

INTERNATIONAL CONFERENCE 2025
**Applying SCIENCE to the CARE of the
THOROUGHBRED RACEHORSE**
15-17 DEC | HKSAR, CHINA

Last Update: 1 December 2025

List of Conference Posters

Artificial intelligence for arrhythmia detection in racehorses: pilot evaluation of a human cardiac algorithm

Presenting Author: Kapusniak, A.¹

Authors: Nath, L.¹, Hitchens, P.², Bailey, S.², Mohamad, R.³, Bollam, L.³, and Franklin S.¹

¹ School of Animal & Veterinary Sciences, University of Adelaide, South Australia, Australia,

² Melbourne Veterinary School, University of Melbourne, Victoria, Australia,

³ Alerte Digital Health/Alerte Equine Science, Melbourne, Victoria, Australia

Investigating Third Metacarpal Shape and Density Asymmetries in Clockwise Racing Thoroughbreds

Presenting Author: A Koshyk¹

Authors: M Abbadi¹, S Smalley², M Wong², WB Edwards¹

¹ University of Calgary, ² The Hong Kong Jockey Club

Euthanasia in Thoroughbred horses in the UK informed by health informatics

Presenting Author: A Lawson

Authors: J Green, G Pinchbeck

Institute of Infection, Veterinary and Ecological Sciences, University of Liverpool, Neston, UK

Regional variations in the equine microbiome: a pilot study of thoroughbreds in Hong Kong

Presenting Author: BM Worthington¹

Authors: MP Pierce², PIT Lau³, TTY Lam¹

¹ The University of Hong Kong, School of Public Health; Laboratory of Data Discovery for Health; Performance X Ltd.,

² The University of Hong Kong, School of Public Health; Performance X Ltd.,

³ Agriculture, Fisheries and Conservation Department, Inspection and Quarantine Branch, Equine Disease and Residues Control Division

Does Vitamin D have a role to play in Recurrent Exertional Rhabdomyolysis (RER)?

Presenting Author: Maile, C. A.¹

Authors: Williamson, S.², Winning, J. C.² & Lanham-New, S.A.³

¹ Department of Veterinary Clinical Sciences, School of Veterinary medicine, Faculty: Health & Medical Sciences, University of Surrey, UK,

² Newmarket Equine Hospital, Newmarket, UK,

³ Discipline: Nutrition, Exercise, Chronobiology & Sleep, School of Biosciences, Faculty: Health & Medical Sciences, University of Surrey, UK

Cardiac arrhythmias detected immediately after racing in the United Kingdom: A Retrospective Case-Control Study

Presenting Author: Dhruvpal Singh Anchan¹

Authors: Celia Marr², Sally Taylor³, Kamalan Jeevaratnam¹, Giovanni Lo Iacono¹

¹ School of Veterinary Medicine, University of Surrey, Daphne Jackson Rd, Guildford GU2 7AL,

² Rosssdales Veterinary Surgeons, Newmarket, Suffolk, CB8 7NN, UK,

³ British Horseracing Authority, Holborn Gate, 26, Southampton Buildings, London. WC2A 1AN

Cardiac Phenotyping and Three-Dimensional Electro-Anatomical Mapping of Adult Horses with and without Mitral Valve ProlapsePresenting Author: E Williams Louie¹Authors: W Hsue¹, R Pariaut¹, SB Mintz¹, A Saljic², JT Butcher¹, R Taylor¹, KJ Mitchell¹¹ Cornell University, ² The University of Copenhagen**Smaller superficial digital flexor tendon cross sectional area associated with increased injury in racing Thoroughbreds in Hong Kong**Presenting Author: EV Sykes¹Authors: SM Rosanowski², H Randle³, CM Steel⁴, CM Riggs⁴, AV Morrice-West⁵, BJ Ahern¹, W Goodwin¹, RSV Parkes⁴¹ The University of Queensland, ² AgResearch Limited, ³ Charles Sturt University, ⁴ The Hong Kong Jockey Club, ⁵ The University of Melbourne**The use of the delta electrocardiography configuration and vectorcardiography to identify the site of origin of focally induced premature depolarizations in horses.**Presenting Author: G. Van Steenkiste¹Authors: E. Paulussen¹, E. Buschmann¹, I. Vernemmen¹, M. Demeyere¹, A. Decloedt¹, T. Delhaas², G. van Loon¹¹ Equine Cardioteam Ghent, Department of Internal Medicine, Reproduction and Population Medicine, Faculty of Veterinary Medicine, Ghent University, Belgium,² Department of Biomedical Engineering, Cardiovascular Research Institute Maastricht (CARIM), Maastricht University, The Netherlands**Comparison of hydrogels, hyaluronic acid and triamcinolone on cytokine-stimulated nitric oxide and glycosaminoglycan release in equine cartilage explants**Presenting Author: H Reesink^{1,2}Authors: E Secor¹, M Thomas¹, E Chu¹, S Hazzard¹, S Raimondi¹¹ Cornell University, Ithaca, NY, ² University of California Davis, Davis CA**Bridging Species with AI: Transfer Learning for Fetlock Fractures Detection in Racehorses**Presenting Author: HT Ahmed¹Authors: D Berner¹, K Verheyen¹, BS Forbes², Q Zhang³, YM Chang¹¹ Royal Veterinary College, ² The Hong Kong Jockey Club, ³ Queen Mary University of London**Predicting Fetlock Fracture Risk in Thoroughbreds: AI-Driven Anomaly Learning from Pre-Fracture Imaging**Presenting Author: HT Ahmed¹Authors: D Berner¹, K Verheyen¹, BS Forbes², Q Zhang³, YM Chang¹¹ Royal Veterinary College, ² Hong Kong Jockey Club, ³ Queen Mary University of London**Multi-Platform Metabolomic Profiling of Equine Synovial Fluid Reveals Biomarkers for Osteoarthritis**

