



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

Priority Research Topics for December 2022

(Applicable for all grant programmes and Research Training Scholarship)

1 High incidence of degenerative orthopaedic disease in racehorses

- 1a 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.
- 1b 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.
- 1c 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?

2 Reducing the incidence of severe fractures in horses while training and racing

- 2a Develop clear advice to trainers based on systematic review of the literature and promulgate to the global racing community.

3 Husbandry and management

- 3a Identify common factors that improve or degrade the welfare of racehorses.

4 Objective measures to assess the physical potential for racehorses to adapt to different future career paths on retirement from racing

- 4a Develop an evidence-based assessment protocol that relates clinical history, clinical findings and performance in early retraining to long-term outcomes.

5 The biological integrity of horses

- 5a Techniques to detect manipulation of the genome of individual horse.

6 Disease associated with intensive training

- 6a Risk factors for Exercise Induced Pulmonary Haemorrhage and lower airway disorders and practical measures to reduce their impact.
- 6b Application of modern technology to identify causes of sudden-onset poor performance and to determine their impact of horse welfare.
- 6c The consequences of Equine Gastric Ulcer Syndrome on horse welfare.