

## Preliminary Program

MONDAY				
Chair		NAME	Time slot	Title
			<b>08.00-08.15</b>	Welcome address
<b>Session 1. Muscle</b>				
Erica McKenzie & Samantha Franklin		<b>Keynote: Birgitta Essén-Gustavsson</b>	<b>08:15-08:55</b>	<b>Muscle metabolic responses to exercise – 40 years of research</b>
		Henry, M.L.	<b>08:55-09:10</b>	Impact of Coenzyme Q10 and N-acetyl cysteine on muscle proteome and antioxidants
		Barrett, M.	<b>09:10-09:25</b>	Hyperthermia decreases mitochondrial ATP synthesis in equine skeletal muscle
		Smit, I.H.	<b>09:25-09:40</b>	Electrode positioning in the horse: towards standardisation of surface EMG measurements
		Borer-Matsui, A.	<b>09:40-09:55</b>	Effect of body position on a 3-dimensional scanning assessment of muscle mass
		Jobst, I.D.	<b>09:55-10:00</b>	Forelimb muscle activation pattern during movement initiation of walk versus single limb lift
		Buckley, P.	<b>10:00-10:05</b>	Pre-race and race management impacts serum muscle enzyme activity in Australian endurance horses
<b>10.05-10.35 Swedish Fika (coffe and snacks break)</b>				
<b>Session 2. Physiotherapy and rehabilitation</b>				
Anna Bergh & Renaud Léguillette		Nankervis, K.	<b>10:35-10:50</b>	The effect of walking speed during water treadmill exercise on pelvic kinematics in racehorses.
		Pasman, Z.C.	<b>10:50-11:05</b>	Water and speed affect upper body kinematics and limb timing in horses walking on a water treadmill
		De Geer, H.C.	<b>11:05-11:20</b>	The combined effect of water and speed on limb kinematics in horses walking on a water treadmill
		Murray, R.C.	<b>11:20-11:35</b>	Effect of walking over ground and raised poles versus no poles on equine limb and back kinematics
		Ursini, T.L.	<b>11:35-11:50</b>	Multifidus muscle activation in response to therapeutic exercises in horses
		Holtz, S.	<b>11:50-11:55</b>	Influence of horse owner demographics and discipline on chiropractic and acupuncture therapy use
		Bergh, A.	<b>12:00-12:05</b>	Acute Effect of an Elastic Resistance Band System on Vertical Movement Symmetry in Riding Horses
		Murray, R.C.	<b>12:05-12:10</b>	Effect of water depth on limb and back kinematics in the horse whilst walking on a water treadmill
		Grossi, I.	<b>12:10-12:15</b>	Characteristics of the horses' gait during swimming exercise in a circular swimming pool.
		Crevier-Denoix, N.	<b>12:15-12:20</b>	Speed of Sound and Attenuation measurements: a quantitative method for assessing tendon recovery
		Tabor, G.	<b>12:20-12:25</b>	Movement strategies and thoracic range of motion during dynamic mobilisation exercises
		te Moller, N.C.R.	<b>12:25-12:30</b>	Walking and trotting through a water track affects limb sagittal angles and stride timing in horses
		Tischmacher, A.	<b>12:30-12:35</b>	Effect of exercise on blood perfusion of healing superficial digital flexor tendons in horses
		Brassington, R.	<b>12:35-12:40</b>	Effect of treatment type on return to work in horses with impinging dorsal spinous processes
<b>12:40-13:40 Lunch</b>				

