develop subtle ECG and cardiac remodeling changes that can be identified at-rest and are used for monitoring and to guide when retirement from high level athletic performance is recommended. Recently, our collaborators have shown that this is also the case for equine athletes, and racehorses with a previous history of paroxysmal atrial fibrillation (AF, a type of arrhythmia), can be differentiated from horses without a history of AF using computational analysis of **at-rest** ECGs. Given the similarities between arrhythmias in human and equine athletes, it is likely that mutations in genes responsible for human cardiac arrhythmias are associated with changes in sinus rhythm ECGs, subtle cardiac remodeling, the presence of arrhythmias, and SCD in racehorses. We have identified 36 high priority mutations in genes that cause arrhythmias in humans, using whole genome sequencing of 6 Standardbreds with AF.

Specific aims and hypothesis. The objective of this study is to determine if: **1)** it is possible to identify horses with different types of exercising arrhythmias using **at-rest** ECGs and **2)** the 36 mutations are associated with cardiac changes identified using ECGs and echocardiography or SCD. *We hypothesize that computational analysis of at-rest ECGs can be used to identify horses with exercising arrhythmias and that these 36 mutations are associated with cardiac abnormalities including exercise associated arrhythmias and subtle cardiac remodeling that may lead to sudden cardiac death.* We will test this hypothesis using the following two specific aims:

Aim 1. Identify at-rest ECG changes in horses consistent with increased risk of arrhythmias and determine if these changes are associated with the 36 predicted arrhythmia-causing mutations. In **aim 1a** we will determine if it is possible to differentiate between horses with and without exercising arrhythmias using computational analysis of at-rest normal sinus rhythm ECGs and in **aim 1b** we will test for association between the 36 mutations and changes in at-rest ECGs.

Aim 2. Quantify the effect size of the 36 arrhythmia-causing mutations on equine cardiac phenotypes. Here, we test for associations between the 36 high priority mutations and the presence of: **2a)** exercise-associated cardiac arrhythmias; **2b)** subtle cardiac remodeling; and **2c)** sudden cardiac death.

Experimental Design and Methods. On 500 Standardbred and 500 Thoroughbred racing fit racehorses collected at Canterbury Park and Running Aces racetracks, we will:

1. Collect ECGs at *rest*, *peak intensity exercise*, and *immediately post-exercise*
2. Perform standard and computational ECG analysis and identify cardiac arrhythmias
3. Perform echocardiograms
4. Obtain blood for DNA extraction
5. Genotype each horse for the 36 putative arrhythmia-causing mutations using an Agena Bioscience iPLEX assay

We will also collect an additional 100 Thoroughbred racehorses with presumed SCD from racetracks across the U.S., including the racetracks in Minnesota. Hair roots will be collected from these horses for DNA extraction and each horse will be genotyped for the 36 mutations as described above.

In **aim 1** we will determine if it is possible to identify horses that develop exercise-associated arrhythmias using computational (complexity and restitution) analyses of at rest ECGs from all 1,000 racehorses and will test for association between the 36 mutations and changes in at-rest ECGs. In **aim 2**, we will test for association between

the 36 mutations and: **2a)** the presence of exercise-associated arrhythmias and **2b)** subtle cardiac remodeling in 1,000 racing-fit horses; and **2c)** SCD the additional 100 Thoroughbreds with presumed SCD.

Preliminary Data.

Identification of horses with a history of paroxysmal atrial fibrillation using at rest ECGs. We have developed a new collaboration with a group based in the U.K. (led by Drs. Kamalan Jeevaratnam and Celia Marr) that use computational analysis to analyze ECGs. In brief, we convert the ECG wave pattern into a string of numbers. Computational analysis (complexity and restitution analysis) can then be used to identify if there are patterns in the ECGs that are different between cases and controls. Using this method, they have demonstrated that it is possible to identify racehorses that have previously had AF from racehorses that have never had AF using apparently normal **at-rest** ECGs. The most important aspect of this preliminary work is that the method for converting the ECG to a string of numbers is not dependent on the portion of the ECG that is related to electrical activity in one single part of the heart, therefore it suggests that all types of arrhythmia could be detected using these computational methods.

Genetic of cardiac arrhythmias. Given the success of WGS in humans for identifying disease-causing mutations, we used WGS of 6 Standardbred racehorses with AF, the most common and best characterized equine arrhythmia that is known to be detrimental, to identify putative functional mutations. Mutations predicted to have a high or moderate impact on 309 genes known to cause human cardiac arrhythmias were further evaluated. 36 mutations were selected for further follow-up because **1)** the mutation impacts the same amino acid as a cardiac arrhythmia causing mutation in humans (n=33); and/or **2)** the mutation is predicted to have high impact on protein function and is uncommon in a population of 110 Standardbred and Thoroughbred racehorses (n=8).

Subtle cardiac remodeling. Based on evidence in human athletes subtle cardiac remodeling is correlated with arrhythmias that lead to sudden cardiac death. New echocardiography techniques in humans are now allowing physicians to identify these changes early and recommend period of rest to allow for the heart to repair these subtle changes. We have formed a collaboration with Dr. Jennifer Brown at the University of Edinburgh who has perfected these echocardiography techniques in racehorses. Dr. Brown has agreed to come to Minnesota to teach us this approach so we can identify these changes in our study population.

Expected Results. We will determine if it is possible to identify horses that will develop exercise-associated cardiac arrhythmias using computational analysis of at-rest ECGs and will establish which of these 36 mutations are associated with, and therefore likely play a role in, **1b)** changes in at-rest ECGs; **2a)** exercise-associated arrhythmias; **2b)** subtle cardiac remodeling; and/or **2c)** SCD. This will provide a *simplified method of identifying horses at high risk of developing exercise-associated arrhythmias* that can lead to SCD and will provide *strong evidence for the mutation(s) having a functional effect on the cardiac cycle in these horses.* Evaluation of subtle cardiac remodeling will give us a new tool to identify horses that may not be safe to exercise and a method to determine when they should return to training. This is a crucial step towards identifying horses at increased of developing SCD, and will allow for increased monitoring of these horses to determine what other factors lead to development of more serious arrhythmias and SCD in high risk horses.

Extension of our previous proposal. The updated version of **aim 1** greatly extends our previous objective 1, which was to use standard ECG measurements to establish if it is possible to differentiate between horses with and without exercising arrhythmias using at-rest ECGs. Although the original analysis will still be performed, the additional computational analysis provides a standardized and reproducible approach that can be used without the issues of human error when calculating the measurements. Using at-rest ECGs to identify horses that go on to develop exercising arrhythmias is a major advantage over the current necessity to use exercising ECGs. While exercising ECGs are well tolerated, they require the horse to be galloping and there is a risk that the lead may slip off during exercise. This is not an issue for the horse, but necessitates the ECG being repeated. At-rest ECGs can be performed while the horse is stabled and therefore a much larger number of horses could be done at a single time point. This is not only useful for this current study, but for future work, this will allow for rapid identification of horses at risk of developing exercise-associated arrhythmias, so that we can monitor why certain horses go on to develop SCD while others appear to have no detrimental effects of these arrhythmias. The addition of the echocardiographic

technique for detecting subtle remodeling changes will also give a new tool for the identification and monitoring of horses at high-risk for exercise-induced arrhythmias and SCD.