Presenting Author: JR Anderson

Authors: BP Norman, MC Lloydlangston, MM Phelan, EJ Clarke, JD Stack, A Ustinova, MJ Peffers

University of Liverpool

Gut Microbiota Changes and Plasma Metabolomic Profiling During Estrous Cycle in Healthy Thoroughbred MaresPresenting Author: Junjie Li¹Authors: Haruka Toyama¹, Touko Matsumoto¹, Mohammad Ibrahim Qasimi¹, Ryo Inoue², Harutaka Murase³, Yuki Yamamoto¹, Kentaro Nagaoka¹¹ Laboratory of Veterinary Physiology, Department of Veterinary Medicine, Tokyo University of Agriculture and Technology, Tokyo, Japan,² Laboratory of Animal Science, Department of Applied Biological Science, Setsunan University, Osaka, Japan,³ Hidaka Training and Research Center, Japan Racing Association, Hokkaido, Japan**Protein analysis of formalin-fixed lung tissue from Thoroughbred racehorses with Exercise-induced pulmonary haemorrhage**Presenting Author: KS Lambon¹Authors: MA Turrubiate¹, E Cillán-García², J Mizzi³, K Jeevaratnam¹, S Armstrong¹¹ School of Veterinary Medicine, University of Surrey, GU2 7AL, Surrey, UK,² Esk Veterinary Consultants Ltd,³ Department of Veterinary Regulation, Welfare and Biosecurity Policy, The Hong Kong Jockey Club, Sha Tin Racecourses, New Territories, HKSAR, China**Doxapram successfully converts horses with acute but not chronic atrial fibrillation**

Presenting Author: KJ Mitchell,

Authors: EG Williams Louie, W Hsue, S Mintz, R Pariaut

Cornell University

Prevalence and characterization of 18F-NaF PET findings of the proximal sesamoid bones in 296 Thoroughbred racehorsesPresenting Author: Koppány Boros¹Authors: Mathieu Spriet², Joe Dowd³, Jeff Blea⁴, Chip Johnson⁵, Will Farmer⁶¹ Department and Clinic of Equine Medicine, University of Veterinary Medicine Budapest, Ullo Dora major, Hungary,² Department of Veterinary Surgical and Radiological Sciences, University of California Davis, Davis, CA, USA,³ Southern California Equine Foundation, Arcadia, CA, USA,⁴ Equine Medical Director, University of California Davis, School of Veterinary Medicine, Davis, CA, USA,⁵ Private Practice, Taylorsville, KY, USA,⁶ Churchill Downs Inc, Louisville, KY, USA**Longitudinal computed tomographic and magnetic resonance imaging evaluation of bone density changes in the metacarpal condyles of Thoroughbred racehorses**Presenting Author: K Boros¹Authors: D Pollard², A Nagy¹¹ Department and Clinic of Equine Medicine, University of Veterinary Medicine Budapest, Hungary,² The Rodhams, Rodham Road, Wisbech, United Kingdom**Behavioural responses of Thoroughbred racehorses to the application and use of a novel inspiratory muscle training device**Presenting Author: LE Fitzharris¹Authors: MJ Hezzell², AK McConnell³, KJ Allen²¹ Equine Sports Medicine Analytics, ² University of Bristol, ³ Independent Consultant

Spontaneous blink rate as an indicator of positive affective state in horses

Presenting Author: Lilian Alexander,
Authors: C Henshall, E Bradshaw-Wiley, H Randle
Charles Sturt University

Modelling the impact of training practices on subchondral bone adaptation and microdamage in racehorses

Presenting Author: M Pan¹
Authors: F Malekipour¹, P Pivonka², AV Morrice-West¹, JA Flegg¹, R Whitton¹, PL Hitchens¹
¹ The University of Melbourne, ² Queensland University of Technology

Implementation of an online raceday veterinary examination reporting system in New Zealand Thoroughbred racing.