Session 3. Biomechanics: Lameness				
René van Weeren & Lars Roepstorff		Wong, A.S.M.	13:40-13:55	Changes in racehorse stride characteristics over time and their association with injury
		Weishaupt, M.	13:55-14:10	Determining average weight-bearing asymmetries in relation to clinical lameness scores in horses
		Blair St. George, L.	14:10-14:25	Adaptive changes in equine muscle activation timings occur during induced fore and hindlimb lameness
		Rhodin, M.	14:25-14:40	Adaptation strategies of the Icelandic horse with Induced hindlimb lameness at walk, trot and tölt.
		Hernlund, E.	14:40-14:45	Changes in pelvic axial rotation following diagnostic analgesia in hindlimb lame horses
		MacAire, C.	14:45-14:50	Exploration of asymmetry thresholds to characterise hindlimb lameness on the circle
		Logan, A.A.	14:50-14:55	Impacts of circular exercise to juvenile bone and joint health
		Rhodin, M.	14:55-15:00	Analgesic testing with meloxicam did not eliminate pain in many clinically lame horses
15.00-15.45 Fika + Poster mingle				
Elin Hernlund & Marie Rhodin		Shaffer, S.K.	15:45-16:00	Local bone volume fraction changes in racehorse proximal sesamoid bones are associated with training
		Pagliara, E.	16:00-16:15	Recording fetlock joint range of motion using wearable inertial sensors in sound and lame horses
		Morrice-West, A.V.	16:15-16:30	Relationship between Thoroughbred racing workloads and the fatigue life of equine subchondral bone
		Bragança, F.M.	16:30-16:45	Adaptation strategies of horses with induced hindlimb lameness walking on a treadmill
		Hardeman, A.M.	16:45-17:00	Interpretation of objective gait analysis data of single limb lame horses
		Leclercq, A.	17:00-17:15	Trainer detection of hindlimb lameness in horses-evaluation of feed back during web based training
		De Mira, M.	17:15-17:20	Trot-up style affects subjective gait assessment scoring in endurance horses
		Davidson, E.J.	17:20-17:25	Ultrasound-guided caudal cervical joint injection accuracy in horses with and without arthropathy
<b>17.30- Evening activity: Sponsor talk The Swedish Horse Industry Foundation (HNS) &amp; Horses made in Sweden</b> Demo: Horses made in Sweden Midsummer festivities at Campus				

TUESDAY				
Session chairs		NAME	Time slot	Title
Session 4. New technology and analysis methods				
Renaud Léguillette &	Sponsored by Casus	Keynote: Hedvig Kjellström	08:20-09:00	AI and Machine Learning methods in equine research
		Parmentier, J.I.M.	09:00-09:15	Prediction of kinetic parameters from body mounted IMU data using recurrent neural networks
		Darbandi, H.	09:15-09:30	Estimation of hoof-on/off moments using inertial sensors and deep learning

Lars Roepstorff	Hernlund, E.	09:30-09:45	Comparison of a computer vision application to optical motion capture for lameness quantification
	Scharf, J.	09:45-10:00	Fast Fourier transform and major peaks analysis of electrocardiograms to assess MLSS in horses
	Schurs, C.	10:00-10:15	Cardiovascular and locomotory parameters during training in Thoroughbreds: a multi-national study
	Darbandi, H.	10:15-10:20	Quantitative detection of fatigue in sport horses using inertial sensors and machine learning
	Marlin, D.J.	10:20-10:25	A novel 4-dimensional imaging technique to track back shape changes in exercising horses
	Witkowska-Pilaszewicz, O.	10:25-10:30	Evaluation of novel promising biomarkers in exercise horse monitoring
	Brounts, S.H.	10:30-10:35	Use of novel computed tomography system to aid in distal limb lameness evaluation in standing horse
	Akbari Shahkhosravi, N.	10:35-10:40	Artificial neural network and finite element modeling of equine hoof biomechanics
	<b>Sponsor presentation</b>	<b>10:40-10:45</b>	<b>Cosmed</b>
<b>10.45-11.25 Fika + poster mingle</b>			
<b>Session 5. Equitation science, Rider and Sports equipment</b>			
Marie Rhodin & Elin Hernlund	Tabor, G.	11:25-11:40	Saddle related equine back pain, muscle condition and behaviour
	Munjizun, A.	11:40-11:55	Effect of weight carriage on work effort in horses
	Marlin, D.J.	11:55-12:10	Stirrup and rein forces do not show left-right differences in advanced dressage riders and horses
	Fairfax, V.	12:10-12:25	Could saddle knee-block design influence limb and thoracolumbar spine kinematics in sport horses?
	Williams, J.M.	12:25-12:40	Are faults in International Showjumping associated with fence design?
	Foreman, J.H.	12:40-12:45	Assessment of Tokyo 2020 Modern Pentathlon Results for Paris 2024 Modifications
	Clark, R.L.	12:45-12:50	Lumbar spine kinematics of experienced and inexperienced horse riders on a riding simulator
	Deckers, I.D.	12:50-12:55	The effect of a saddle on the kinematics of the thoracolumbosacral spine at walk and trot in-hand
	MacKechnie-Guire, R.	12:55-13:00	Does Gluteus Medius Activation in Riders Affect Rider Pelvic Function, Saddle Movement and Gait?
<b>13.00-14.00 Lunch</b>			
<b>Session 6: Biochemistry, Haematology, Endocrinology and Thermoregulation in Exercise</b>			
Erica McKenzie & Kenneth McKeever	<b>Keynote: Mike Davis</b>	<b>14:00-14:40</b>	<b>Fatigue in Equine Exercise: Multiple Answers to a Simple Question</b>
	Lindinger, M.I.	14:40-14:55	Physicochemical analysis of venous and arterial blood acid-base state during and after exercise
	Constable, P.D.	14:55-15:10	Predictors of blood pH and plasma bicarbonate concentration in healthy trained Standardbreds
	Kang, H.	15:10-15:25	Wireless tracking method to monitor body temperature changes in the exercising horse
	Verdegaal, E.	15:25-15:30	Skin surface temperature is not a reliable proxy for thermoregulatory response in endurance horses
	Manfredi, J.M.	15:30-15:35	Correlations between insulin dysregulation, metabolic phenotype, and equine lameness
	Constable, P.D.	15:35-15:40	Buffer value and improved estimates for Atot and Ka of non-bicarbonate buffers in equine plasma
		Sloet, M.M.	15:40-15:45

