

POSTER SESSIONS

Wednesday 22 August 2018, 12:30 – 14:30

Theme 1: GIT nutrient sensing and the enteroendocrine system

Boulevard Auditorium Foyer, BCEC

Paper title	Paper reference #	Presenting author name Organisation
Effect of dietary copper sources on animal performance, gut microbiota and ghrelin-growth hormone axis of piglets fed diets with antibiotics	200	Matthew Bekker, Novus International, Australia
Carvone enantiomer specificity accounts for conformational changes in the porcine odorant-binding protein (p-OBP) bound state using a computational model	201	Núria Elias Masiques, University of Barcelona, Spain
Effect of fat source on gastric emptying, and blood Cholecystokinin and triglycerides in pigs	202	Richard Faris, Cargill Animal Nutrition, USA
Sucrose inclusion in gestating and lactating diets conditions preference thresholds of piglets for sucrose and monosodium glutamate	203	Sergio A. Guzmán-Pino, Universidad de Chile, Chile
Piglet appetite for glutamate and sucrose solutions is not influenced by maternal conditioning with MSG	204	Sergio A. Guzmán-Pino, Universidad de Chile, Chile
Effects of Lawsonia intracellularis infection on number of enteroendocrine cells in mouse enteroids	205	Talita Resende, University of Minnesota, USA
Lawsonia intracellularis infection decreases the number of endocrine cells in pigs affected by proliferative enteropathy	206	Talita Resende, University of Minnesota, USA
Dietary bitter compounds delayed gastric emptying and glucose uptake while increased plasma insulinotropic hormone GLP-1 in pigs	207	Eugeni Roura, The University of Queensland, Australia
Selected bitter compounds may increase blood flow into the gastrointestinal tract by eliciting mesenteric artery smooth muscle relaxation in pigs	208	Zeping Shao, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia
Effects of peptide and crystalline AA added into extremely low-crude protein diet on chemosensing of gastric acid secretion of pigs	209	Junhua Shen, Laboratory of Gastrointestinal Microbiology, Nanjing Agricultural University, China
Effects of mix-fermented rapeseed meal by substituting soybean meal on growth performance, nutrient digestibility and blood indicators of growing pigs	210	Haifeng Wang, Zhejiang University, China
Male grower pigs fed cereal soluble dietary fibres display reduced GIP response and delayed insulin peak following a feed challenge.	211	Barbara Williams, The University of Queensland, Australia
Effects of dietary hydoxycholeic acid on intestinal enteroendocrine cells differentiation and function, and serum biochemical indexes in weaning piglets	212	Huansheng Yang, Animal Nutrition and Human Health Laboratory, School of Life Sciences, Hunan Normal University, China

Theme 2: Gut health and intestinal immunity (challenges to gut health)

Boulevard Auditorium Foyer, BCEC

Paper title	Paper reference #	Presenting author name Organisation
Early supplement of oat β -glucan influence the intestinal proteome of suckling pigs	213	Lidija Arapovic, Swedish University of Agricultural Sciences, Sweden
Phytogenics improve growth performance and intestinal barrier integrity in piglets	214	Tobias Aumiller, Delacon Biotechnik GmbH, Austria
IPEC-J2 cells: a medium-throughput system for in vitro oxidative stress assessment in a porcine intestinal model	215	Miriam Ayuso, University of Antwerp, Belgium
Effects of direct-fed microbial blends on immune response of weaned pigs challenged with F18 enterotoxigenic Escherichia coli	216	Spenser Becker, Iowa State University, USA
Effect of protein source on weaning diarrhea and performance in piglets	217	Christine Brøkner, Hamlet Protein, Denmark
Porcine plasma protein supplementation attenuates intestinal inflammation in a mice model of both enteric and pulmonary challenge	218	Joy Campbell, APC, USA
Plants with antimicrobial effects to combat post-weaning diarrhea in piglets – Allicin and acid-containing species	219	Nuria Canibe, Aarhus University, Denmark