Our previous proposal investigated these 36 mutations in 500 Thoroughbred racehorses and did not factor in limitations due to COVID-19 that restricted the number of horses we were able to sample. We have extended this study to include 500 Standardbred racehorses and have also obtained additional funding to extend the ECG measurements to include the advanced computational ECG analyses. The use of two different highly athletic breeds will extend the results of this study to cover more horses across the US and world. Although it is likely that some of the risk factors for arrhythmias and SCD are shared between Standardbreds and Thoroughbreds, others will be unique to each breed. Therefore, by investigating both breeds we will extend the outcomes of this study. The computational analysis of at rest ECGs to identify horses that will develop exercise-associated arrhythmias will be a major step forward in arrhythmia and SCD in racehorses.

Last summer we successfully performed complete ECG examinations in 195 racehorses (88 Standardbred, 107 Thoroughbred racehorses, 112 males, 84 females) despite the COVID-19 limitations that restricted the number of days that we were able to examine horses and the importance of limiting the number of personnel available to assist with ECG collection. We also collected 37 horses with SCD. This summer, we are requesting additional funding for personnel and their travel expenses to increase the number of horses that can be sampled this racing season.

Timeline:

April - October 2021. Recruitment and cardiac work-up of 412 Standardbred and 393 Thoroughbred racehorses and 63 Thoroughbreds with SCD and computational ECG analyses.

October - December 2021. Design of the iPLEX bioassay and genotyping of the 1,100 racehorses and computational ECG analyses.

January - March 2022. Data analysis and manuscript preparation and submission of abstracts for consideration for the American College of Veterinary Internal Medicine and American Association of Equine Practitioners conferences.

Potential Impact for Equine Health. Our long-term goal is to reduce the incidence of SCD in racehorses. To do this we need to: **1)** be able to identify horses that will develop potentially fatal arrhythmias and **2)** establish the genetic and environmental factors that lead to certain horses developing SCD. The work in this proposal will result in significant progress towards this goal. It will allow us to identify horses that are at increased genetic risk for developing arrhythmias and SCD. Once identified these horses can then be routinely monitored with **at-rest** ECGs to determine if they have developed the subtle ECG changes that suggest a higher risk for **exercising-arrhythmias** and echocardiography will allow detection of subtle changes and allowing for evidence-based recommendation for return to training and prevention of SCD. This will allow us to identify horses at increased risk of SCD without the need to perform time consuming and more technically difficult exercising ECGs. This critical data will allow for monitoring and additional genetic investigation of high risk horses to determine the environmental and genetic modifiers that lead to certain high risk horses developing SCD. Knowing the factors that contribute to SCD will allow for increased monitoring and potentially changes in management to reduce the risk of SCD. Additionally, genetic tests can be used to inform future breeding decisions, to allow breeders to decrease the number of horses at increased genetic risk of developing arrhythmias in their breeding animals. *Even if the mutation(s) are **not significantly associated** this is still an important finding. The mechanism behind how mutations with strong evidence for pathogenicity are tolerated is an important area for future investigation in all species.*

BUDGET

Category	Year 1	Total
<u>Personnel:</u>		
1. Principal investigator. Molly McCue	\$0	\$0
2. Co-investigator #1. Sian Durward-Akhurst	\$0	\$0
3. Co-investigator #2. Jenifer Gold	\$0	\$0
4. Colloborator. Jennifer Brown	\$0	\$0
5. Research assistant. Kendall Blanchard	\$16,476	\$16,476
Total Salaries & Wages	\$16,476	\$16,476
<u>Supplies, Equipment, Travel & Other Expenses:</u>		
1. Travel expenses (Dr. Gold)	\$5,245	\$5,245
2. Travel expenses (Dr. Brown)	\$3,645	\$3,645
Total Supplies, Equipment, Travel & Other Expenses	\$8,889	\$8,889
Subtotal of All Categories	\$25,365	\$25,365
Indirect Costs (no indirect costs per contract)	\$0	\$0
Grand Total Requested from MRC	\$25,365	\$25,365

BUDGET JUSTIFICATION

Personnel

Dr. Molly McCue is a veterinarian, board certified in Large Animal Internal Medicine. She is a highly gifted statistical genetic and genetic epidemiology researcher. Dr. McCue has extensive clinical experience in ECG analysis and echocardiography and has broad practical experience in WGS and SNP analysis. She will provide expert advice on all analyses, manuscript, and grant preparation. No salary requested.

Dr. Sian Durward-Akhurst is a veterinarian, board certified in Large Animal Internal Medicine. She has training and experience in the pathophysiology of cardiac arrhythmias, ECG analysis, echocardiography, PCR and single nucleotide polymorphism genotyping, and computational and statistical techniques involved in genetic analysis. She is responsible for identifying the mutations investigated in this proposal during her PhD. Dr. Akhurst will be responsible for **aims 1 and 2** as well as mentoring the research assistant and PhD student in cardiac arrhythmia phenotyping, preparing the manuscript, and presenting the data at conferences. No salary requested.

Dr. Jenifer Gold is a veterinarian, board certified in Large Animal Internal Medicine. She has extensive experience in equine internal medicine, including the cardiac work-up of equine athletes. Dr. Gold will spend 3 weeks in Minnesota performing cardiac phenotyping (ECGs and echocardiography) on Standardbred and Thoroughbred racehorses. No salary requested.

Dr. Jennifer Brown is a veterinarian, board certified in Large Animal Internal Medicine. She is currently a PhD student that is focused on echocardiographic determination of cardiac remodeling in Thoroughbred racehorses. Dr. Brown will spend 2 weeks in Minnesota performing cardiac phenotyping (ECGs and echocardiography) on Standardbred and Thoroughbred racehorses and teaching Dr. Akhurst to perform the procedure. No salary requested.

