

**Pig Study Commission selected sessions at the 2020 EAAP Virtual Annual Meeting**

✓ **Early career competition: stressing innovation in pig production.**

This session promises a lot of high-quality talks from early career scientist that will put a lot of effort in making the best presentation

✓ **Energy and protein efficiency in pigs, from conception to slaughter.**

With invited speaker **Jaap van Milgen** from INRAE. He will give the talk “Efficient pig and poultry production: what did we learn from Feed-a-Gene?”. Jaap coordinated the Feed-a-Gene project, which was funded under the Horizon 2020 program of the European Commission between 2015 and 2020. Although efficiency seems to be a simple word and concept, it encompasses a complicated and complex issue. “How efficient have you been in the last year, as a person?”. The answer to this question shows that there is much more to it than just feed or food.



✓ **Modulating gut function and microbiome for resilient livestock production.  
(with the health and welfare commission)**

Invited speaker **Stafford Vigors** is an Assistant Professor in the School of Agriculture and Food Science, University College Dublin Ireland. His primary research interest is the interaction between nutrition, microbiome and gut function in important animal production models. He utilises next generation sequencing approaches to assess the impact of alterations in the gut microbiome and changes in gene expression in animal models of feed efficiency, nutrient supplementation, methane emissions and improving meat quality.



This talk will focus on two main aspects of his previous work in the use of dietary additives and the identification of pigs with improved feed efficiency as means to improve animal productivity. While the mechanisms influencing animal performance through genetic selection and dietary intervention are multifactorial, one factor that warrants further exploration is the influence of the gut microbiome. By using dietary additives, we potentially can alter the intestinal microbiome to improve animal health and performance. Research in UCD has established the potential of feeding naturally sustainable bioactives from marine flora

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and fauna to modify the intestinal bacterial population to improve animal performance and health.

While diet is a means to alter the microbiome, the influence of host genetics is not well established in animal production and UCD research has examined the potential influence of the microbiome on feed efficiency, establishing that pigs with improved feed efficiency have alterations in their gut microbiome compared to their less efficient counterparts.

✓ **Pig, poultry and rabbit husbandry for improved product quality.**

This bottom-up session will combine abstracts dealing with different aspects of product quality.

✓ **Mineral and vitamin nutrition in pigs and poultry**

In this session, we have 2 invited speakers:

**Patrick Schlegel** will talk about the kinetics of bone mineralisation in gilts and sows and its potential to develop feeding strategies aiming for a reduced use of mineral phosphates. Patrick grew up on a dairy farm and graduated in animal sciences at the ETHZ. With a few years of activity in the private industry and with a PhD from AgroParisTech in the pocket, he joined Agroscope. Patrick is in charge of conducting research on mineral and vitamin nutrition in ruminants and pigs as well as in assessing reference values for nutrient excretion in various farming animal species.



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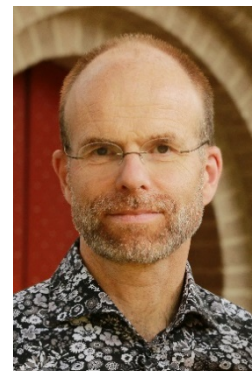
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# EAAP

## European Federation of Animal Science

**Paul Bikker** will give a talk on the Kinetics of calcium and phosphorus absorption and utilisation in pigs and poultry. Paul is a senior researcher at Wageningen University & Research with about 25 years of experience in scientific and applied research in the nutrition of pigs and consultancy for the feed industry. His main areas of interest and expertise include the requirements and metabolism of amino acids, minerals (calcium and phosphorus) and trace elements (copper and zinc) in pigs. Calcium and phosphorus are essential nutrients for bone development, cell structure and numerous biochemical processes, in pigs and poultry. These minerals need to be absorbed in an adequate ratio for optimal post-absorptive utilisation. This presentation aims to further elucidate calcium to phosphorus interactions in different segments of the digestive tract, the role of microbial phytase, the influence of limestone particle size. Based on novel data, the regulation via active and passive absorption mechanisms in pigs and broilers will be discussed. Unlike earlier studies, the results indicate that limestone particle size plays a significant role in pigs and poultry, not only with respect to digestibility but also on post absorptive utilization. The potential role of synchronization of calcium and phosphorus will be discussed.



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