Weaning age affects intestinal health and performance in nursery piglets	220	Vinicius Cantarelli, Federal University of Lavras, Brazil
Gut inflammatory and immune responses in a post weaning diarrhea model in early weaned piglets	221	Pietro Celi, DSM Nutritional Products, USA
Faecal volatile organic compounds as a non-invasive biomarker of gastrointestinal functionality in early weaned piglets	222	Pietro Celi, DSM Nutritional Products, USA
Feeding CLA or MCFA to gilts and sows does not improve colostrum or milk composition or progeny blood lipid profiles.	223	Jessica Craig, Rivalea (Australia), Australia
Citrus flavonoids supplementation in weanling diets may improve piglet intestinal health and performance allowing to reduce the use of antimicrobials	224	Francisco Javier Crespo, Ferrer Interquim, Spain
Interrelationships between post-weaning body weight loss and gut health parameters	225	Jeroen Degroote, Ghent University, Belgium
Replacing antibiotics with 0.20% L-glutamine in swine diets: Impact on health and productivity following weaning and transport during different seasons	226	Alan Duttlinger, Purdue University, USA
Effect of copper hydroxychloride and heat stress on growth performance, diarrhea incidence, and blood characteristics of weanling pigs	227	Charmaine Espinosa, University of Illinois Urbana-Champaign, USA
Effects of Oligosaccharide on Growth Performance, Blood Biochemical Indexes, Nutrient Apparent Digestibility, Intestinal Morphology and Disaccharidase Activity in Weaned Piglets	228	Rejun Fang, Hunan Agricultural University, China
Effects of Epidermal Growth Factor on LPS-Induced Apoptosis in Porcine Intestinal Epithelial Cells	229	Rejun Fang, Hunan Agricultural University, China
Effects of dietary supplementation with porous zinc oxide on the growth performance, intestinal barrier and immune function in weaning piglets	230	Rejun Fang, Hunan Agricultural University, China
Predictability of intestinal integrity based on body temperature modulation of pigs under heat stress and zinc supplementation.	231	Julie Feldpausch, Purdue University, USA
Changes in IUGR piglets gut and liver metabolism predisposing to preferential use of fatty acids as a source of energy	232	Małgorzata Domino, Warsaw University of Life Sciences, Poland
Changes in the intestine and liver in intrauterine growth (IUGR) retarded neonatal piglets which may lead to their diminished performance	233	Karolina Ferenc, Warsaw University of Life Sciences, Poland
Effect of nutritional alternatives to limit the digestive disorder and performance impairment around weaning.	234	Audrey Gloux, INRA, France
The development of a Streptococcus suis serotype 9 challenge model in weaned piglets	235	Xiaonan Guan, Schothorst Feed Research / HMI Wageningen UR, Netherlands
Observation of stomach lesions in weaned piglets	236	David Guillou, MiXScience, France
Dietary inclusion of essential oils and tributyrin mixtures selected as antibiotic alternatives from in vitro study improved piglet intestine health	237	Haifeng Wang Maolong He, Lucta (Guangzhou) Flavours, China
Lawsonia intracellularis-Mycoplasma hyopneumoniae challenge alters intestinal function and integrity of grow-finish pigs	238	Emma Helm, Iowa State University, USA
Galactosylated chitosan-oligosaccharides protect against enterotoxigenic Escherichia coli in piglets	239	Charlotte Maria Elisabeth Heyer, University of Alberta, Canada
Egg-yolk antibodies supplementation protect weaned pigs against enterotoxigenic Escherichia coli induced diarrhea and improve gut health similar to antibiotics	240	Pengfei Huang, School of Life Sciences, Hunan Normal University, China
Dietary zinc and the development of immune competence in post weaning piglets	241	Alfons Jansman, Wageningen Livestock Research, Netherlands
Effects of dietary threonine:lysine ratio on performance and mucin gene expression in weaned pigs challenged with Escherichia coli K88	242	Balachandar Jayaraman, Evonik (sea), Singapore
Effects of dietary antimicrobial peptides on growth performance, digestibility, intestinal morphology and digestibility in newly weaned piglets	243	Feng Jie Ji and Huansheng Yang, Hunan Normal University, China
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Cecropin and plectasin as antibiotic alternatives affect blood indicators and nutrient digestibility in weaned pigs weighing 8 to 25 kg	245	Feng Jie Ji and Huansheng Yang, Hunan Normal University, China
Vitamin B6 alters diarrhea rate, intestinal morphology and inflammation response in weaned piglets fed a high-protein diet	246	Jun Li and Huansheng Yang, Hunan Normal University, China