		Waller, A.P.	15:45-15:50	Pre-loading large volume oral electrolytes: tracing acid-base variables in exercising horses
		Foreman, J.H.	15:50-15:55	Mitigation of Effects of Heat and Humidity at Tokyo 2020 Olympic Summer Games Equestrian Events
		Schott, H.C.	15:55-16:00	Exercise effects on symmetric dimethylarginine, creatinine, and urea concentrations in horses
<b>16.00-16.25 Fika</b>				
<b>Session 7. Biomechanics: Hoof, Shoe, Surface</b>				
Lars Roepstorff & René van Weeren		<b>Peder Fredricson, equestrian olympic medalist</b>	<b>16:25-16:30</b>	<b>A rider's view on the bare foot horse</b>
		Malone, S.	16:30-16:45	Bone proportions of the equine distal forelimb and correlations with hoof angle
		Crevier-Denoix, N.	16:45-17:00	Comparison of vertical forces in trotter horses exercising on a hard and a soft track surface
		Northrop, A.J.	17:00-17:05	The relationship between the mechanical response of cross-country tracks and edaphic factors
		Dahl, V.E.	17:05-17:10	Effect of horseshoe length on hoof deformations and fetlock extension
		Rohlf, C.M.	17:10-17:15	The Effect of Fiber in Equine Arena Surfaces on Shear Ground Reaction Forces
		Horan, K.	17:15-17:20	Hoof impact and foot-off accelerations in galloping horses testing eight shoe-surface combinations
		Hartmann, M.C.	17:20-17:25	The effects of novel tailor-made 3D-printed shoes on equine kinetic parameters
		Peham, C.	17:25-17:30	Comparison of the grip of different hoof boots and a bare hoof on different surfaces
		Rohlf, C.M.	17:30-17:35	Vertical Ground Reaction Forces of Equine Arena Surfaces Vary with Surface Compaction
	<b>Sponsor presentation</b>	<b>17:35-17:45</b>	<b>HästSverige</b>	
Free evening activity + Pub night in Uppsala Lameness Tools Workshop for pre-registered delegates at the University Animal Hospital at Campus				

THURSDAY				
Session chairs		NAME	Time slot	Title
<b>Session 8. Biomechanics: Kinematics of the equine athlete</b>				
Toshiyuki Takahashi & René van Weeren	Sponsored by Boehringer Ingelheim	<b>Keynote: Alan Wilson</b>	<b>08:00-08:40</b>	<b>From equine anatomy to cheetah biomechanics: taking the gait lab into the wild</b>
		<b>Sponsor presentation</b>	<b>08:40-08:45</b>	<b>Boehringer Ingelheim</b>
		Clayton, H.M.	08:45-09:00	Vertical head and pelvic movement asymmetries in dressage horses trotting in-hand and under a rider
		Persson-Sjodin, E.	09:00-09:15	Prevalence of vertical movement asymmetries of head and pelvis in young unriden Warmblood horses
		Lundblad, J.	09:15-09:30	Significance of motor laterality in relation to vertical movement asymmetries in young riding horses
		Zetterberg, E.	09:30-09:45	Prevalence of vertical movement asymmetries in trot among Icelandic horses in training

