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IRISH EVENTING RIDER SAM WATSON OPENS EQUINE VETERINARY CONFERENCE

Back Pain in Horses, Modifying Training Speeds, Lyme Disease and the Sweet Power of Honey Amongst Clinical and Scientific Presentations for Equine Vets

Irish eventing rider Sam Watson delivered the Official Opening Address at Veterinary Ireland's Equine Veterinary conference at the Celbridge Manor Hotel, Co. Kildare today (Friday 9th November, 2018). The conference runs over two days on 9th and 10th November, preceded by wetlabs in the Anglesey Lodge Equine Hospital focusing on mare reproduction techniques and spinal and pelvic lameness.

Sam Watson says he has been lucky to be able to combine his love and experience of the equestrian world with his professional qualification - a first class honours degree in MSIS (Management Science & Information Systems) – to found EquiRatings in 2015, an equestrian data analytics company.

Sam Watson's address at the Veterinary Ireland conference reflected on combining his equestrian field with innovation. "As an athlete and as an entrepreneur I am driven by three words: Try. Fail. Learn. We have to try - in terms of pushing ourselves, our boundaries and horizons; but also trying new things. This will inevitably lead to failure. So, we must fail well. Then, we can learn from it. Learning is a mind-set, a skill, a process - and it is aided by a system."

"New ideas and concepts are not about lightbulb moments and genius minds. We can all be innovators, we can all push the boundaries. Innovation is just progress but efficient progress is facilitated by a systematic approach to learning," said Mr. Watson.

Catherine Dwan MVB, Chair of the Conference Organising Committee, welcomed the 150 equine veterinary practitioners from across the country who are joining experts at the Veterinary Ireland conference, as they constantly strive to keep their skills up to date.

BACK PAIN IN HORSES CAN BE RIDER OR TACK INFLICTED

The three main causes for back pain in horses include rider or tack inflicted back pain, pathology causing primary back pain and pathology causing secondary back pain, according to international speaker Carolin Gerdes. Carolin identified the main causes of rider or tack inflicted back pain as:

- Poor saddle fit
- Unsuitable riding or training techniques (e.g. rollkur, overuse of draw reins)
- Poor riding skills (novice, unbalanced riders)
- Lack of fitness/strength of the horse
- Excessive rider weight

Formerly of Rossdales in Newmarket and now living and working in Germany, Carolin's specialist interests include orthopaedics, diagnostic imaging and poor performance investigations. Carolin's presentations at the Veterinary Ireland conference included back pain, sacro-iliac joint disease and proximal suspensory desmopathy.

THE HORSE – A MIRACLE OF BIOENGINEERING

Horses have an amazing anatomy, according to Professor Renate Weller, Dr Med.Vet PhD MRCVS FHEA from the Royal Veterinary College at the University of London and President of the British Equine Veterinary Association.

The most common clinical problem in horses is lameness and like human athletes, equine athletes walk a fine line between being top performers and risking injury. “When you train more you get better but at the same time your risk of musculoskeletal injury goes up.”

Horses show an amazing ability to perform a whole range of sporting activities. In evolutionary terms they developed as what is termed “cursorial animals” with the ability to run very fast if they need to but also cover large distances at slow speeds while grazing for nourishment.

To be able to do this the horse has developed special anatomical and physiological features that are aimed to reduce the energy cost of locomotion. The horse has made its limbs lighter and has elongated its limbs by essentially walking on its tip toes so it has a very long stride and makes room for the very long tendons on the back of its leg.

The fetlock joint is in permanent hyperextension: Even in the standing horse it is “angled backwards” and during movement it may even touch the ground at high speeds. It allows the horse to use its bodyweight to save energy while moving.

“Every time the leg hits the ground the fetlock joint acts as a pivot around which the flexor tendons on the back of the leg get stretched,” explains Professor Weller. “These tendons are like rubber bands: when they get stretched they store energy which is then released when the leg leaves the ground. These tendons return more than 90% of their energy thus making horse locomotion extremely energy efficient.”

All these modifications come at a cost: if you want to have light legs you need to make your bones and tendons as gracile as possible. If you do that they become more fragile. “A galloping horse will impose about 220 loading cycles per mile and it is indeed the cyclical overloading that leads to injuries in equine as well as human athletes,” says Professor Weller.

MODIFY TRAINING SPEEDS

Bones and tendons in horses have been estimated to have a “working life” of as little as 10,000 cycles, before they wear out. It is therefore no surprise that horses are prone to musculoskeletal injuries.

The load experienced by the leg is determined by body weight and how fast the horse is going. “If you want to win races you cannot reduce speed during a race, but you can modify training speeds,” says Professor Weller. Body weight in horses as in humans needs to be optimal with a minimum of fat but enough muscle to power the horse forward.

SWEET POWER OF HONEY

An update on wound management was presented by a European Specialist in Equine & Large Animal Surgery based at Lisadell Equine Hospital in Co. Meath, Simon Hennessy MVB MSc CertAVP (ESO) (ESST) MRCVS DipECVS.

He described how wound healing is a dynamic process involving the sequential stages of haemostasis, inflammation, proliferation and maturation of scar tissue, but that completion of each stage is required before the next phase can complete successfully (Theoret, 2017).

“In horses, the inflammatory phase of healing is often poor with insufficient release of inflammatory mediators and cells to allow successful debridement of the wound surface prior to the proliferative phase. As the proliferative phase begins this can prevent the progression of wound healing and often result in exuberant granulation tissue or proud flesh formation.”