Presenting Author: MJ Gibson
Authors: KA Legg, EK Gee, CW Rogers
School of Veterinary Sciences, Massey University, Private Bag 11-222, Palmerston North 4442, New Zealand

Poor Welfare as a Potential Factor Affecting Racehorse Performance

Presenting Author: N Hennes¹
Authors: A Ruet^{2,3}, Romane Phelipon², Arnaud Duluard⁴, Hélène Bourguignon⁵, Léa Lansade²
¹ INRAE, CNRS, University of Tours, PRC, 37380, Nouzilly, France & French Federation for Horse Racing, Paris, France,
² INRAE, CNRS, University of Tours, PRC, 37380, Nouzilly, France,
³ IFCE, 4940, Saumur, France,
⁴ Société d'Encouragement à l'Élevage du Trotteur Français, Paris, France,
⁵ French Federation for Horse Racing, Paris, France

Multi-omics approach to investigate the impact of training on equine systemic immunity

Presenting Author: Omar A. Alfituri¹
Authors: Nicholas Parkinson¹, Dominic Kurian¹, Carly YQ Liu², Catherine Steel², Anna E. Karagianni¹, Robert S. Pirie¹
¹ The University of Edinburgh, ² The Hong Kong Jockey Club

Relationship between hoof conformation and fetlock injuries of thoroughbred racehorses using computed tomography.

Presenting Author: Peta L. Hitchens¹
Authors: Fernando Mosquera Jaramillo^{1,2}, Raquel Yvonne Arantes Baccarin², R. Chris Whitton¹
¹ Equine Centre, Melbourne Veterinary School, Faculty of Science, University of Melbourne, Werribee, VIC 3030, Australia,
² Department of Internal Medicine, School of Veterinary Medicine and Animal Science University of São Paulo, SP, Brazil

Advancing Racehorse Welfare Through Evidence-Based Assessments

Presenting Author: R Annan¹
Authors: L Trigg², K Allen², J Hockenhull², M Valenchon², S Mullan¹
¹ University College Dublin, ² University of Bristol

Born to run? Association between gestational and early-life exposures and later-life performance outcomes in ThoroughbredsPresenting Author: R. Mouncey¹Authors: A.M. de Mestre², J.C. Arango-Sabogal³, K.L. Verheyen¹¹ Department of Pathobiology and Population Sciences, Royal Veterinary College, Hawkshead Lane, North Mymms, Hatfield, Hertfordshire, AL9 7TA, United Kingdom,² Baker Institute for Animal Health, College of Veterinary Medicine, Cornell University, United States of America,³ Département de Pathologie et Microbiologie, Faculté de Médecine Vétérinaire, Université de Montréal, Saint-Hyacinthe, Québec, Canada**Risk factors for long-term injury in British flat racing**Presenting Author: SE Allen¹Authors: S Taylor², J Given², KLP Verheyen¹¹ Department of Pathobiology and Population Sciences, Royal Veterinary College, Hawkshead Lane, Hatfield, Hertfordshire, AL9 7TA, UK,² British Horseracing Authority, 26 Southampton Buildings, High Holborn, London, WC2A 1AN, UK**Descriptive epidemiology of long-term injuries in Jump racing Thoroughbreds in Great Britain**Presenting Author: S McDonald¹Authors: K.L.P. Verheyen¹, Y.M. Chang², S.E. Allen¹¹ Department of Pathobiology and Population Sciences, Royal Veterinary College, London, UK,² Department of Comparative Biomedical Sciences, Royal Veterinary College, London, UK**Outcomes following race-related long-term injury in Jump racing Thoroughbreds in Great Britain**Presenting Author: S McDonald¹Authors: K.L.P. Verheyen¹, Y.M. Chang², S.E. Allen¹¹ Department of Pathobiology and Population Sciences, Royal Veterinary College, London, UK,² Department of Comparative Biomedical Sciences, Royal Veterinary College, London, UK**Molecular Detection of Equine Herpesvirus-5 in Hubei, China: A Baseline Survey with Implications for Respiratory Health Surveillance**