Kendall Blanchard is a research assistant with the goal of becoming a equine veterinarian. She has assisted Dr. Akhurst with other ECG studies this past year and will assist with cardiac phenotyping (ECGs and echocardiography) for this proposal. Fifty percent salary for 6 months including benefits is requested. **\$12,501 salary and 31.8% fringe benefits. \$16,476 total.**

Supplies, Equipment, Travel & Other Expenses

Travel expenses for Dr. Gold. Total \$5,245

- Mileage to and from Washington State University (1,447 miles each way at 56 cents per mile). **\$1,621**
- Hotel (21 days). **\$1,484**
- Mileage to and from Canterbury park 3 days a week (12 miles each way at 56 cents per mile). **\$242**
- Mileage to and from Running Aces 3 days a week (42 miles each way at 56 cents per mile). **\$423**
- Per diem expenses for 21 days. **\$1,596**

Travel expenses for Dr. Brown. Total \$3,645

- Flight to/from Edinburgh. **\$1,400**
- Hotel (14 days). **\$1,040**
- Mileage to and from Canterbury park 3 days a week (12 miles each way at 56 cents per mile). **\$54**
- Mileage to and from Running Aces 3 days a week (42 miles each way at 56 cents per mile). **\$188**
- Per diem expenses for 14 days. **\$1,064**

Development of a Multi-Marker Genetic Assay to Predict RER Risk in Racehorses

Rationale. Exercise-induced rhabdomyolysis (tying-up) is a painful condition characterized by muscle cramping, rapid-onset muscle damage and possibly death. Approximately 10–25% of Thoroughbred (TB) and Standardbred (STDB) racehorses tie-up repeatedly with exercise, a syndrome collectively termed “recurrent exertional rhabdomyolysis” (RER). RER also affects Quarter Horse racehorses, however the incidence of the disease in this group of horses is unknown. In addition to affecting the horse’s welfare, RER impacts the ability of affected horses to train and race, which has large economic consequences. Recent studies have conclusively shown that RER is a complex genetic disorder, with ~ 40 – 50% of RER risk in both breeds due to a horse’s genetic makeup. However, RER is not a simple genetic disease caused by a single mutation, as there are likely hundreds of genetic alleles contributing to the overall genetic risk for RER. *Our hypothesis is that an individual horse’s genetic risk for RER results from the combination of multiple alleles in genes that are responsible for skeletal muscle metabolism, excitability, contractility, structure, and repair.* In prior work we have identified ~2,500 genes that may harbor alleles that increase a horse’s risk for developing RER in Thoroughbred and Standardbred racehorses. Further, we have identified an initial test set of genetic markers that can determine if a horse will become an RER case with up to 92% accuracy. Using this information coupled with whole genome sequencing we identified a far more comprehensive set of 27,000 genetic markers for further follow-up in RER cases and controls. In this proposal, we will use genotype data from all 27,000 markers in 2,304 horses to accomplish two important **objectives**:

Experimental Methods.

Objective 1. Refine and validate a genetic test that predicts an individual’s risk for RER. We have developed a genotyping assay that will allow us to quickly determine each horse’s genotype for each of the 27,000 alleles of potential interest. In this we will use these genotypes and statistical modeling in 495 TBs and 476 STDBs to develop a genetic risk model that provides a probability that an individual horse will develop RER. After we have developed this initial model, we will confirm that it is accurate in an independent group of 674 TB and 659 STDB horses already collected.

Aim 2. Identify functional alleles underlying RER susceptibility. We will use the combined genotype data from all 1,169 TB and 1,135 STDB horses from **objective 1** to prioritize alleles with moderate to large effects on RER risk for functional validation, and we will identify the genes and pathways harboring these alleles as targets for novel treatments and/or interventions to prevent RER.

Aim 3. Evaluate RER alleles in a cohort of Quarter Horse racehorses. We also know that tying-up affects Quarter Horse (QH) racehorses. However, the genes identified in the QH that cause tying-up such as the allele for polysaccharide storage myopathy (PSSM), do not occur or occur at very low frequency in racing QH. We hypothesize the genes underlying RER in the TB are shared with the racing QH due to their shared ancestry. In this objective we will collect blood samples from 200-300 racing QHs to determine the frequency of RER in this population and we will evaluate the accuracy of our TB/STDB genetic assay in this breed.

To date, there are no known genetic mutations underlying RER, nor are there published, validated genetic tests for this important disease. The work outlined in this proposal will provide both a genetic test and critical information regarding RER pathophysiology.

Exercise-induced tying-up causes a range of signs from undetectable muscle damage, to mild muscle soreness, to severe and extensive muscle cell damage, to life-threatening sequelae, such as inability to stand and kidney failure. It is now well established that genetics contributes to repeated episodes of tying-up in TB and STDB racehorses, where it is termed RER to distinguish it from sporadic cases of tying-up. RER is an important cause of illness, medical expenses, and loss of training and racing days. In fact, tying-up recurrence is so frequent in ~17% of affected TBs, that after a single bout of rhabdomyolysis, these horses do not race again that season¹. Identification of individuals at risk for RER before the first episode of tying-up will allow owners and trainers to put management and training strategies in place to prevent clinical disease and loss of training and racing days. To date, there are no data describing the frequency of RER in QH racehorses.

Genetic tests offer advantages over clinical diagnosis and muscle biopsy, including being more sensitive and specific and allowing veterinarians to eliminate a surgical biopsy procedure, which in turn decreases morbidity and lost training time. Developing a predictive assay for RER that classifies horses into risk categories and identifying the genes and alleles that contribute to RER risk will improve the management and treatment of horses with RER.

Our goal in this proposal is to develop a risk model that will stratify the population of horses at risk for RER into distinct risk categories that will allow for more refined management, treatment and breeding recommendations². In **Figure 1**, we provide an example of how stratified risk will allow for more specific management recommendations for horses with RER.

The second crucial objective of this proposal is to identify the *genes, specific functional alleles and pathways* underlying RER molecular pathophysiology. Identification of putative functional alleles and the genes/pathways in which these alleles occur will provide further insight into the etiologies of skeletal muscle dysfunction in RER pathophysiology leading to improved treatment strategies³. For an individual horse, the sum of the horse's risk alleles would allow for *disease sub-classification*⁴. When a heterogeneous group of patients can be separated into appropriate sub-types, more effective individualized treatment becomes possible⁵. This is particularly important when disease subtypes point to specific pathophysiology and targeted treatments.