		Gunnarsson, V.	09:45-10:00	Effect of low and high head and neck position on stride parameters of slow tölt in Icelandic horses
		Nonnenmacher, S.	10:00-10:05	Comparison of impact accelerations measured at the distal limb and trunk of Thoroughbred horses
		Kallerud, A.S.	10:05-10:10	Movement asymmetry in Standardbred trotters
		Leclerq, A.	10:10-10:15	Prevalence of vertical movement asymmetries in riding and trotter foals
<b>10:10-11:20 Fika + poster mingle</b>				
<b>Session 9. Biomechanics and locomotion</b>				
Toshiyuki Takahashi & René van Weeren		Logan, A.A.	11:20-11:35	Characterization of varying circle size and gait on front hoof area and force
		te Moller, N.C.R.	11:35-11:50	Responses of the healthy equine carpal joint to treadmill exercise
		Fairfax, V.	11:50-12:05	Influence of speed and race girth design on girth pressure and force distribution in racehorses
		MacKechnie-Guire, R.	12:05-12:20	Rotational movement of the back in jumping horses, when trotting in-hand and ridden on a 18m circle
		Malone, S.	12:20-12:25	The palmar metric of the equine distal phalanx
		Rankins, E.M.	12:25-12:30	Equine muscle activity with induced stride alterations
		Pagliara, E.	12:30-12:35	Multibody modelling of internal forces causing catastrophic carpal fracture during traditional race
		Bukhari, S.	12:35-12:40	Quantification of Basic Stride Parameters of Walking Donkeys
		Cerca, L.	12:40-12:45	Objective quantification of collected gaits' quality: comparing piaffe with trot using IMU sensors
		Zsoldos, R.R.	12:45-12:50	Bilateral activity of the equine splenius muscle during circle work in an automated horse walker
	Giercuzskiewicz-Hecold, B.	12:50-12:55	The prevalence of radiographic lesions in distal parts of limbs in endurance horses competing in UAE	
	Faramarzi, B.	12:55-13:00	Fore and hind hooves impact phase kinetics: trimming influence	
<b>13:00-14:00 Lunch</b>				
<b>Session 10. Applied physiology: Genetics</b>				
Gabiella Lindgren & Kenneth McKeever		<b>Keynote: Ken Hinchcliff</b>	14.00-14.40	<b>Key publications in equine exercise physiology 2017-2021</b>
		<b>Sponsor presentation</b>	14.40-14.45	<b>Agria</b>
		Valberg, S.	14:45-15:00	Lack of association between commercial genetic tests and myopathies in Quarter Horses
		Hill, E.W.	15:00-15:15	Genetic risk markers for dorsal metacarpal disease (sore/bucked shins) in Thoroughbred horses
		Katz, L.M.	15:15-15:30	Genetic risk markers for recurrent laryngeal neuropathy (RLN) in flat racing Thoroughbred horses
		McGivney, B.A.	15:30-15:45	Genetic risk markers for exercise-induced pulmonary haemorrhage (EIPH) in Thoroughbred horses
		Hill, E.W.	15:45-15:50	Amygdala and hippocampus gene expression highlights functionally relevant genes for equine behaviour
		Holtby, A.R.	15:50-15:55	Genetic markers for behaviour in yearling Thoroughbred racehorses
	Naboulsi, R.	15:55-16:00	Genetics of Dynamic Laryngeal Collapse in Norwegian-Swedish Coldblooded trotters	
<b>15.35-16:10 Afternoon tea + poster mingle</b>				

Session 11. Applied physiology: Drugs in equestrian sport and exercise				
Kenneth McKeever & Erica McKenzie		Sanz, M.G.	16:45-17:00	Effects of furosemide on systemic cytokine mRNA expression post-racing in 2-year-old Thoroughbred ra
		McKeever, K.H.	17:00-17:15	Duration of the effects of a novel Phosphodiesterase Type-5 inhibitor (PDE5-I)
		Manso, Filho, H.	17:15-17:30	Impact of furosemide and exercise on the cytokine response in Standardbreds
		Manso, Filho, H.	17:30-17:35	Glucose and lactate in equine fecal liquor are altered after exercise independent of furosemide
The Racing Victoria Gala Dinner at Uppsala Castle				