Presenting Author: Siyu Xiao

Authors: Ruizhi Luo, Jia He, Wenjing Zhao, Lei Yang, Wanying Peng

Huazhong Agricultural University

Bisphosphonates detected in cadaveric bone from 31% of NY Thoroughbred racehorses (2019–2022), with good concordance between appendicular and axial skeletal sitesPresenting Author: Thomas O C. Ratcliffe¹Authors: Machiel P. Ysebaert¹, Garrett B. Pearson¹, Sean P. McDonough², Scott E. Palmer^{2,3}, Heather Knych⁴, Heidi L. Reesink^{1,5}¹ Department of Clinical Sciences, College of Veterinary Medicine, Cornell University, Ithaca, NY,² Department of Population Medicine and Diagnostic Sciences, College of Veterinary Medicine, Cornell University, Ithaca, NY,³ New York State Gaming Commission, Schenectady, NY,⁴ K.L. Maddy Equine Analytical Chemistry Laboratory, CAHFS-UC Davis, Davis, CA,⁵ Department of Surgical and Radiological Sciences, School of Veterinary Medicine, University of California, Davis, Davis, CA

From risk factors to risk profiling – has prediction and therefore prevention become reality?Presenting Author: T Zuffa¹Authors: ED Bennet², BS Forbes³, KH Lam³, BD Stewart⁴, AW Dowsey¹, TDH Parkin¹¹ University of Bristol, Bristol Veterinary School,² University of Glasgow, School of Biodiversity, One Health and Veterinary Medicine,³ The Hong Kong Jockey Club, Department of Veterinary Regulation, Welfare and Biosecurity Policy,⁴ The Hong Kong Jockey Club, Department of Veterinary Clinical Services**Antiarrhythmic effect of ketodoxapram on induced self-sustained atrial fibrillation in horses.**Presenting Author: L.M. Verhaeghe¹Authors: G. Van Steenkiste¹, A. Decloedt¹, I. Vernemmen¹, E. Buschmann¹, M. Demeyere¹, L. Heirman¹, S. De Meyer⁵, F. Wiedmann^{2,3,4}, C. Schmidt^{2,3,4}, G. van Loon¹¹ Equine Cardioteam Ghent, Department of Internal Medicine, Reproduction and Population Medicine, Faculty of Veterinary Medicine, Ghent University, Belgium,² Department of Cardiology, University of Heidelberg, Heidelberg, Germany,³ DZHK (German Center for Cardiovascular Research), partner site Heidelberg /Mannheim, University of Heidelberg, Heidelberg, Germany,⁴ HCR, Heidelberg Center for Heart Rhythm Disorders, University of Heidelberg, Heidelberg, Germany,⁵ Department of Plant Biotechnology and Bioinformatics, Ghent University, Belgium**How does walking and trotting over ground and raised poles influence equine spinal kinematics?**Presenting Author: Walker, V.¹Authors: Slosman, C.¹, Pickett, M.¹, MacKechnie-Guire, R.¹, Deckers, I.¹, te Moller, N.², Tabor, G.¹, Winfield, J.¹, Murray, R.³, Maddock, C.¹¹ Hartpury University, Gloucester, GL19 3BE, UK, ² Utrecht University, Utrecht, 3584 CM, The Netherlands,³ Ibikus Ltd, Bury St Edmunds, UK**Walking and trotting over ground and raised poles: effect of speed on equine spinal kinematics**Presenting Author: Walker, V.¹Authors: Slosman, C.¹, Pickett, M.¹, MacKechnie-Guire, R.¹, Deckers, I.¹, te Moller, N.², Tabor, G.¹, Winfield, J.¹, Murray, R.³, Maddock, C.¹¹Hartpury University, Gloucester, GL19 3BE, UK, ²Utrecht University, Utrecht, 3584 CM, The Netherlands,³ Ibikus Ltd, Bury St Edmunds, UK**Horse outcomes following major orthopaedic injury in Thoroughbred flat racing in Victoria, Australia (2014 – 2023).**Presenting Author: W Williamson¹Authors: A Shaker², PL Hitchens¹, C Kettle², A Morrice-West¹¹ The University of Melbourne, ² La Trobe University**Isolation, Identification, and Antimicrobial Resistance Analysis of ESBL-Producing Escherichia coli from Thoroughbred Racehorses in Chinese Mainland**Presenting Author: YH WU^{1,2}Authors: CX ZHANG¹, L YANG¹, B LIU¹, J LI^{1,3,2}¹ College of Veterinary Medicine, China Agricultural University,² Dongfangmadu Equine Teaching Hospital, College of Veterinary Medicine, China Agricultural University,³ National Key Laboratory of Veterinary Public Health Safety

Real-Time Racehorse Behaviour Monitoring and Health Management Using Wearable Sensors and Deep Learning