Successful wound management involves the manipulation of the various phases of wound healing which can improve the outcome by reducing the length of inflammation, increasing the intensity of the inflammatory response and ensuring adequate debridement occurs to reduce the bioburden, allowing the proliferative phase to complete.

Simon Hennessy said that honey in particular exerts an antimicrobial, osmotic and antioxidant effect, whilst also managing to modulate the inflammatory response to wounds which reduces pain, oedema and exudate (Bischofberger et al, 2016).

He highlighted that while most research has focused on Manuka honey, Carnwath et al 2014 identified Scottish Heather Honey as an excellent source of antimicrobial properties and a recent report by Kavanagh et al, 2018 identified Irish Heather Honey as having one of the highest total phenolic contents making it an excellent source of antioxidants. Thus alternative sources of more reasonably priced honeys are likely to become available in the near future.

He also gave an overview of the Versajet hydrosurgical system, Larval debridement, Autolytic debridement, negative pressure wound therapy, topical regenerative treatments and wound closure.

IRISH VETS ASKED TO CONTACT RESEARCHERS ABOUT SUSPECTED LYME DISEASE CASES IN IRELAND

Lyme disease, is a tick borne disease caused by *Borrelia burgdorferi* spirochaetes (Wagner et al, 2011), Ixodid ticks are the vector for transmission. It is the most prevalent arthropod-borne human disease in Europe and the US, affecting 329,000 people in the US annually, 250,000 in Germany and 45,000 cases in the UK. While not directly spread among species (without ticks), pet owners are 1.5 times more likely to be bitten by a tick than non-pet owners (Jones et al).

“Lyme disease is best studied in a One Health context, because risk is shared among humans and domestic animals and because data derived from one species informs understanding of risks in others,” according to Dr Sinead Devine MVB CVMA from UCD Veterinary Hospital.

She described how ***Seroprevalence of Equine Lyme Disease in Ireland*** is the subject of a study in UCD Veterinary Hospital in collaboration with UCD School of Medicine and Cornell Veterinary School in New York, USA. She called on Irish equine veterinary practitioners with suspect cases of Equine Lyme Disease to contact her at UCD with test results and clinical findings to help document this emerging disease.

In the US, the recently published American College of Veterinary Internal Medicine statement points to this being a disease of paramount importance to equine welfare (*Borrelia burgdorferi* infection and Lyme Disease in North American Horses: A Consensus Statement Divers et al Journal of Veterinary Internal Medicine February 2018).

Investigation is hampered by a lack of disease model and the difficulty of making a definitive diagnosis. Treatments are extrapolated from human treatment guidelines. Sinead Devine described the blood tests used in the USA for *Borrelia* exposure in horses and the challenges of clinical diagnosis in horses, where many other equine diseases share similar clinical signs.

FOALS: DEALING WITH DYSTOCIAS

“Dystocia is a life threatening emergency in equine practice and is defined as “any problem which interferes with the normal birth of a foal,” according to Dr. Matteo Mereu DVM– Equine Surgery Resident, Anglesey Lodge Equine Hospital, The Curragh.

The period between the onset of dystocia and its resolution has a significant bearing on foetal survivability.

“The clinician must be methodical but timing is key. The period between the onset of dystocia and its resolution has a significant bearing on foetal survivability. Early detection with rapid appropriate intervention are critical for foal survival and future reproductive performance of the mare,” said Dr. Mereu. “Immediate referral may offer best prognosis to mare and foal if delivery is not promptly achieved at the farm.”

DONKEYS DIFFER

The Donkey Sanctuary Ireland took the opportunity to remind vets that donkeys are not small horses with big ears! Donkeys present a very different clinical picture when suffering from the same serious conditions as horses. The presentation highlighted significant differences between donkeys and horses and describe why the ‘dull’ or ‘listless’ donkey is a genuine veterinary emergency.

CLINICAL AND MANAGEMENT EXPERTISE

Dr. Patrick M. McCue DVD, PhD from Colorado State University spoke on ovarian, uterine, cervical and oviductal abnormalities. Dr. McCue teaches Theriogenology – the study of animal reproduction – and co-ordinates the clinical stallion, broodmare, foaling and embryo transfer services at the Equine Reproduction Laboratory.

‘Headshaking in the Horse’ was addressed by Sarah Ross. Matthew Austin delivered a ‘Dummies Guide to Animal Remedies Regulations’. Camilla Quattrini presented on How to Decide When to Transfer a Colic.

Carolyn Crowe delivered presentations on ‘Thriving in Practice – Building Resilience in Yourself and Others’ and on ‘Managing and Motivating Your Team’.

The organising committee for the 2018 Veterinary Ireland Conference are: Catherine Dwan, Bridget McGing, Jürgen Bodamer, Rosalinda Devereux, Louis Hassett, Liz O’Flynn and David MacGuinness.

ENDS

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Issued by: Antonina Ni Dhuinn, Progress Communications
Tel: 01-2766117 Email nina@progresspr.ie

EDITORIAL FOOTNOTE:

Sam Watson has competed at three World Equestrian Games (in 2010, 2014 and 2018) representing Ireland, winning a silver medal with the Irish team in Tryon, North Carolina. He has also competed in numerous European Championships. The son of multiple World and European Championships medallist John Watson, Sam was raised around horses and had the opportunity to ride with and train with his father. Having spent five seasons Eventing in England, Sam runs a farm in Ireland with his wife Hannah in Ballybolger Stud, Co Carlow. The farm is popular for racehorses to get some flatwork, with a growing student training base and some promising horses coming through the ranks.

You will find a copy of the conference programme here:

<http://www.veterinaryireland.ie/images/equineconf2018.pdf>