Protein degradation in intestinal crypt epithelial cells of weaning piglets	247	Meiwei Wang and Huansheng Yang, Hunan Normal University, China
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Validation of a quantitative biomarker of gut inflammation in weaned piglets.	250	Noémie Lemoine, MiXScience, France
Dietary corn bran increased intestinal cellulolytic bacteria and alleviated inflammatory response in weaned pigs	251	Ping Liu, China Agricultural University, China
Efficacy of medium-chain fatty-acid salts alone or protecting sodium heptanoate in front of an ETEC K88 oral challenge in piglets	252	Paola López-Colom, Animal Nutrition and Welfare Service. Animal and Food Science Department. Universitat Autònoma de Barcelona (UAB), Spain
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Dietary raw potato starch modulates intestinal immune status and beneficial host-microbe interactions.	254	Crystal Loving, USDA-ARS-National Animal Disease Center, USA
Dietary sodium diformate and monolaurate affect faecal pathogen load in lactating sows	255	Christian Lückstädt, ADDCON GmbH, Germany
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Effects of continuously infusing glucose or casein at the terminal ileum on systemic inflammation	257	Edith J Mayorga, Iowa State University, USA
Increasing intestinal protection with specific algae extracts	258	Virgil Meallet, Olmix Group, France
Pre-weaning feeding stimulates gut development of piglets at weaning	259	Anouschka Middelkoop, Wageningen University and Research, Netherlands
Effect of cyclic heat stress and supplemented inorganic and organic zinc source levels on intestinal gene expression and morphology.	260	Kayla Mills, Purdue University, USA
Sainfoin (<i>Onobrychis viciifolia</i>) tannins reduce Enterotoxigenic <i>Escherichia coli</i> infection symptoms in weaning piglets	261	Catherine Ollagnier, Agroscope, Switzerland
Targeting gut inflammation in pigs with the use of olive fruit bioactives positively influences pig performance	262	Jose J. Pastor, Lueta, Spain
Porcine gastric ulceration in weaners from high-risk Danish herds using finely grounded commercial diets fed ad libitum	263	Juan Miguel Peralvo Vidal, University of Copenhagen, Denmark
Evaluation of gastrointestinal functionality changes in a nutritional post weaning diarrhea model in early weaned piglets	264	Estefania Perez Calvo, DSM Nutritional Products, France
Effects of dietary protease on growth performance and intestinal morphology of weaned pigs	265	Rider Perez-Maldonado, DSM Nutritional Products, Singapore
Development of a pig model for inflammatory bowel diseases in humans	266	Stig Purup, Aarhus University, Denmark
Soybean meal and β-mannanase affected immunoproteins in carotid artery and morphology and water channel proteins in small intestine of pigs	267	Yanrui Qiao, Elanco Animal Health, China
Dietary soybean meal level and β-mannanase supplementation affected serum biochemicals and enzyme activities in nursery pigs	268	Yanrui Qiao, Elanco Animal Health, China
Gamma-aminobutyric acid and amino acid supplementation in weaner pigs subject to short-term production stressors do not influence intestinal permeability	269	Samantha Sterndale, Murdoch University, Australia
Effect of short-chain fructooligosaccharides supplementation on performance and gut health of pigs.	270	Chris Van Ginneken and Miriam Ayuso, Applied Veterinary Morphology, University of Antwerp, Belgium
Impact of intestinal disorders and respiratory diseases on performance and economics of growing pigs	271	Maarten van Helvoort, De Heus Animal Nutrition, Netherlands
Mycotoxin binder increases growth performance and digestive health of finisher pigs offered wheat based diets grown under different agronomical conditions	272	Ruth Rattigan, University College Dublin, Ireland
Maternal and direct supplementation with milk protein fraction and yeast beta glucan helps piglets overcome the post-weaning challenge	273	Ruth Rattigan, University College Dublin, Ireland
The immune response of pigs divergent in feed efficiency differs in both basal unchallenged and lipopolysaccharide challenged colonic tissue	274	Ruth Rattigan, University College Dublin, Ireland

