



EAPA

EUROPEAN ANIMAL PROTEIN ASSOCIATION

Presence

EAPA members are present in all over Europe.



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Program



How safe plasma can help to reduce the usage of antibiotics on European farms ?

Chairman: Mr Han Swinkels, Professor at HAS University for Applied Sciences, Den Bosch The Netherlands

14.00: reception with coffee and tea

14.15: opening and welcome by Mr Albert Gibert, president of EAPA

14.25: update on the development of PEDv on a global scale: what knowledge has been gained by the swine industry by Dr. Tanja Opriessnig, Associate Professor, Iowa State University, USA and The Roslin Institute , University of Edinburgh, United Kingdom

15.00: plasma potentiates PEDV inactivation by Dr. Galena Quist-Rybachuk, practising Veterinarian and Post-Doc at Ghent University, Belgium

15.30: refreshments break

15.45: resume of the seminar

Program

- 15.45:** **how to get away from antibiotics and what feedborn possibilities do we have?** by Professor Geert Janssens, Department of Nutrition, Faculty of Veterinary Medicine, Ghent University, Belgium

- 16.15:** **recent experiences with plasma in piglets** by Dr. David Torrallardona, researcher at the IRTA Institute of Agrifood Research and Technology, Catalonia Spain

- 16.45:** **(first) experiences with plasma in broiler diets** by Ir. Carine van Vuure, MSc, Manager Nutrition & Regulatory Affairs, Darling Ingredients International, The Netherlands

- 17.05:** **wrap-up by mr Han Swinkels**

- 17.10:** **final word by mr Albert Gibert**

- 17.15:** **networking and some drinks and snacks**

**NOTE: All presentations will be presented to you after the seminar via the EAPA website*

Speakers

Prof. Dr. Han Swinkels – Chairman seminar

Han Swinkels (51) started on 1 January 2012 as professor at the University of Applied Sciences 'HAS Hogeschool' in 's-Hertogenbosch. His area of expertise is sustainable animal production. Before that Han worked almost 13 years in several jobs for the departments livestock research and food & biobased research at the Wageningen University and research center. Thereafter, Han worked for almost 5 years as manager livestock for the Dutch farmers organization. Han combines his job as professor at 'HAS Hogeschool' with his own consultancy company. In this role Han works as a consultant for entrepreneurial organizations and private companies, governments, research institutes and ngo's. In his work as consultant Han focusses on co-operative projects with the aim to achieve new sustainable developments in animal production and the agri & food business.



Speakers

Tanja Opriessnig

Mag. med. vet., Dr. med. vet., Ph.D.

Chair of Infectious Disease Pathology, The Roslin Institute, University of Edinburgh, UK

Professor, Veterinary Diagnostic and Production Animal Medicine, Iowa State University, Ames, Iowa, USA

Prof. Tanja Opriessnig completed her veterinary degree at the University of Veterinary Medicine in Vienna, Austria in 2000. In 2002, she received her advanced degree in Veterinary Science from the same University. From 2002 to 2006, Prof. Opriessnig worked as a postdoctoral researcher at Iowa State University and she completed a Ph.D. in Veterinary Pathology. From 2006 to 2013, she worked as Veterinary Diagnostic Pathologist at the Assistant or Associate Professor rank in the Veterinary Diagnostic Laboratory at Iowa State University. Since 2013 Prof. Opriessnig has a joint appointment with the Roslin Institute, University of Edinburgh and the Department of Veterinary Diagnostic and Production Animal Medicine, Iowa State University. Her current research focus is on pathogenesis, control, and diagnosis of infectious pathogens in pigs with emphasis on porcine circovirus type 2, porcine reproductive and respiratory syndrome virus, *Erysipelothrix rhusiopathiae*, porcine parvovirus, porcine astrovirus, porcine epidemic diarrhea virus, and swine hepatitis E virus. Since 2002, Prof. Opriessnig published > 150 peer-reviewed manuscripts in various journals of virology, microbiology and veterinary relevance.