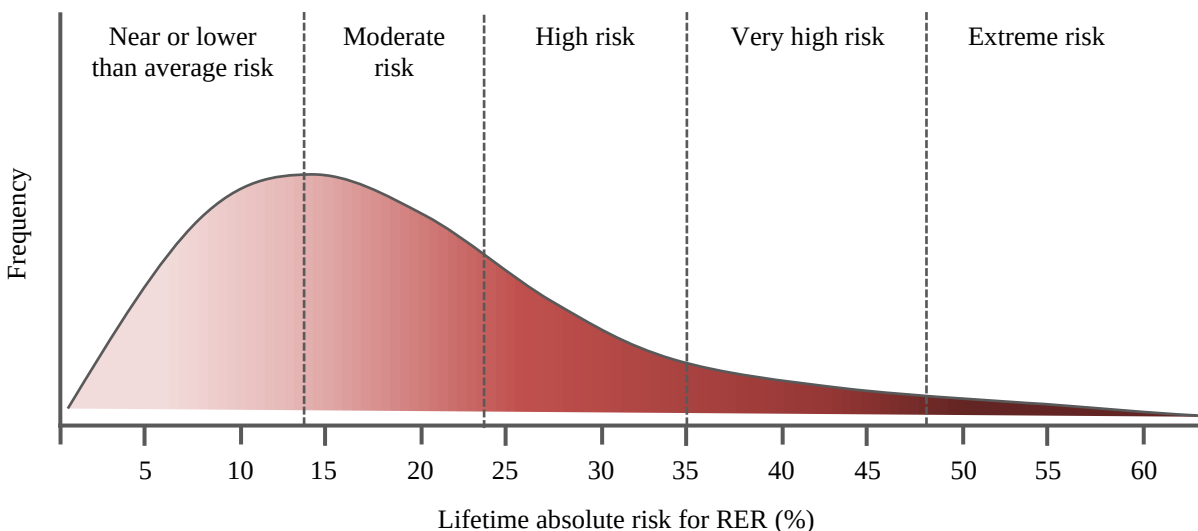
In oligogenic (many-gene), heterogenous forms of exertional rhabdomyolysis in humans, dysfunction in different molecular pathways, or combinations of pathways such as glycogen metabolism, calcium regulation, or mitochondrial protein transport point to different treatment and management strategies⁶⁻¹¹. For example, provision of enzyme cofactors or more distal products in a metabolic pathway can often compensate for decreased enzyme activity¹² and supplementation of taurine can have both short and long term beneficial effects on the control of calcium homeostasis and ion channel function in myopathies that directly or indirectly involve ion channels dysfunction¹³.

A patient's unique combination of genes/alleles can also guide intervention that can be beneficial or contraindicated based on the specific pathways that are disrupted. For example, creatine supplementation has been shown to improve muscle strength and decrease inflammation in patients with skeletal muscle structural weaknesses and inflammatory myopathies, but worsen signs in patients with deficiencies in glycogenolysis¹⁴.

Upon completion of this work we will have identified and validated a set of genetic markers that can be used to estimate the probability that an individual will develop RER, and if the gene alleles underlying RER in TBs and STDBs, also explain RER risk in racing QHs. We will also have the first estimate of the frequency of RER in QH racehorses. This work will create a valid diagnostic test that can be made available to owners, trainers and veterinarians. This RER risk model will allow us to identify individual horses before they tie-up, allowing preemptive management changes to decrease the frequency and severity of their disease.

Figure 1. Hypothetical stratification of disease risk in RER and potential clinical, management and breeding recommendations based on disease risk category.

Average or below average risk	Moderate risk	High risk	Very high risk	Extreme risk
• Normal diet & management for farm/trainer • Change management if tying-up occurs • Return to exercise 7-10 days after episode of tying-up • Breeding risk low	• Feed high fat diet • Monitor muscle enzymes frequently during return to training after tying-up • Breed to individuals with low RER risk	• Feed high fat diet • Monitor muscle enzymes biweekly-monthly during racing season to screen for subclinical muscle damage • Monitor muscle enzymes daily during return to training after tying-up • Consider altering racing and/or training intensity • Consider prophylactic Dantrolene for high-intensity training runs • Breed to individuals with low RER risk	• Feed high fat diet • Monitor muscle enzymes weekly during racing season to screen for subclinical muscle damage • Monitor muscle enzymes daily during return to training after tying-up • Increase length of recovery period after tying-up • Slower return to training and racing after tying-up episode • Consider altering racing and/or training intensity • Consider prophylactic Dantrolene for high-intensity training runs • Consider eliminating from breeding population	• Feed high fat diet • Monitor muscle enzymes frequently for subclinical muscle disease • Consider prophylactic Dantrolene for high-intensity training runs • Consider retirement from racing if clinical and/or subclinical muscle disease persists • Consider delayed castration in males until racing career is over • Eliminate from breeding population



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Detailed Budget and Justification

			Year 1		Year 2		TOTALS
Personnel Costs			% effort	Dollars	% effort	Dollars	
Graduate student (TBD)	Stipend	\$53,000.00	0.50	\$26,500.00	0.25	\$13,250.00	
	Health ins	\$10,547.00	0.50	\$5,274.00	0.25	\$2,637.00	
	Tuition	\$32,854.00	0.50	\$16,427.00	0.25	\$8,213.50	
TOTALS				\$48,201.00		\$24,100.50	\$72,301.50
Research Costs		Cost per horse	Number of horses	Dollars			
DNA isolation		\$5.00	300	\$1,500.00			
Genotyping		\$41.67	288	\$12,000.00			
TOTALS				\$12,000.00			\$12,000
Grand TOTAL						\$84,301.50	

Itemized Budget Justification

Personnel

No salary is requested or allowed for Drs. Molly McCue and James Mickelson who are full time faculty members at the University of Minnesota.

Support for a graduate student, Kirsten Dimmler. Kirsten Dimmler is a new PhD student in our laboratory who started in We are requesting salary and fringe at 50% effort for year 1 and 25% effort for year 2. Kirsten will be responsible for all aspects of this project.

Other research costs

All the research costs for the TB and STDB samples are covered elsewhere. In this proposal, we are asking for support for the student to work on the project and the cost of adding the QH racehorses to project.

Disposable laboratory supplies and DNA isolation. This item is necessary for sample collection and DNA isolation from blood or hair root samples from 288-300 QH race horses at \$5 per horse.

NuGEN genotyping.

Cost per 288 samples

1. Sample QC and normalization = **\$572.23**
2. Fragmentation, ligation, and library preparation = **\$6,332.32**
3. Pooling, probe binding, Extension = **\$509.32**
4. Library amplification and QC = **\$402.88**
5. NovaSeq Sequencing = **\$4,183.25**
6. Total NuGEN assay cost per 288 samples = **\$12,000**; or \$41.67 per sample.

This discounted price comes from NuGEN selling us reagents at cost and not charging for assay design since their aim is to have this project be the first example of using their technology in animal genomics.

AGENDA ITEM

6H

MEMORANDUM

To: Minnesota Racing Commission Racing Committee Members

From: Steve May, Executive Director

Date: April 7, 2021

RE: Information Related to Simulcast Date Fees Reimbursements

At the March 15, 2021 Minnesota Racing Commission ("Commission") Finance Committee meeting, the Finance Committee discussed a request from both pari-mutuel racetracks in Minnesota regarding a refund of fees paid for approved simulcast dates.