Evaluation of Intestinal Morphology and Inflammatory Cell Infiltration in a Swine Chronic Heat Stress Model	275	Caitlin Vonderohe, Purdue University, USA
Effect of dietary Lactobacillus plantarum on innate immunity in young piglets challenged with ETEC K88	276	Li Wang, Institute of Animal Science, Guangdong Academy of Agricultural Sciences, China
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iTRAQ-based membrane proteomic analysis reveals intestinal development is altered by intrauterine growth restriction in piglets	278	Junjun Wang, China Agricultural University, China
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Effects of dietary supplementation with antibiotics or yeast glycoprotein on intestinal mucosal morphology and Hsp70 in weanling piglets	280	Xin Wu, Institute of Subtropical Agriculture, the Chinese Academy of Sciences, China
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Maternal uridine supplementation reduces diarrhea rate of piglets by influencing intestinal mucosal barrier and cytokines in suckling piglets	282	Xin Wu and Yulong Yin, Institute of Subtropical Agriculture, the Chinese Academy of Sciences, China
Maternal yeast-based nucleotides supplementation during late-pregnancy and lactation induced transport and immune function of small intestine in neonate piglets	283	Xin Wu, Institute of Subtropical Agriculture, the Chinese Academy of Sciences, China
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Pyrimidine nucleotides metabolism and function of gut in an early-weaned piglets model: Effects of a uridine monophosphate or uridine diet	285	Xin Wu, Institute of Subtropical Agriculture, the Chinese Academy of Sciences, China
A comparative analysis for the growth performance and intestinal development of weanling piglets affected by UMP and UR supplements	286	Xin Wu, Institute of Subtropical Agriculture, the Chinese Academy of Sciences, China
Activation of endoplasmic reticulum stress signaling in jejunum of early-weanling piglets	287	Zhenlong Wu, China Agricultural University, China
Effects of dietary niacin on intestinal morphology and diarrhea of weaning piglet	288	Zhenfeng Yi and Huansheng Yang, Hunan Normal University, China
Effects of folic acid in antibiotic-free diets on growth performance and diarrhea of weaned piglets	289	Lei Wang and Huansheng Yang, Hunan Normal University, China
Effects of dietary protein on diarrhea and intestinal inflammation of weaned piglets	290	Lanmei Yin and Huansheng Yang, Hunan Normal University, China
Effects of dietary sulfur amino acids on serum biochemical variables, mucosal amino acid profiles, and intestinal inflammation in weaning piglets	291	Enyan Zong Huansheng Yang, Hunan Normal University, China
Effects of dietary vitamin B6 on the growth performance, intestinal morphology and inflammation response in weaned piglets	292	Jun Li and Huansheng Yang, Hunan Normal University, China
Swine-Derived Lactobacillus reuteri LR1 modulates the activation of M2 macrophages in the intestine of weaning piglets	293	Xuefen Yang, Institute of Animal Science, Guangdong Academy of Agricultural Sciences, China
Responses in gut permeability, nutrient digestibility and growth performances in weanling pigs fed the diet supplemented with aureomycin	294	Xindi Yin, University of Guelph, Canada
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Dietary fatty acid patterns affect intestinal health of weaning piglets	296	Yulong Yin, Institute Of Subtropical Agriculture, Chinese Academy Of Sciences, China
Effects of dietary Carboxymethylpachymaran supplementation on oxidative stress induced by diquat in weaned piglets	297	Yulong Yin, Institute Of Subtropical Agriculture, Chinese Academy Of Sciences, China
Effect of oral supplementation of Lactobacillus plantarum JCM1149 on growth performance, diarrhea incidence, and intestinal health in growing pigs	298	Yulong Yin, Institute Of Subtropical Agriculture, Chinese Academy Of Sciences, China
The effect of benzoic acid and essential oils on nutrient digestibility and colonic microbiota in piglets	299	Hengxiao Zhai, DSM Nutritional Products, China
The protective effect of resveratrol against oxidative stress injury induced by deoxynivalenol in intestinal porcine epithelial cells	300	Cui Zhu, Agro-biological Gene Research Center, Guangdong Academy of Agricultural Sciences, China

