



Press Release

The 11th European Equine Health & Nutrition Congress!

By D.A. van Doorn, PhD & A.D. Ellis, PhD

Over 200 delegates from 20 countries attended the 11th edition of the European Equine Health & Nutrition Congress (EEHNC). The 11th EEHNC was hosted by Ghent University, Belgium from the 23rd of March until the 25th of March included. Internationally recognized specialists in nutrition, veterinary scientists, veterinarians, industry representatives and equine professionals attended this meeting. The Congress started with workshops leading into plenary sessions and ended in practical hands-on workshops on Saturday (25th) at the Faculty of Veterinary Medicine, Ghent.

The Thursday workshop themes were related to EU feed legislation, equine ration calculation and poisonous plants. The plenary sessions on Thursday addressed the main topic “Fiber First!”. Professor Chris Proudman (School of Veterinary Medicine, University of Surrey) reviewed recent developments in our understanding of equine grass sickness (EGS) including work to characterize the metabolomic signature of the disease and a recent vaccination trial. Equine grass sickness remains a usually fatal disease of horses; it is of unknown aetiology and without effective disease prevention or treatment. Also reviewed was a project that investigated the impact of different types of forage on equine gut microbial communities and metabolic profiles. Hallmarks of EGS are a marked gut dysbiosis and metabolic perturbation and this information may be of use diagnostically in the future.

Dr. Caroline Loos (University of Kentucky) highlighted in her talk that a higher quality protein source will provide more essential amino acids, consequently triggering a stronger muscle anabolic response than lesser quality protein sources making it a more effective nutritional solution when muscle growth is needed.

Professor Vervuert highlighted that new ways of harvesting forage are necessary to avoid nutrient losses on the field and to provide good forage hygiene. We should also avoid luxury overconsumption of forage in practice. She highlighted the importance of alfalfa, cereal straw and beet pulp. These feedstuffs may play an increasing role in horse feeding to compensate for forage shortages that can occur in practice.

The Friday programme addressed the theme “Tools & Techniques in Equine Nutrition & Health” and included a session dedicated to the “The Internet Connected Horse”. In the first session entitled “The Omics”, Professor Chris Proudman presented the results of a cohort study of foals from birth to 3 years old that addressed the microbiome, immune status, and health outcomes. The results of his study indicate that gut microbial communities change rapidly in the first two months of life in the foal, approaching their final, stable community structure as young as 2 months old.

The researchers also found a significant association between gut bacterial diversity at one month old and the risk of several adverse health outcomes later in life. Chris also highlighted that clinicians should be aware that the use of antimicrobials, which are known to suppress gut microbial diversity, has a significant and measurable impact on the health of horses in later life. That antimicrobials affect the microbial diversity was also confirmed by one of the studies put forward in the presentation of Mathijs Theelen and Roosmarijn Luiken of Utrecht University that showed that oral treatment with a specific anti-microbial has a rapid and long-lasting effect on faecal microbiota composition and resistome. Nutritional strategies that can influence the microbial composition in combination with the development of in vitro models to screen nutritional compounds and dietary strategies for their ability to influence gut health provide potential tools for improving equine health by alternative strategies. This may provide opportunities for the feed industry but also lead to alternative and preventive strategies for the equine practitioner.

Ingrid Vervuert highlighted that that commercial mineral analysis of hair is not reliable for assessing mineral intake in horses and that various mineral / trace element concentrations in the blood do not reflect nutrient intake in horses. She highlighted the importance of feed analysis and ration analysis remain the most effective approaches to ensure a sufficient mineral supply in horses.

The winner of the Free Communications Award was the abstract of Khafipour and coworkers that was presented by Anirikh Chakrabarti. The abstract dealt with how *Saccharomyces cerevisiae* Fermentation Postbiotic Influences the Microbiome Stability and Robustness in Young, Stressed Horses.

Dr. Andrea Ellis (Unequi) presented an Energy and Protein Unit Calculator based on Feed Chemistry bringing together current published formulas by various feed evaluation systems for horses. The calculator can be applied by feed manufacturers and nutrition scientists to estimate energy and protein units of feedstuffs. If applied universally, it will bring more unity to feed labelling, feed evaluation and ration calculations for horses. Andrea also showed ongoing work regarding the development a direct conversion tool. As it may sometimes be necessary for equine or veterinary professionals (specialized veterinarians, nutrition advisors) when working with feedstuffs originating from various regions. Ultimately, calculating from feed chemistry values will always be more accurate but in practice a direct version tool may provide an estimate when information is lacking and is desired to perform a ration calculation.

Prof. Gunther van Loon and Dr. Glenn van Steenkiste highlighted that the use of health sensors in horses is still in its early stages and is not yet as widely integrated as in humans. Indeed, sensors have the potential to revolutionize equine (gastrointestinal tract) health monitoring and offer non-invasive and continuous monitoring of GIT parameters. However, the currently available sensors are primarily used in research setting for horses and their application in a clinical setting might still

be impractical. The currently available technology has often not or poorly been validated for use in horses.

On Saturday, March 25, 2023, the 11th EEHNC organisation hosted an extensive workshop track programme at the Faculty of Veterinary Medicine of Ghent University (Merelbeke).

Peter Bollen, President of the European Equine Health Association (EEHNA) awarded a 500 Euro cheque to presenting author Anirikh Chakrabarti for the free communication entitled “*Saccharomyces cerevisiae* Fermentation Postbiotic Influences Microbiome Stability and Robustness in Young, Stressed Horses”.

Share and win-contest:

By mentioning the congress on social media using #EEHNC during the event, participants had a chance to win a free ticket to the 12th European Equine Health & Nutrition Congress! The winner of this contest is *Emma Hernandez-Sanabria*! She made a LinkedIn post about Chris Proudman’s study with 52 foals. Congratulations, Emma!