Pursuant to 2020 Minnesota Statutes 240.10, "The fee for a class B license is \$500 for each assigned racing day and \$100 for each day on which simulcasting is authorized and must be remitted on July 1." Both racetracks submitted the license fee of \$100 for each day of simulcasting from July 1, 2020 through and including December 31, 2020, with the exception of the December 25, 2020 holiday.

Through various emergency executive orders issued by Governor Tim Walz, simulcasting was not authorized at either pari-mutuel racetrack between November 21, 2020 through and including December 31, 2020. As a result, both pari-mutuel racetracks have requested a refund of the simulcast dates fees submitted to the Commission on July 1, 2020 for days that simulcast wagering was not authorized pursuant to these emergency executive orders.

The Finance Committee requested a final calculation of the request from both pari-mutuel racetracks, which is as follows:

Running Aces dates in which simulcast wagering was not authorized pursuant to emergency executive orders:

November 21, 2020 through December 24, 2020 (34 days)

December 26, 2020 through December 31, 2020 (6 days)

Total number of days (40 days) x \$100/day = \$4,000.00

Canterbury Park dates in which simulcast wagering was not authorized pursuant to emergency executive orders:

November 21, 2020 through December 23, 2020 (33 days)

December 26, 2020 through December 31, 2020 (6 days)

Total number of days (39 days) x \$100/day = \$3,900.00

Commission staff is requesting authorization to instruct with the Small Agency Resource Team to issue a refund of the simulcast license fees for these amounts.

AGENDA ITEM

7

CANTERBURY PARK LOCATION
1100 CANTERBURY ROAD, STE. 100
SHAKOPEE, MN 55379
TELEPHONE: 952-496-7950
FAX: 952-496-7954
WWW.MRC.STATE.MN.US



RUNNING ACES CASINO & RACETRACK LOCATION
15201 ZURICH STREET NE, STE. 212
COLUMBUS, MN 55025-7908
TELEPHONE: 651-925-3951
FAX: 651-925-3953
WWW.MRC.STATE.MN.US

To: Minnesota Racing Commission Members

From: Nicole Edstrom, Thoroughbred and Quarter Horse Breeders' Fund Coordinator/Licensing Clerk, Minnesota Racing Commission

Date: April 6, 2021

Re: **2021 Thoroughbred and Quarter Horse Breeders' Fund Registrations**

Monday, March 15 marked the end of the 2021 thoroughbred and quarter horse mare registration period. Included below are the registration totals for thoroughbred and quarter horse stallions, mares, and foals for the years 2019-2021.

	Thoroughbred Breeders' Fund Registrations			Quarter Horse Breeders' Fund Registrations		
	2019	2020	2021	2019	2020	2021
Stallions	12	13	5	7	8	9
Mares	226	181	144	55	45	49
Foals	185	145	62*	42	37	7*

*** foals will continue to be registered as they are born throughout the summer**

Though the registration numbers are clearly decreasing, the 2021 totals are greater than expected; this is especially surprising considering the widespread misfortunes brought about by COVID-19 and the uncertainty surrounding future agreements between the Shakopee Mdewakanton Sioux Community and Canterbury Park.

I am grateful for the continued loyalty of our Minnesota breeders and am pleased to report the addition of six new breeders in 2021; including one individual based in New Hampshire who has sent seven mares to foal in Minnesota.

I look forward to continuing to work closely with Minnesota-bred breeders and owners as well as breeding and foaling facilities, and hope to see new opportunities for additional funds that will incentivize participation in the Breeders' Fund.

AGENDA ITEM

8B



Canterbury Park - March 2021

Minnesota Racing Commission Status Report

Summary of Canterbury Park Card Casino Operations

Business Segment	2021		2020		% Comparison		
	March	Year-to-Date	March	Year-to-Date	March	Year-to-Date	Segment
Table Games	\$2,228,472	\$5,224,347	\$1,023,740	\$5,419,940	117.68%	-3.61%	Table Games
Poker	\$714,747	\$1,639,947	\$372,507	\$2,141,232	91.87%	-23.41%	Poker
Total Card Casino Revenue	\$2,943,219	\$6,864,294	\$1,396,247	\$7,561,172	110.80%	-9.22%	Total CC

Summary of Canterbury Park Player Pool

CPE Minimum Player Pool Balance	Jackpot Balances	\$520,815	25% MVP Balance	\$135,326	.25% Trailing TG Revenue	\$56,023
					CPE Minimum Player Pool Balance 3/31/21	\$712,164
CPE Maximum Player Pool Balance	Jackpot Balances	\$520,815			6% Trailing TG Revenue	\$1,344,563
					CPE Maximum Player Pool Balance 3/31/21	\$1,865,378
CPE Actual Player Pool Balance			CPE Actual Player Pool Balance as of 3/31/21			\$1,442,876

Summary of Canterbury Park Pari-Mutuel Operations

Business Segment	2021		2020		% Comparison		
	March	Year-to-Date	March	Year-to-Date	March	Year-to-Date	Segment
Live Handle	\$0	\$0	\$0	\$0	N/A	N/A	Live Handle
Simulcast Handle	\$1,721,620	\$4,101,785	\$1,100,273	\$4,921,142	56.47%	-16.65%	Simulcast
Total On-Track PM Handle	\$1,721,620	\$4,101,785	\$1,100,273	\$4,921,142	56.47%	-16.65%	Total On-Track
Out-of-State Handle	\$0	\$0	\$0	\$0	N/A	N/A	Out-of-State

Summary of Canterbury Park & SMSC Purse Accounts

Beginning CPE TB Purse Balance	3/1/2021	\$2,588,163.38
Live Racing Purse Earnings		\$0.00
CPE Simulcast Purse Earnings (82% During Mixed Meet)		\$90,161.72
Running Aces Simulcast Purse Earnings		\$21,642.12
Card Casino Purse Earnings (91%)		\$269,376.90
Out-of-State Host Fee Purse Earnings		\$0.00
ADW Purse Earnings from Prior Month (67% of 82%)		\$27,184.20
Interest Earned (Service Charges)		\$122.87
(Minnesota HBPA Admin Fees Paid)		(\$35,000.00)
(Thoroughbred Purse Transfers)		\$0.00
Ending CPE TB Purse Balance	3/31/2021	\$2,961,651.19
Ending CPE TB Purse Balance	3/31/2020	\$1,474,027.90
CPE TB Purse Balance Difference 2021 vs 2020		\$1,487,623.29