Speakers



Update on PEDV on a global scale with emphasis on the situation in the USA and Canada

By Tanja Opriessnig

The Roslin Institute, University of Edinburgh, UK

Department of Veterinary Diagnostic and Production Animal Medicine, Iowa State University, USA

This presentation will focus on porcine epidemic diarrhea virus (PEDV), which in recent years was associated with substantial disease outbreaks in many major pig rearing areas in the world causing tremendous economic losses. Specifically, basic virus characteristics, clinical signs, pathology and routes of transmission will be discussed. In addition, as spray-dried plasma of porcine origin has been implicated in transmission of PEDV, recent data from several pig experiments involving PEDV and spray-dried porcine plasma will be presented.

Speakers

Galena V. Quist-Rybachuk, DVM, PhD

EDUCATION:

May, 2009 **Doctor of Philosophy (PhD)** **Major: Molecular Virology, LSU, USA**
May, 2007 **Doctor of Veterinary Medicine (DVM),**
Louisiana State University SVM, Baton Rouge, LA, USA
Dec., 1997 **Bachelor of Science (BS)** **Major: Biochemistry**
Dec., 1997 **Bachelor of Science (BS)** **Major: Microbiology**
College of Basic Sciences, Louisiana State University, Baton Rouge, LA, USA



INTERESTS AND EXPERTISE:

In vitro culture (virus, STEM cell, primary cell, cell line, tissue, bacteria); Infectious diseases (Herpes and coronavirus virology, anthrax, biosafety) Veterinary and Comparative Nutrition; Veterinary Surgery and Medical Imaging; Medical scientific writing and editing; Histology; 3D Confocal and Electron Microscopy; DNA, RNA, and protein molecular biology techniques (cloning, sequencing, synthesis, microarray); instrumental analysis in analytical chemistry (NMR, GS/LC-MS, HPLC, FACScan)

EMPLOYMENT AND EXPERIENCE:

02/11- present **Biomedical Scientist, Visiting Postdoctoral Researcher,**
Laboratory of Virology, Ghent University, Belgium, in cooperation with Veos Group, Belgium
08/13- present **Veterinary Practice Owner,** Small, exotic, and wild animal medicine & surgery, Bertem, Belgium

Speakers

Plasma potentiates PEDV inactivation

by Dr. Galena Quist-Rybachuk
practising Veterinarian and Post-Doc at Ghent University, Belgium

Porcine epidemic diarrhea virus (PEDV), the culprit of recent staggering porcine neonatal mortality in the United States, is a faeco-orally transmitted enveloped ssRNA alphacoronavirus. Its RNA has been found in multiple body tissues and fluids of infected pigs. Concerns on the safe use of spray-dried porcine plasma (SDPP) have been favourably addressed by inactivation assays that simulate industrial spray-dry practices and storage in dry conditions. The present study investigated interactions between environmental pH, mild heat treatment and presence of non-immune porcine plasma on the inactivation of PEDV in liquid media.

Although refrigerated plasma did not affect PEDV infectivity, the virus was considerably sensitive to incubation in porcine plasma at 37°C. These *in vitro* data suggest that PEDV would not remain infectious for more than a few hours in the blood of live pigs. In neutral-pH culture medium, in contrast, PEDV showed little sensitivity to heat treatment of 40°C. Irrespective of presence of plasma, alkalinisation to pH 10.2 without mild heat treatment was not effective to inactivate PEDV. Alkaline pH conditions, however, strongly potentiated thermal sensitivity of PEDV.

Heat treatment at 48°C in alkaline conditions (pH 10.2) resulted in an 8 log₁₀ reduction in virus infectivity titer within 4.6 min in plasma or 15.2 min in culture medium. Overall, these data underline the potentiating effect of plasma on physical (heat) and chemical (alkaline pH) inactivation of PEDV.

Speakers

CV Geert Janssens

Geert Janssens graduated 1992 as agricultural engineer in Leuven, Belgium in 1992. He obtained his PhD in veterinary sciences in 1999 at Ghent University. He became head of the Laboratory of Animal Nutrition at that university in 2001, and started teaching animal nutrition to the veterinary students. At the same time, he initiated a range of research projects, with main focus on the role of intestinal events on metabolic traits, nutritional modulation of energy homeostasis, and micromineral-related physiology. He appreciates the added value of comparative nutrition, involving species from throughout the animal kingdom within both wild and domesticated animals. He is president of the European Society of Veterinary and Comparative Nutrition, further involved in the organization of several international congresses, and an editor of Journal of Animal Physiology and Animal Nutrition.