Theme 6: Other

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Paper title	Paper reference #	Presenting author name Organisation
Use of Essential Oils as an alternative to antibiotic growth promoters in piglets	301	Bernat Canal, Norel SA, Spain
Reducing body weight loss during lactation in sows: a meta-analysis on the use of a non-starch polysaccharide-hydrolyzing enzyme supplement	302	Pierre Cozannet, Adisseo France, France
Effects of increased amino acids supply as protein or free amino acids on performance and carcass of heat stress pigs	303	John Htoo, Evonik Nutrition & Care GmbH, Germany
Estimation of body composition of piglets at weaning using live weight and deuterium space	304	Camilla Kaae Højgaard, SEGES Danish Pig Reserach Centre/Aarhus University, Denmark
Alternatives to medicinal zinc for weaner pigs	305	Niels Kjeldsen, Seges, Denmark
The Influence of Dietary Calcium Concentration on the Efficacy of Supplementary Phytase in Finisher Pigs	306	Steven Laird, University of Leeds, United Kingdom
Allometric development of gastrointestinal tract of pigs from 30 to 150 kg	307	Ning Lu, University of Kentucky, USA
Benzoic acid replaces high level of CuSo4 as Growth promoter in piglet feed	308	Jesper Poulsen, Seges, Danish Agriculture & Food Council, Denmark
Effects of combining essential oils, increased zinc oxide and copper sulfate, on nursery pig performance	309	Jacob Richert, Kansas State University, USA
In-feed antibiotics or protected sodium heptanoate on performance in post-weaned piglets	310	Cinta Sol, Norel SA, Spain
Sodium salts of medium chain fatty acids on performance in piglets	311	Cinta Sol, Norel SA, Spain
Validation of nutrient matrix values for a novel bacterial 6-phytase in weaned piglets	312	David Torrallardona, IRTA, Spain
Supplementation of a wheat-barley-rye based diet with xylanase/glucanase improves the apparent total tract digestibility of nutrients in lactating sows	313	David Torrallardona, IRTA, Spain
Nutrient and energy sparing with a novel bacterial 6-phytase in weaned piglets	314	David Torrallardona, IRTA, Spain
Effect of encapsulating an orally administered iron supplement over the prevention of anaemia in suckling piglets	315	Carolina Valenzuela, Universidad de Chile, Chile
The effect of early intervention with galactooligosaccharides on the intestinal development of small intestinal in suckling piglets	316	Shiyi Tian and Jing Wang, National Center for International Research on Animal Gut Nutrition, Jiangsu Key Laboratory of Gastrointestinal Nutrition, China
The reliability of tabular values to estimate the composition and digestibility of pig feeds	317	Louis Paternostre, ILVO, Belgium
Evaluation of methods for estimation of the net energy content of pig feeds	318	Louis Paternostre, ILVO, Belgium
Effects of dietary serine supplementation on growth performance and amino acid contents in growing-finishing pigs	319	Xihong zhou, The Chinese Academy of Sciences, China
Dietary methionine deficiency promotes muscle fibre type transformation in weanling piglets	320	Xihong zhou, The Chinese Academy of Sciences, China
Effects of dietary serine supplementation on meat quality in growing-finishing	321	Xihong zhou, The Chinese Academy of Sciences, China

POSTER SESSIONS

Thursday 23 August 2018, 12:00 – 14:00

Theme 3: Rate and extent of ingredient digestion in the small intestine

Boulevard Auditorium Foyer, BCEC

Paper title	Paper reference #	Presenting author name Organisation
Impact of adding insoluble dietary fiber (IDF) on ileal and fecal digestibility of fiber components in growing pigs	400	Jesus A Acosta Camargo, Iowa State University, USA
Evaluating the effect of adaptation length on apparent ileal and total tract digestible energy in weaning pigs	401	Sunday Adedokun, University of Kentucky, USA
Phytate degradation pattern in piglets fed diets differing in P, Ca and phytase level	402	Kolapo M. Ajuwon, Purdue University, USA
Effect of serine protease in piglet diets containing either soy bean meal or canola meal	403	Matthew Bekker, Novus International, Australia
Both dietary copper(II)oxide and copper sulphate stimulate growth performance in pigs but differentially affect copper absorption and metal transporter genes	404	Paul Bikker, Wageningen University and Research, Netherlands
Low phosphorous diets in gestation and lactation stimulate calcium absorption in sows and reduce calcium and phosphorous absorption in offspring	405	Paul Bikker, Wageningen University and Research, Netherlands
Effects of two direct fed microbials on digestibility of amino acids and energy in diets fed to growing pigs	406	Laia Blavi, University of Illinois, USA
Impact of Brachyspira hyodysenteriae on intestinal amino acid digestibility and endogenous amino acid losses in pigs	407	Eric Burrough, Iowa State University, USA
The effect of physicochemical properties of feed grade zinc oxide sources in dissolution kinetics	408	Denise Cardoso, Animine, France
Protein and amino acid digestibility of Camelina sativa co-products for growing pigs	409	Alba Cerisuelo, Instituto Valenciano De Investigaciones Agrarias, Spain
Next-generation non-starch polysaccharide-degrading, multi-carbohydrase complex rich in xylanase and arabinofuranosidase to enhance pig feed digestibility	410	Pierre Cozannet, Adisseo France, France
Comparison of lactose digestive capacity in the small intestine between gilt and sow progeny around birth and weaning.	411	Jessica Craig, Rivalea (Australia), Australia
The effect of soluble dietary fibre on the metabolite profile of pig intestinal tissue	412	Bernadine Flanagan, The University of Queensland, Australia
Dietary phytate and phytase levels influence mineral utilisation in weaned pigs	413	Patrick Guggenbuhl, DSM Nutritional Products, France
Effects of dietary phytate and phytase levels on growth performance in weaned pigs.	414	Patrick Guggenbuhl, DSM Nutritional Products, France
Phytate esters degradation with graded amounts of phytase at the proximal duodenum in T cannulated pigs	415	Patrick Guggenbuhl, DSM Nutritional Products, France
Dietary xylose effects on digestibility, fermentation, and metabolism in pigs	416	Nichole Huntley, Iowa State University, USA
Protein digestion in the gastrointestinal tract of pigs involves a one-by-one type of hydrolysis mechanism	417	Alfons Jansman, Wageningen Livestock Research, Netherlands
Protein sources differ in in vitro and in vivo digestion kinetics in the small intestine of pigs	418	Alfons Jansman, Wageningen Livestock Research, Netherlands
Digestibility of amino acids and energy in soybean products fed to growing pigs without or with multi-enzyme composite	419	Elijah Kiarie, University of Guelph, Canada
Effects of protease on growth performance, fecal gas emission of growing pigs fed low or high density diets	420	Ludovic Lahaye, Jefo, Canada
Join dynamics of feeding behavior and plasmatic metabolites in voluntary fed pigs	421	Maud Le Gall, Cargill, France
Meat or fish but not blood meal can replace half of protein contribution of 22% soybean meal in weaner diet	422	Fan Liu, Rivalea Australia, Australia
The influence of liquid feeding on growth performance, nutrient digestibility and intestinal microbiota of fattening pigs	423	Rosil Lizardo, IRTA, Spain
The influence of soaking and phytase inclusion on growth performance, nutrient digestibility and intestinal microbiota of liquid fed pigs	424	Rosil Lizardo, IRTA, Spain