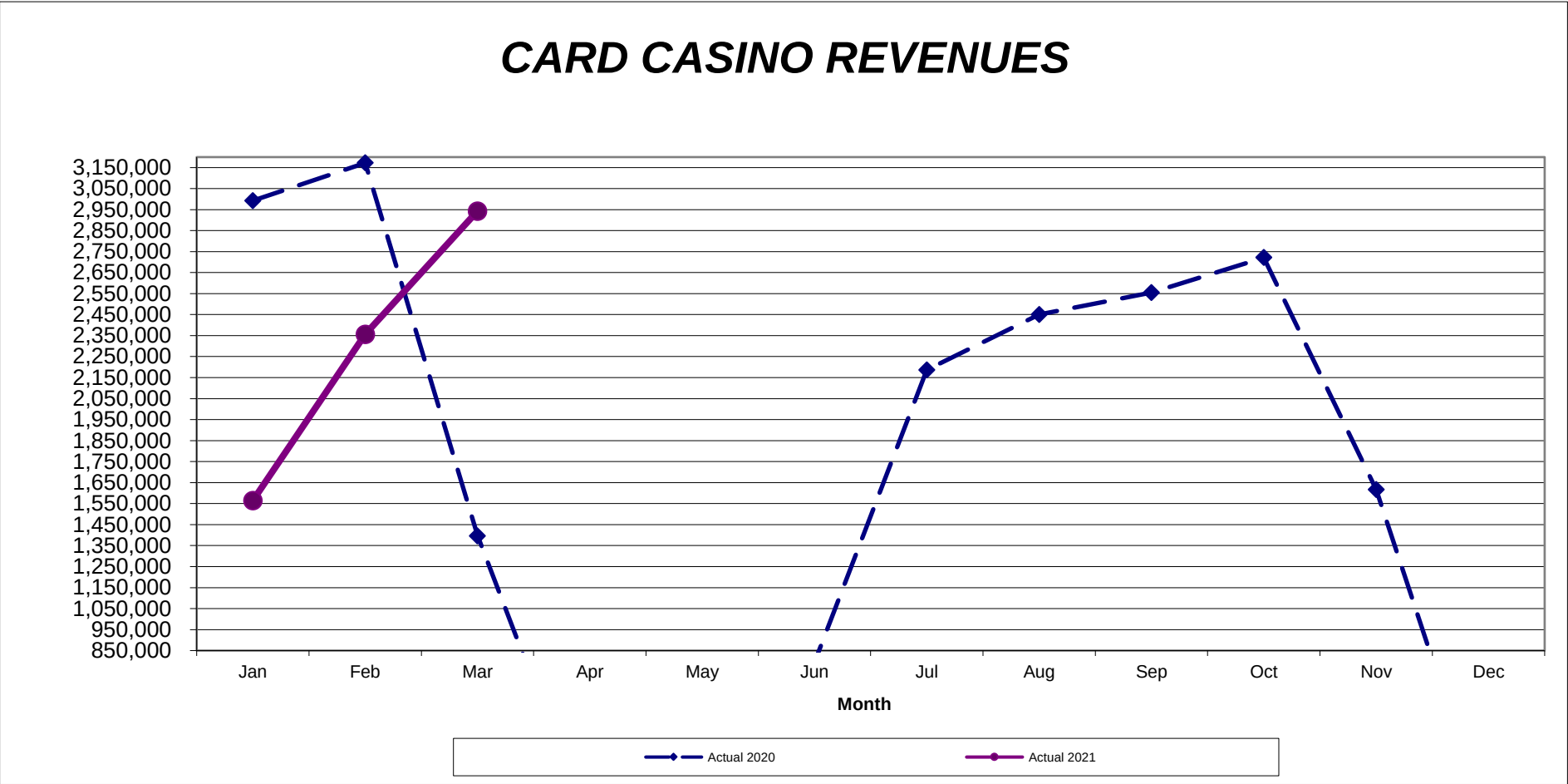
Beginning CPE QH Purse Balance	3/1/2021	\$331,130.23
Live Racing Purse Earnings		\$0.00
CPE Simulcast Purse Earnings (18% During Mixed Meet)		\$2,803.20
Running Aces Simulcast Purse Earnings		\$322.08
Card Casino Purse Earnings (9%)		\$26,641.67
Out-of-State Host Fee Purse Earnings		\$0.00
ADW Purse Earnings from Prior Month (50% of 18%)		\$4,453.18
Interest Earned (Service Charges)		\$0.00
(MN Quarter Horse Racing Association Admin Fees Paid)		\$0.00
(Quarter Horse Purse Transfers)		\$0.00
Ending CPE QH Purse Balance	3/31/2021	\$365,350.37
Ending CPE QH Purse Balance	3/31/2020	\$155,178.15
CPE QH Purse Balance Difference 2021 vs 2020		\$210,172.22

Beginning SMSC TB Purse Balance	3/1/2021	\$37.27
SMSC Contributions & Interest Earnings (89%)		\$0.00
SMSC Thoroughbred Purses Paid		\$0.00
Ending SMSC TB Purse Balance	3/31/2021	\$37.27
Ending SMSC TB Purse Balance	3/31/2020	\$641,807.82
SMSC TB Purse Balance Difference 2021 vs 2020		(\$641,770.55)

Beginning SMSC QH Purse Balance	3/1/2021	\$4.61
SMSC Contributions & Interest Earnings (11%)		\$0.00
SMSC Quarter Horse Purses Paid		\$0.00
Ending SMSC QH Purse Balance	3/31/2021	\$4.61
Ending SMSC QH Purse Balance	3/31/2020	\$272,191.87
SMSC QH Purse Balance Difference 2021 vs 2020		(\$272,187.26)