Proceedings:

If you are interested in the summaries provided by the speakers, the Proceedings of the 11th European Equine Health & Nutrition Congress are available as a booklet or as PDF. The proceedings contain full papers of invited speakers and abstracts from the poster session. The proceedings are available for purchase on the congress website www.equine-congress.com through the account section which can be accessed via the top right corner of every page. Registered participants can download a PDF version of the proceedings in the same account section, using their login and password they entered during registration.

Some experts have recorded take home messages that can be found on the [EEHNC YouTube channel](#).

For questions regarding this press release, please contact: registration@equine-congress.com or +32 (0) 9 242 82 29

Free communications award



Picture: Peter Bollen (left), President of the European Equine Health Association (EEHNA), awarded a 500 Euro cheque to presenting author Anirikh Chakrabarti (right) for the free communication entitled “Saccharomyces cerevisiae Fermentation Postbiotic Influences Microbiome Stability and Robustness in Young, Stressed Horses”.

Dr. Caroline Loos (University of Kentucky)



Picture: Dr. Tresemiek Picavet (DBP Veterinary Services) (left), member of the EEHNC scientific committee thanked Dr. Caroline Loos (University of Kentucky) (right) for her talk about protein sources and muscle growth.

Prof Chris Proudman (School of Veterinary Medicine, University of Surrey)



Picture: Dr Ellen Roelfsema (Utrecht University) (left) and Dr Tresemiek Picavet (DBP Veterinary Services) (middle) chairing the session of Chris Proudman (right).

Dr. Glenn Van Steenkiste en Prof. Gunther Van Loon (Ghent University)



Picture: Dr. Glenn van Steenkiste (Ghent University) (left) and Prof. Gunther van Loon (right) highlighted in their presentation that the use of health sensors in horses is still in its early stages and is not yet as widely integrated as in humans.

Dr. Miel Hostens (Utrecht University)



Picture: Dr Miel Hostens provided “Food for thought” during an inspiring lecture how internet technology is integrated in the nutrition and health management of ruminants.

Professor Ingrid Vervuert (Faculty of Veterinary Medicine, Leipzig University)



Picture: Professor Vervuert (University of Leipzig) highlighted that mineral analysis of hair is not a reliable tool for assessing mineral intake in horses. She strongly recommended ration formulation and analysis to assess mineral intake in horses.

Dr. Andrea Ellis (Unequi)



Picture: Dr. Andrea Ellis (Unequi) presented an Energy and Protein Unit Calculator based on Feed Chemistry bringing together current published formulas by various feed evaluation systems for horses. This calculator may function as a centralized tool for manufacturers and nutritionists. The calculator can be applied by feed manufacturers and nutrition scientists to estimate energy and protein units of feedstuffs. If applied universally, it will bring more unity to feed labelling, feed evaluation and ration calculations for horses. Andrea also showed ongoing work regarding the development a direct conversion tool. As it may sometimes be necessary for equine or veterinary professionals (specialized veterinarians, nutrition advisors) when working with feedstuffs originating from various regions. Ultimately, calculating from feed chemistry values will always be more accurate.

Dr. Louis Penning (Utrecht University)



Picture: Dr. Louis Penning (Utrecht University) and Jurgen van Baal (Wageningen University) presented the results of the [CENTAUR](#) project that resulted in the establishment of an equine liver organoid with either a stem/cholangiocyte or hepatic phenotype. The organoid technology could provide a model to study equine metabolic disturbances. In combination with equine intestinal organoids (and other in vitro models), nutritional, pharmacological and toxicological studies should be possible without the need for large numbers of animals in a long-term study set-up.



Picture: Dr Louis Penning (left) in conversation with Lieselot Hamerlinck (right) representing the EEHNC local organization.

Workshop tracks (Campus Merelbeke, Saturday March 25, 2023)

Equine Parasites Track



Picture: Dr Deborah van Doorn (Utrecht University) and Prof. Edwin Claerebout (Ghent University) discussed in the first part of the Parasitology workshop “What is new and going on in Western & Northern Europe? In the second part Juan David Carbonell Bonelo & Prof. Aránzazu Meana (Complutense University of Madrid) provided an update on parasite issues related to Southern Europe. Dr Adolfo Paz Silva (University of Santiago de Compostela) informed participants on the latest news on nutritional strategies & ingredients for parasite control & management.

Gastro & Respiratory Track



Pictures: Em. Professor Richard Ducatelle (Ghent University) discusses the relation between “Colic, Fiber and the Microbiome”.



Picture: Gunther van Loon (Ghent University) demonstrated the use of diagnostic imaging to assess GIT health.

Delegates that followed the workshop track at Campus Merelbeke (Ghent University) of Em. Professor Ducatelle on Saturday were further informed about the relation between “Colic, Fiber and the Microbiome”. Gunther van Loon (Ghent university) demonstrated the use of diagnostic imaging to assess GIT health. Emmanuelle Van Erck – Westergren (Equine Sports Medicine Practice) addressed the relationship between feeding and respiratory health in the workshop that focused on the question “How to store your forage and organize your ventilation / stable management to optimize equine respiratory health (Air, dust, ventilation equine specific expert of stables)?”

Insulin Dysfunction & Laminitis Track



Picture: Marie-Céline Hottat from the Equine Nutrition Service (Ghent University) (presenting on the right) and Ellen Roelfsema (Utrecht University) (seated on the left) updated the congress delegates about

recent research in the field of nutrition and clinical management of horses with Equine Metabolic Syndrome (EMS)/Insulin dysregulation.



Picture: Professor Frederik Pille (Ghent University) updated the delegates about laminitis treatment from an orthopedic perspective.