Speakers

How to get away from antibiotics: which feed-borne possibilities exist ?

By Geert P.J. Janssens

Laboratory of Animal Nutrition, Faculty of Veterinary Medicine, Ghent University, Belgium

Already before the 2006 EU ban on antimicrobial growth promoters, the search for alternatives had begun. Starting from rather a black-box approach where any component with potential was tested with sometimes little rationale, research has shifted towards more mechanistic studies. It appeared that the original separation between growth promoters and health promoters had to be revised, since both are connected. There is growing awareness that gut health not only depends on the modulation of intestinal microbiota but also of the host's metabolism, with intimate cross-talk between both. Examples of direct gut microbial modulation are plenty, including prebiotics, probiotics, organic acids, etheric oils and plasma powders. Yet, many of them also affect the absorption of nutrients, hence changing the animal's capacity to counteract inflammatory attacks from intestinal microbiota. Increasing evidence shows that even additives that were initially not intended to act upon gut microbiota, now seem to influence microbial populations in the gut, e.g. cell wall degrading enzymes and emulsifiers. The challenge now lies in the identification and quantification of the conditions (such as basic diet composition and environment) that allow these additives to show their benefits.

Speakers

David Torrallardona

In 1988 he obtained his veterinary degree in from the Autonomous University of Barcelona. Soon after, he moved to follow his postgraduate studies at the University of Aberdeen, where he obtained his PhD degree in Animal Nutrition in 1994 for his work at the Rowett Research Institute under the supervision of Malcolm F. Fuller. During his doctoral work he studied the contribution of the gastrointestinal microflora to amino acid requirements in non-ruminants. After a post-doctoral stay at the Rowett Research Institute (Aberdeen) he joined IRTA research institute in 1995. His current research interest focuses on the effects of feed ingredients and alternative products to antimicrobial growth promoters on the gut health of piglets at weaning, area in which he has been involved in several national and European funded projects. He is also active in contractual research work in collaboration with many Spanish and international companies from the pig feed sector. Also he has many years experience on the study of the effects of enzymes on nutrient digestibility, environmental pollution aspects related to feeding and efficacy studies of different additives in the feeding of swine. He is a member of the editorial boards of the scientific journals “Animal” and “Archives of Animal Nutrition”. He has served as secretary (2001-2006) and vice-president (2007-2011) of the Pig Production Commission of the European Association for Animal Production (EAAP), and currently member of the Spanish Scientific Committee of EAAP and the International Steering Committee for the Digestive Physiology of Pigs Symposium (DPP). He is author/co-author for over 80 scientific publications and 150 contributions to scientific meetings.



Speakers



Recent experiences with plasma in piglets

by Dr. David Torrallardona

researcher at the IRTA Institute of Agrifood Research and Technology, Catalonia Spain

In 2010 a meta-analysis of 75 trials derived from 43 papers has been published. In this speech an update of this meta-analysis will be given, with the focus on the actual endeavour to reduce the use of antibiotics in pig feed.

Speakers

Carine van Vuure

Nutritionist – Darling Ingredients International / Sonac

Ir C.A. van Vuure is for more than 25 years working as a nutritionist, the first 7 years in the compound feed industry. The last 19 years she is especially active in the field of animal by-products.

Next to this she is representing Darling Ingredients International in European organisations like EFRA and EAPA.



Speakers

(First) experiences with plasma in broiler diets

by Ir. Carine van Vuure, MSc

Manager Nutrition & Regulatory Affairs, Darling Ingredients International, The Netherlands

Broilers are very susceptible young animals, which have to grow in 5 – 6 weeks to an end weight of much more than 2 kilograms. Due to this huge performance asked from them, high nutritious ingredients are required in their diets. To keep them healthy coccidiostats and antibiotics are used widely.

In a recent report (May 2015) from the Dutch SDA we learned that in general the use of antibiotics has declined, but the drop in the Netherlands was slowed down in 2014. In the calf and broiler sector the most notices of exceeding the action level has been recognized.

Products like plasma, from which it is known that it can help to make the intestine of young piglets more resilient, could also be of help in the diets of broilers. Especially in the first 10 days after hatching.

Research to proof this concept have been done in several countries. This presentation will give an overview of research done in the last few years.



Thank you.