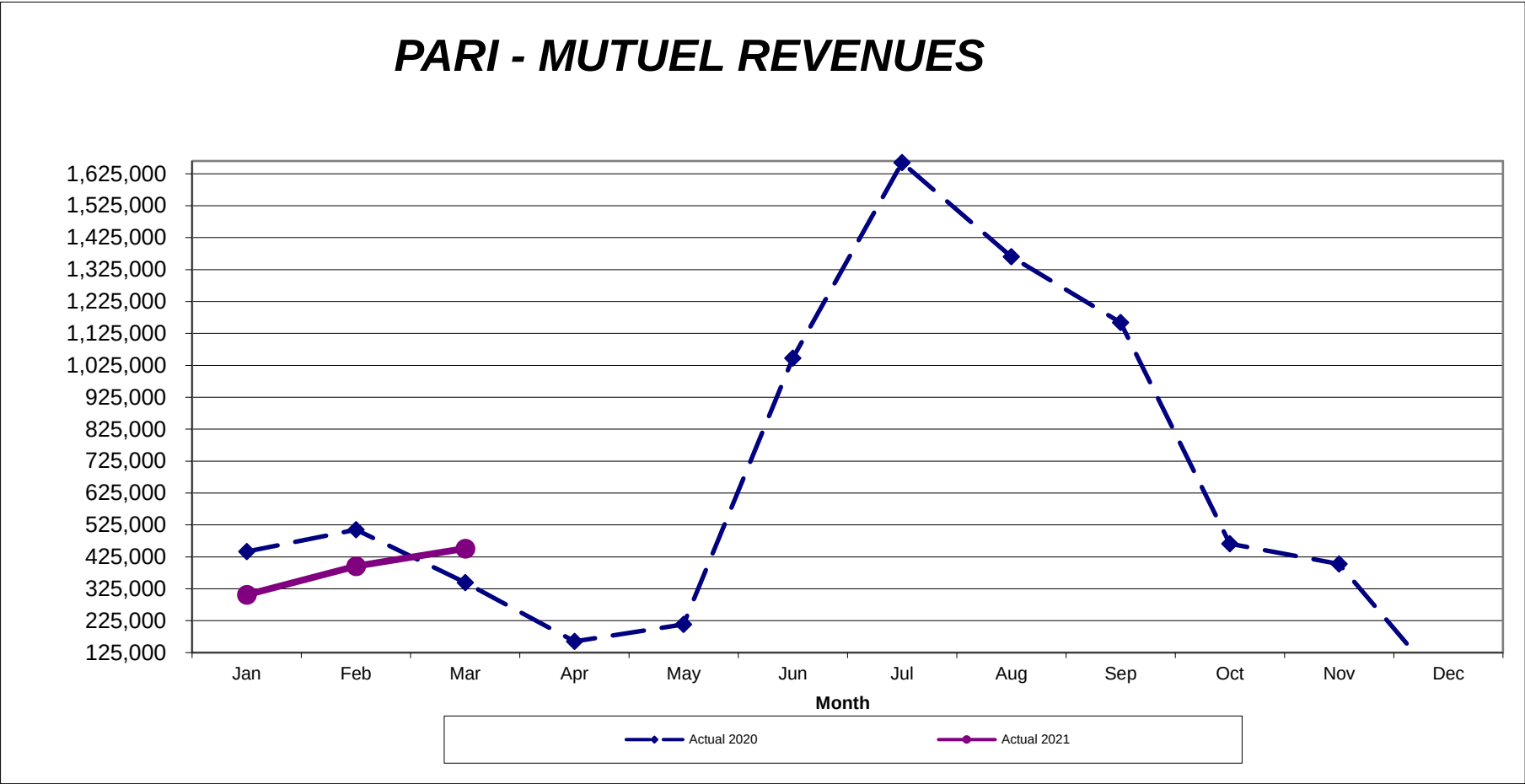
CANTERBURY PARK - CPE
Card Casino Revenue - Trend

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>YTD Total</u>
Actual - 2020	2,992,752	3,172,174	1,396,246	-	-	795,194	2,186,413	2,450,255	2,554,940	2,721,436	1,616,452	-	7,561,172
Actual - 2021	1,564,348	2,356,728	2,943,218										6,864,294



CANTERBURY PARK - CPE
Pari-Mutuel Revenue - Trend

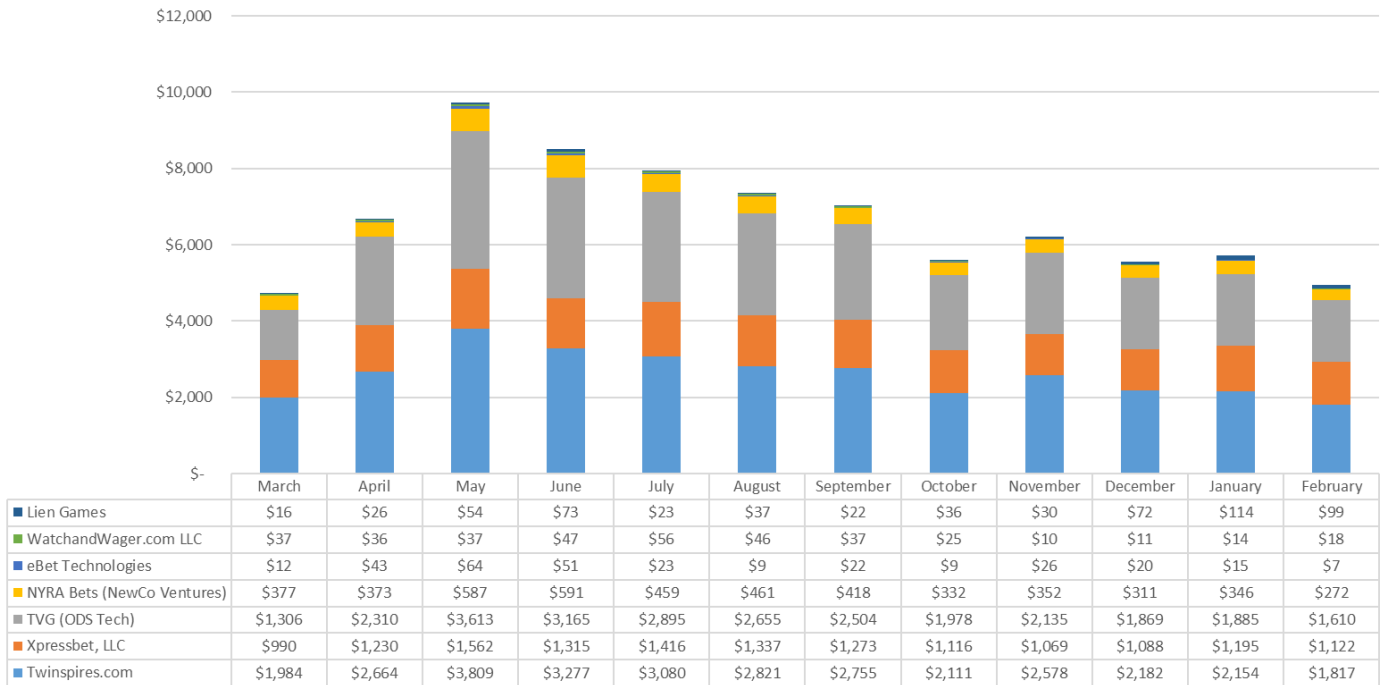
	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>YTD Total</u>
Actual - 2020	441,696	509,949	344,381	159,865	213,522	1,047,197	1,660,012	1,365,475	1,159,045	466,131	402,863	-	<u>1,296,026</u>
Actual - 2021	306,119	395,952	451,262										<u>1,153,333</u>