Presenting Author: Zhaojin Guo

Authors: Chuanyi Guo, Zheng He, Li Lyu, Kai Liu

Jockey Club College of Veterinary Medicine and Life Sciences, City University of Hong Kong

Direction-Dependent Gait Asymmetry During Lunging in Retired Thoroughbred RacehorsesPresenting Author: ZYS Chan¹Authors: K Garcia¹, W Ho², R Parkes², B Forbes², T Pfau¹¹ University of Calgary, ² The Hong Kong Jockey Club**Characterization of the Fecal Microbiome of Healthy Thoroughbred Mares in the Pre-Pasture Season**Presenting Author: Agnieszka Pomorska-Zniszczyńska¹Authors: B.Kaczmarek¹, M. Kunstman¹, M.Adamczyk², G. Kunstman²¹ University of Life Science in Lublin, ² Stark Tech Sp. Z o.o. Kraków**Protective boots significantly reduce the risk of digital flexor tendon laceration of the forelimbs in British racing**

Presenting Author: Amy Hawthorn

Authors: A Siwik, S Taylor, C Roberts

British Horseracing Authority, Holborn Gate, 26 Southampton Buildings, London WC2A 1AN

Investigating the transcriptomic signature of equine recurrent exertional rhabdomyolysis in blood and muscle tissue using single nuclei and bulk RNA sequencingPresenting Author: A. Psifidi¹Authors: E. Attree¹, C. Cuffe¹, H. Hodges¹, M. McCue², E. Clark³, R. J. Piercy¹¹ Royal Veterinary College, Clinical Science and Services, Hatfield, United Kingdom,² University of Minnesota, College of Veterinary Medicine, Minnesota, United States,³ The Roslin Institute, The Royal (Dick) School of Veterinary Studies, Scotland, United Kingdom and The European Bioinformatics Institute, Cambridge, United Kingdom**Evolution of subchondral bone indentations and defects in the metacarpophalangeal joint of young Thoroughbred racehorses: a longitudinal comparative imaging study**Presenting Author: A Nagy¹Authors: K Boros¹, S Dyson²¹ University of Veterinary Medicine Budapest, ² Independent Consultant**Wearable continuous fitness tracker device coupled with omics to evaluate thoroughbred race horse resilience and adaptation to heat and exercise stresses**Presenting Author: F Beccati²Authors: S Mecocci¹, E Porzio¹, M Pepe², G Chillemi³, E Chiaradia¹, K Cappelli²¹ Department of Veterinary Medicine, University of Perugia, Perugia, Italy,² Sports Horse Research Center, Department of Veterinary Medicine, University of Perugia, Italy,³ Department of Experimental Medicine, University of Rome, Rome, Italy**Equine squamous gastric disease does not affect stride length and selected physiological parameters in Thoroughbred racehorses under race-like conditions.**Presenting Author: B.W. Sykes¹Authors: S.S.F. Xie², C.M. Steel²¹ BW Sykes Consultancy, ² The Hong Kong Jockey Club

A comparison of radiomic and semantic analysis of bone scintigraphy in equine lameness assessmentPresenting Author: B Forbes⁴Authors: PT Tually¹, GC Currie², B Sykes³, JW Meadows¹¹ TeleMedVET, Perth, ² Charles Sturt University, ³ University of Queensland, ⁴ The Hong Kong Jockey Club**Resting electrocardiograms and echocardiographic findings in sustained and paroxysmal atrial fibrillation in racing Thoroughbreds.**Presenting Author: C Loubiere¹Authors: O Nekouei², K Jeevaratnam³, C Marr⁴¹ Department of Veterinary Clinical Sciences, Jockey Club College of Veterinary Medicine and Life Sciences, City University of Hong Kong, HKSAR, China,² Department of Infectious Diseases and Public Health, Jockey Club College of Veterinary Medicine and Life Sciences, City University of Hong Kong, HKSAR, China,³ School of Veterinary Medicine, University of Surrey, Guildford, United Kingdom,⁴ Rossdale Veterinary Surgeons, Newmarket, Suffolk, CB8 7NN, United Kingdom**Transcriptomic remodelling of pulmonary vein sleeves suggests a role in atrial arrhythmogenesis in Thoroughbred horses**Presenting Author: Charlotte E. Edling¹Authors: Magdalena Arevalo-Turrubiate¹, Carla Moller-Levet², Bronte Forbes³, Victoria Kemp³, Joe Weir³, Celia Marr⁴, Rebecca Lewis¹, Kamalan Jeevaratnam¹¹ School of Veterinary Medicine, Faculty of Health and Medical Sciences, University of Surrey, United Kingdom,² School of Biosciences, Faculty of Health and Medical Sciences, University of Surrey, United Kingdom³ The Hong Kong Jockey Club, Sha Tin Racecourse, HKSAR, China,⁴ Rossdale Equine Hospital and Diagnostic Centre, Newmarket, United Kingdom**Uncovering Cardiac Molecular Remodeling in Racing Thoroughbreds with Paroxysmal Atrial Fibrillation**Presenting Author: Charlotte E. Edling¹Authors: Magdalena Arevalo-Turrubiate¹, Carla Moller-Levet², Bronte Forbes³, Victoria Kemp³, Joe Weir³, Celia Marr⁴, Rebecca Lewis¹, Kamalan Jeevaratnam¹¹ School of Veterinary Medicine, Faculty of Health and Medical Sciences, University of Surrey, United Kingdom,² School of Biosciences, Faculty of Health and Medical Sciences, University of Surrey, United Kingdom,³ The Hong Kong Jockey Club, Sha Tin Racecourse, HKSAR, China,⁴ Rossdale Equine Hospital and Diagnostic Centre, Newmarket, United Kingdom**Effects of intra-articular polyacrylamide hydrogel on the equine synovium and effects on cultured neurons and macrophages**Presenting Author: CYT Lam²Authors: EL Morrell¹, P Loukopoulos¹, CM Steel², G Forbes³, SR Bailey¹¹ The University of Melbourne, ² The Hong Kong Jockey Club, ³ Racing Victoria**Early-life Gut Microbial Communities are Associated with Health and Athletic Performance in Horses Bred for Racing.**

