



The Hong Kong Jockey Club
**Equine Welfare
Research Foundation**

Priority Research Topics for December 2023

(Applicable for all grant programmes and Research Training Scholarship)

- ▶ **Detection of alteration of the equine genome or biomarkers that indicate artificial manipulation of performance**
- ▶ **High incidence of degenerative orthopaedic disease in racehorses**
 - Response of critical musculoskeletal tissues to repetitive, cyclical high intensity loads associated with current modes of training and racing.
 - Longitudinal studies to characterise structural changes in tissues at high risk of injury due to repetitive, cyclical loading.
 - Relationship between track and injuries.
 - Application of “Big Data” analytics to identify risk factors for injuries in training and racing.
 - Pros and cons of synthetic surfaces in different climates.
 - Suitability of individual horses for racing.
 - Are there particular biomechanical characteristics of horses (either temporary or permanent) that predispose individuals to injury? If so, can we screen for these?
 - Is “Handedness” a real feature of horses and, if so, does it impair some horses running in a particular direction around an oval track?
- ▶ **Reducing the incidence of severe fractures in horses while training and racing**
 - Develop clear advice to trainers based on systematic review of the literature and promulgate to the global racing community.
- ▶ **Husbandry and management**
 - Identify common factors that improve or degrade the welfare of racehorses.
- ▶ **Objective measures to assess the physical potential for racehorses to adapt to different future career paths on retirement from racing**
 - Develop an evidence-based assessment protocol that relates clinical history, clinical findings and performance in early retraining to long-term outcomes.
- ▶ **Disease associated with intensive training**
 - Exercise Associated Sudden Death.
 - Risk factors for Exercise Induced Pulmonary Haemorrhage and lower airway disorders and practical measures to reduce their impact.
 - Application of modern technology to identify causes of sudden-onset poor performance and to determine their impact of horse welfare.
 - The consequences of Equine Gastric Ulcer Syndrome on horse welfare.