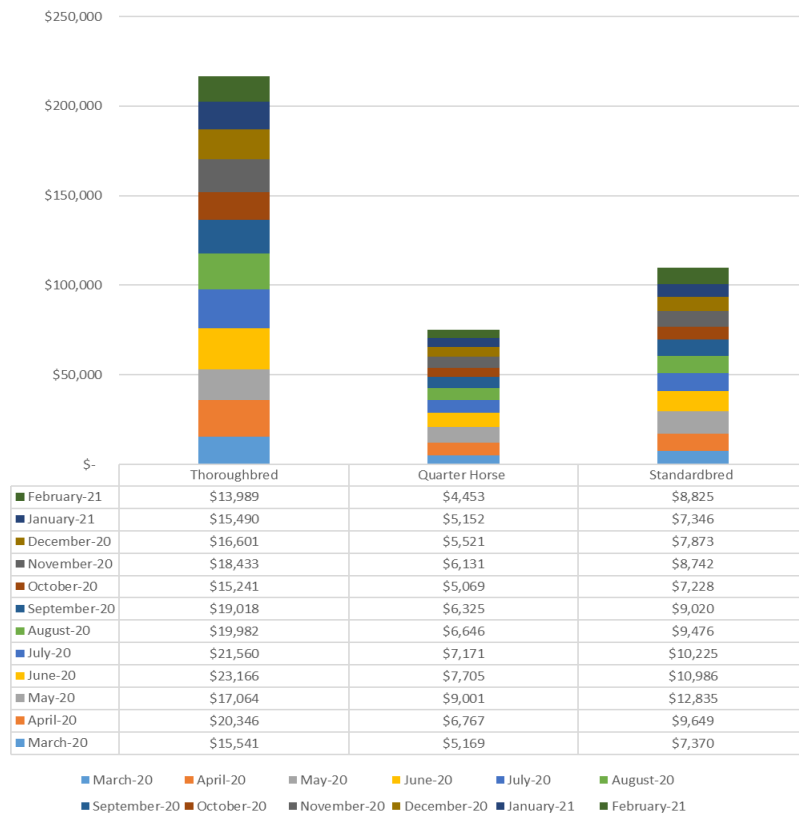
AGENDA ITEM

10A

ADW Handle by Minnesota Residents (000)



Incremental Breeders Awards via ADW



AGENDA ITEM

11D

Minnesota Racing Commission

March 2021 Licensing Report

Class C Applications Processed @ Canterbury Park: **52**

Class C Applications Processed @ Running Aces: **32**

Class C Large Gaming/Racing Vendors: **4**

Class C Small Gaming/Racing Vendors: **0**

Class C Non-Gaming/Racing Vendors: **9**

Class C Licensing Fees for Month: **\$13,815**

Fingerprint Fees for Month: **\$825**

(Fingerprint fees are forwarded to Public Safety for processing reports)

Fines Collected FYTD as of 3/11/2021: **\$32,175**

ARTICLES OF INTEREST

Equine program engages students, impacts racing industry

Times Report Crookston Times

The Minnesota thoroughbred industry foals out between 150-200 foals each year across Minnesota. These foals become a part of an industry that brings \$409 million in economic impact to the state, per a 2017 University of Minnesota economic impact report.

“We are foaling out 10 mares this year, three of those mares are quarter horses and the other seven are thoroughbreds,” said Morgan Pyles, UMN Crookston equine lecturer.

“When students at the University of Minnesota Crookston participate in the foaling out of a Minnesota registered thoroughbred racehorse, they not only have a valuable equine in their care, they also have the future hopes and dreams of thoroughbred racehorse owners and breeders in their hands,” added Joe Scurto, executive director at Minnesota Racehorse Engagement Project.

The opportunities in the thoroughbred industry include employment in reproduction, nutrition, track management, and opportunities in the racing industry itself include all of that and then some for graduates in UMN Crookston’s criminal justice, horticulture, turfgrass and landscape degrees.

“All of those things happen at a racetrack and relationships with the racing industry, while highly regulated, has much to offer our graduates,” said Jonathon Holland.

Holland, a 1995 UMN Crookston alum who now works in enrollment management, has a degree in equine science and is a former instructor and extension educator. Holland and his two colleagues, Nicky Overgaard, UMN Crookston equine lecturer and Christy Doyea, UMN Crookston barn manager, collaborate often to identify ways to engage students in the work that they love. “Spend the time and effort to take advantage of the opportunities and learn from the instructors,” Holland says.

“All registered Minnesota-bred thoroughbreds must be born in the state and their mares must arrive no later than March 15th each year,” Scurto explained. These broodmares come from a wide array of backgrounds, Scurto went on to say. Some broodmares have had successful racing careers themselves and some have royal bloodlines but have never competed on the racetrack.

Holland said the foaling service is competitive and affordable. “UMN Crookston maintains the service by being competitive with other facilities that have foaling services,” he said.

Crookston’s faculty use this opportunity as a teaching and learning experience, at \$350 per foal, we desire to provide the best service to our clients while engaging students in real life training,” Overgaard said.

Pyles will transition to an assistant professor in August. She recently joined the Crookston campus and will complete her Ph.D. from the University of Kentucky in May.

“UMN Crookston’s equine program offers a range of equine science and equitation courses. I am teaching a variety of equine classes, including equine exercise physiology, reproduction, horse production and western equitation,” she said. “Watching foals grow and develop is very satisfying to me; most of my research has been with mares and foals, and let me tell you, I have gained a lot of respect for these broodmares.”

According to the Minnesota Racehorse Engagement Project, owners of thoroughbred broodmares typically receive 10% of the earnings of their progeny. “In a typical year, a Minnesota broodmare can receive a few hundred to over \$10,000 per foal they produced,” said Scurto. A successful broodmare that produces 5-7 successful racehorses can provide an annuity to their owners of more than \$30,000 per year, he added.

The ten mares foaling out on the Crookston campus include four thoroughbreds from South Dakota, six from North Dakota, with three thoroughbreds and three quarter horses. Staff say Crookston’s campus location is best positioned for breeders from Canada, North Dakota, and South Dakota. “To have mares foal in Minnesota and be qualified for Minnesota-bred purses is great for the industry and our students,” Holland noted.

Each year these Minnesota-foaled and registered thoroughbreds win over \$5 million for their owners racing at Canterbury Park in Shakopee. Many of these horses go on to compete nationally, including Minnesota favorite, Mr. Jägermeister, a six-year-old who has won 11 races and accumulated over \$600,000 in earnings to date.

Minnesota-registered broodmares have been paired with successful local sires like Kela, as well as world-renowned champion sires across the country. There currently is a three-year-old Minnesota foaled colt, Sota King, whose sire was triple crown winner American Pharoah. Owners typically pay between \$5,000 and \$100,000 in stud fees for their broodmares to find the right recipe for success to breed a future champion.

Scurto said the beginning moments of a racehorse’s life can make all the difference in its success on the racetrack. As the relationship continues to expand between the University of Minnesota Crookston’s Equine programs and the Minnesota horse racing industry, he noted, the larger impact students will have on the industry.