Presenting Author: C Proudman

Authors: J Leng, C Moller-Levet, R La Ragione

University of Surrey

Individual longitudinal follow-up of racehorses at training using a wearable biometric sensor

Presenting Author: N Crevier-Denoix

Authors: L Fayaubot, P Pourcelot, F Munoz-Nates, JM Denoix

Unité INRAE-EnvA 957 BPLC-BEL, INRAE-EnvA, France

Spatial epidemiology approach and Geographic Information System for injury Prevention in Thoroughbred Jump Racing in FrancePresenting Author: D-M Votion¹Authors: F Patarin¹, A Théry²¹ University of Liège, Faculty of Veterinary Medicine, Department of Functional Sciences, Pharmacology and Toxicology, Comparative Veterinary Medicine, FARA, Liège, Belgium,² Direction Opérationnelle des Courses, France Galop, France**Cardiac arrhythmias during intense exercise in thoroughbred racehorses: frequency and association with subsequent race performance**Presenting Author: E van Erck-Westergren¹Authors: S O'Connor², B Stewart², G Dubois³, J Morton⁴, K Hinchcliff⁵, F ter Woort¹¹ Equine Sports Medicine Practice, ² The Hong Kong Jockey Club, Department of Veterinary Clinical Services, ³ Arioneo; LIM Group, ⁴ Jemora Pty Ltd, ⁵ Melbourne Veterinary School, University of Melbourne**Genomic prediction of heart rate recovery in Thoroughbred horses**Presenting Author: Emmeline W. Hill^{1,2}Authors: Haige Han², Martina Dempsey³, Katie Gough³, Charlotte Herdan³, Sinead Murray³, Beatrice A. McGivney², Lisa M. Katz³¹ UCD School of Agriculture and Food Science, University College Dublin, Dublin, Ireland,² Equinome (Zinto Labs), Dun Laoghaire Industrial Estate, Pottery Road, Dun Laoghaire, Co. Dublin, Ireland,³ UCD School of Veterinary Medicine, University College Dublin, Dublin, Ireland**A genomic prediction model for risk of catastrophic fracture of the distal limb/fetlock in USA Thoroughbred horses**Presenting Author: EW Hill^{1,2}Authors: H Han¹, J Haughan³, BA McGivney¹, MA Robinson³¹ Equinome (Zinto Labs), Dublin, Ireland, ² University College Dublin, Ireland, ³ School of Veterinary Medicine, University of Pennsylvania, USA**Proteomic signature of small extracellular vesicles reveals biomarker candidates for moderate asthma of racehorses**Presenting Author: Eric A. Richard¹Authors: Elliott Schmitt¹, Anne Couroucé², Marie-Pierre Toquet¹, Margot Bègue¹, Benoît Bernay³, Julien Pontin³, Didier Goux³, Pauline Barbazanges², Emmie Vuillier², Gabin Le Digarcher², Frédéric Cassé³,¹ LABÉO, UniCaen, ² Oniris, UniCaen, ³ UniCaen**Training–rest patterns as predictors of career outcomes in French-trained Thoroughbred jump racehorses**Presenting Author: F Patarin¹Authors: A Théry², D-M Votion¹¹ University of Liège, Faculty of Veterinary Medicine, Department of Functional Sciences, Pharmacology and Toxicology, Comparative Veterinary Medicine, FARA, Liège, Belgium,² Direction Opérationnelle des Courses, France Galop, France