FRIDAY				
Session chairs		NAME	Time slot	Title
Session 12. Cardio-Respiratory				
Samantha Franklin & Renaud Léguillette	Sponsored by Racing Victoria	<b>Keynote: Gunther Van Loon</b>	<b>08:00-08:40</b>	<b>Diagnosing cardiac arrhythmias in performance horses</b>
		<b>Sponsor presentation</b>	<b>08:40-08:45</b>	<b>Racing Victoria</b>
		Scott, W.M.	08:45-09:00	Prosthetic laryngoplasty improves peak oxygen consumption in horses with laryngeal neuropathy
		Smart, B.	09:00-09:15	Does wind surgery improve performance in the thoroughbred racehorse?
		Shoemaker, S.	09:15-09:30	Factors Associated with Severity of EIPH in 2-year-old Thoroughbred Racehorses
		Carstensen, H.	09:30-09:45	Exercise-induced remodeling of the atria in Standardbred racehorses
		Franklin, S.H.	09:45-10:00	Exercise is associated with increased P-wave duration and dispersion in Standardbred horses
		Van Erck Westergren, E.	10:00-10:15	Cardiopulmonary exercise testing in competitive sport horses
		Hövener, J.H.	10:15-10:30	Cardiac findings in 822 warmblood horses and their association with poor performance
		Nath, L.C.	10:30-10:35	Risk factors for exercise-associated sudden cardiac death in Thoroughbred racehorses
		Jago, R.C.	10:35-10:40	Changes to left ventricular mechanics during detraining in National Hunt Thoroughbred racehorses
		Ter Woort, F.	10:40-10:45	Retrospective analysis of upper airway problems in sport horses with lower airway disease
<b>10:45-11:10 Fika</b>				
Samantha Franklin & Emmanuelle		<b>Keynote: Warwick Bayly &amp; Renaud Leguillette</b>	<b>11.10-11:50</b>	<b>EIPH – the role of blood volume and left sided cardiac function</b>
		Reed, J.C.	11:50-12:05	Ventricular mechanics in response to furosemide in National-Hunt Thoroughbred racehorses
		Massie, S.L.	12:05-12:20	Training vs racing: a comparison of arrhythmias and their repeatability in chuckwagon horses

van Erck Westergren	Leguillette, R.	12:20-12:35	Workload associated with untethered swimming in horses
	Hemmerling, K.	12:35-12:50	The Relationship of Mucus Scores to Cytokines, Environment and Performance in 2-yr-old Thoroughbreds
	Lo Feudo, C.M.	12:50-12:55	Thoracic ultrasonography for equine asthma and exercise-induced pulmonary hemorrhage
	Bagshaw, J.	12:55-13:00	Effects and severity of pharyngeal lymphoid hyperplasia vary with age and location in thoroughbreds
<b>13:00-14:00 Lunch</b>			
<b>Session 13: Training</b>			
Renaud Léguillette & Jonathan Foreman	Finding, E.J.T.	14:00-14:15	EXO-cise: investigation into the links between exercise and angiogenesis in Thoroughbred racehorses
	Nissen, S.D.	14:15-14:30	Long-term training induces slowing of the cardiac conduction system in Standardbred racehorses
	Fitzharris, L.E.	14:30-14:45	Does the equine diaphragm respond to training?
	Downer, M.	14:45-15:00	Metabolic effects of endurance training in a field setting
	Massie, S.L.	15:00-15:05	Cardiorespiratory and metabolic effects of 8-weeks of field training in Thoroughbred yearlings
	Jacques, K.L.	15:05-15:10	Identification of Injured Racehorses Using Exercise Histories and XGBoost
	Munsters, C.	15:10-15:15	Relationship between workload and injury risk in Dutch mounted-police horses
	Gluck, C.	15:15-15:20	Performance analysis of show jumping rounds at a national pony competition
	Beccati, F.	15:20-15:25	Effect of environment, horse and type of incremental fSET on blood lactate in endurance horses
	Santosuosso, E.S.	15:25-15:30	Heart rate variability after standardized training in Thoroughbred horses using a controlled trial
	Siegers, E.W.	15:35-15:40	Training response of young Friesian stallions to a 10-week studbook approval test
	Israel, J.	15:45-15:50	Effects of training and exercise on plasma and blood volume in Thoroughbreds and Endurance horses
	De Maré, L.	15:50-15:55	Profiling the aerobic window of horses in response to training by means of a modified LMS test
	Patarin, F.	15:55-16:00	Carrier interruption in French jump races during 2021 an overview
Stewart, M.	16:00-16:05	Inflammatory cytokines induce periosteal osteogenesis; a mechanism of bone response to exercise	
<b>Fika: 16:05-16:25</b>			
<b>Session 14: Nutrition</b>			
Anna Jansson & Kenneth McKeever	Pratt-Phillips, S.	16:25-16:40	Judges favor adiposity in athletic show ponies
	Boshuizen, B.	16:40-16:55	Effect of aleurone on glucose & insulin dynamics and gut microbiome of trained horses
	Wesolowski, L.T.	16:55-17:10	Nano-Q10 supplementation improves skeletal muscle mitochondrial capacities in equine athletes
	Simons, J.L.	17:10-17:25	Impacts of exercise and DHA/EPA/GLA supplementation on plasma cytokines in Thoroughbreds
	Munjizun, A.	17:25-17:30	Relationship between body condition, cresty neck score and blood variables in competition ponies
Free evening			