Searching for success: Exploring key indicators for suitable second careers for former racehorses

Presenting Author: JM Williams
Author: S Jordan
Hartpury University

Development of Surrey Equine ECG Diagnostics and Database (SEED2) - a fully automated web service for arrhythmia diagnostics using sinus rhythm ECGs

Presenting Author: Kamalan Jeevaratnam
Authors: Vadim Alexeenko, Dhruvpal Singh Anchan, Celia Marr
¹ University of Surrey, Guildford, UK, ² Rosssdales Veterinary Surgeons, Newmarket, UK

Long-chain polyunsaturated fatty acids (LC-PUFA) may play a role in the pathogenesis of several diseases affecting thoroughbred racehorses

Presenting Author: J.D. Pagan
Authors: A. Fowler and P.J. Huntington
Kentucky Equine Research

Use of percutaneous thermal-sensing microchips to manage post-exercise cooling in thoroughbred racehorses

Presenting Author: JD Pagan¹
Authors: RW Springer¹, MS Davis², PJ Huntington¹
¹ Kentucky Equine Research, ² Waypoint Veterinary Education and Consulting LLC

Role of technological developments in advancing understanding of equine exercise physiology and sports medicine relevant to Thoroughbred racing.

Presenting Author: K. W. Hinchcliff¹,
Authors: E. van Erck-Westergren², K. H. McKeever³
¹ Trinity College and University of Melbourne, Melbourne, Australia, ² Equine Sports Medicine Practice, Waterloo, Belgium, ³ Rutgers University, New Jersey, USA

Machine learning algorithms identify confounder effects enabling the development of an accurate predictive model of heart rate recovery in Thoroughbred racehorses

Presenting Author: LM Katz¹
Authors: A Inglis², K Gough¹, C Herdan³, M Dempsey³, S Murray¹, EW Hill³, A Parnell⁴
¹ UCD School of Veterinary Medicine, University College Dublin, ² Hamilton Institute, Maynooth University, ³ UCD School of Agriculture and Food Science, University College Dublin, ⁴ UCD School of Mathematics and Statistics, University College Dublin

Protocol for Introduction of Wearable Devices During Races in Great Britain

Presenting Author: Max Kendrick¹
Authors: Sally Taylor², Miles Brandi³, Dhruvpal Singh Anchan⁴, Celia Marr⁵
¹ Fergal O'Brien Racing, Ravenswell Farm, Withington, Cheltenham, GL54 4DD,
² British Horseracing Authority, Holborn Gate, 26, Southampton Buildings, London. WC2A 1AN,
³ Arioneo - Lim Group, 8, Avenue de l'Hippodrome, 33110, Le Bouscat, France,
⁴ School of Veterinary Medicine, University of Surrey, Daphne Jackson Rd, Guildford GU2 7AL,
⁵ Rosssdales Veterinary Surgeons, Newmarket, Suffolk, CB8 7NN, UK

Pro-inflammatory potential of inhaled mineral particles originating from equine racetracks

Presenting Author: M Bullone¹
Authors: G Scavello¹, B Sica¹, C De Giuli¹, J Petriglieri¹, M Tomatis¹, F Freccero², E Belluso¹, F Turci¹
¹ University of Turin, ² University of Bologna

Developing a strategy to increase demand for retired ThoroughbredsPresenting Author: NA Hamilton¹Authors: K Day¹, E Baird², K Caldwell³, K Duffy³, C Holland⁴, C Jenkins¹, MF Lenz⁵, T Mackenzie¹, A Smet⁶, MV Ware⁴, J Krawczyk⁷, BD Velie⁸, JM Williams⁹¹ Racing Australia, NSW, Australia, ² Thoroughbred Racing Northern Territory, NT, Australia, ³ Racing Queensland, QLD, Australia, ⁴ Racing Victoria, VIC, Australia, ⁵ Tasracing, TAS, Australia, ⁶ Racing WA, WA, Australia, ⁷ Victoria, Australia, ⁸ University of Sydney, NSW, Australia, ⁹ Hartpury University, Gloucester, United Kingdom**Arrhythmia burden is higher during racing than training in National Hunt racehorses**Presenting Author: SEH Taylor¹Authors: M Kendrick², K Bishop³, D Singh Anchan⁴, A Siwik¹, K Jeevaratnam⁴, C Marr⁵¹ British Horseracing Authority, ² Fergal O'Brien Racing, ³ Summerhill Equine Vets, ⁴ University of Surrey,⁵ Rosssdales Veterinary Surgeons**Post-mortem pulmonary scores in horses with sudden death versus catastrophic injury**Presenting Author: SH Franklin¹Authors: HK Arnold¹, LC Nath¹, AE Kapusniak¹, AW Stent²¹ University of Adelaide, ² University of Melbourne**Risk factors for fatality in jump racing Thoroughbreds in Ireland (2012 to 2024)**Presenting Author: S.M. Rosanowski¹Authors: L. Fergusson², G. Adams², T. Parkin³, L. Hillyer²¹ Independent Veterinary Epidemiologist, Palmerston North, Manawatu-Wanganui, New Zealand,² Irish Horseracing Regulatory Board, The Curragh, Ireland,³ Bristol Veterinary School, Bristol, United Kingdom**Circulating microRNA biomarker validation in Thoroughbred racehorses with Exercise induced pulmonary haemorrhage: a new approach to a known welfare issue**Presenting Author: SK Armstrong¹Authors: K Lambon¹, M Arevalo Turrubiarte¹, M Noble¹, E Cillan-Garcia², J Mizzi³, K Jeevaratnam¹¹ The University of Surrey, ² Esk Veterinary Consultants Ltd, ³ The Hong Kong Jockey Club**Interleukin 1b priming induces an anti-inflammatory mesenchymal stem cell phenotype and extracellular vesicle response: Implications for NIK-dependent mechanisms and equine musculoskeletal therapies**Authors: E J Clarke¹, N Poulter², A Beckett³, G Dykes³, M J Peffers¹¹ Institute of Life Course and Medical Sciences, University of Liverpool, Liverpool, United Kingdom,² Department of Equine Clinical Science, Philip Leverhulme Equine Hospital, School of Veterinary Science, Leahurst Campus, University of Liverpool, Neston, Wirral, United Kingdom,³ Biomedical Electron Microscopy Unit, University of Liverpool, United Kingdom**On Racetrack Movement Symmetry Assessment in Thoroughbred Chuckwagon Racehorses with GNSS-IMU technology**Presenting Author: T Pfau¹Authors: C de Bruyne¹, M van den Broek^{1,2}, Z Chan¹, B Davis¹, C Eamon¹, M Fallscheer¹, S Frostad¹, K Garcia¹, E Pajor¹, S Skotarek Loch¹, R Weller¹¹ University of Calgary, ² TU Delft

Determining the risk of fatal musculoskeletal injury in individual Thoroughbred racehorses using AI-based analytics of IMU sensor data collected from 22,247 horses in 50,993 race-startsPresenting Author: Warwick M. Bayly²Authors: Mikael Holmström¹, Nicholas P. Hall², Denise Mc Sweeney², Kevin D. Donahue¹, David H. Lambert¹,¹ StrideSAFE USA, ² Washington State University**Increased freedom of head movement mitigates stress and bacterial load in the airways of horses during transport**Presenting Author: Y Takahashi¹Authors: H Niwa¹, Y Ebisuda¹, K Mukai¹, T Yoshida¹, S Raidal², B Padalino³, H Ohmura¹¹ Japan Racing Association, ² University of Melbourne, ³ University of Bologna, Southern Cross University**Tuning and validation of a virtual mechanical testing pipeline for condylar stress fracture risk assessment in Thoroughbred racehorses**Presenting Author: S Irandoust¹Authors: RC Whitton², CR Henak¹, P Muir¹¹ University of Wisconsin-Madison, ² University of Melbourne**Risk assessment for condylar stress fracture in elite racing Thoroughbreds using standing computed tomography-based virtual mechanical testing**Presenting Author: S Irandoust¹Authors: NL Brown¹, EJ Thom¹, RC Whitton², CR Henak¹, P Muir¹¹ University of Wisconsin-Madison, ² University of Melbourne**Proximal sesamoid bone fatigue injury in Thoroughbred racehorses is associated with palmar osteochondral disease in the condyles of the third metacarpal bone**

Presenting Author: S Irandoust

Authors: EJ Thom, CR Henak, P Muir

University of Wisconsin-Madison

Supervised learning for automated fetlock segmentation from standing computed tomography images

Presenting Author: S Irandoust

Authors: CR Henak, P Muir

University of Wisconsin-Madison

The new approach to quinidine therapy for atrial fibrillation in Thoroughbred racehorses based on population pharmacokineticsPresenting Author: Taisuke Kuroda¹Authors: Yohei Minamijima², Hiroshi Mita¹, Motoi Nomura¹, Pierre-Louis Toutain³, Yuhiro Ishikawa¹¹ Equine Research Institute, Japan Racing Association, ² Laboratory of Racing Chemistry, ³ Department of Comparative Biomedical Sciences, Royal Veterinary College, London, UK