Mechanisms and kinetics of starch digestion in growing pigs fed processed and unprocessed cereal based diets	425	Bianca Martens, Wageningen University and Research, Netherlands
Rate of amino acid disappearance in the small intestine depends on the amount of digested protein arriving from the stomach	426	Carlos Montoya, AgResearch, New Zealand
Can intestinal phosphorous absorption and excretion in urine be used to quantify phytate-phosphorus release by phytase in phosphorus (P)-adequate diets?	427	Kristin Olsen, Iowa State University, USA
Basal ileal endogenous losses of amino acids in pigs determined by feeding nitrogen-free diet, low-casein diet, and regression analysis	428	Chan Sol Park, Purdue University, USA
Grain digestibility affects the extent of large intestinal fermentation and growth of pigs	429	Vishal Ratanpaul, CNAFS, Queensland Alliance for Agriculture and Food Innovation, University of Queensland, Australia
Fibre-type affects intake of a highly digestible diet – Potential manifestation of feed hydration capacity and colonic fermentation controlling digesta-passage-rate	430	Vishal Ratanpaul, CNAFS, Queensland Alliance for Agriculture and Food Innovation, University of Queensland, Australia
Mycotoxin binder influences digestibility and nutrient transporters gene expression of pigs offered wheat based diets grown under different agronomical conditions	431	Ruth Rattigan, University College Dublin, Ireland
Effects of nutrient solubility and feeding level on digesta passage rate through the proximal gastrointestinal tract of growing pigs	432	Marijke Schop, Wageningen University and Research, Netherlands
The effects of diet viscosity on the passage rate and physicochemical properties of digesta in the digestive tract of pigs	433	Marijke Schop, Wageningen University and Research, Netherlands
Neonatal iron deficiency anemia in pigs: State of art, new oral procedures of IDA prevention using Heme and Sucrosomial® iron	434	Rafał Starzyński, Institute Of Genetics and Animal Breeding Pas, Poland
Processing of soybean meal enhanced ileal digestibility of protein and amino acids in weanling pigs	435	Mai Anh Ton Nu and Hagen Schulze, Agilia, Denmark
Effect of controlled cereal fermentation and carbohydrase supplementation on growth and digestibility in grow-finishing pigs	436	Alberto Torres-Pitarch, Teagasc, Animal and Grassland Research and Innovation Centre, Ireland
Concentrations of digesta metabolites in growing pigs are influenced by dietary energy level, but not by dietary amino acid level	437	Pedro Urriola, University Of Minnesota, USA
Comparison of dietary protein bioavailability using a new dual stable isotope ratio method with direct ileal digestibility assessment in pigs.	438	Nikkie van der Wielen, Wageningen University, Netherlands
Growth performance of pigs fed diets differing in resistant starch	439	Rik van Erp, Wageningen University, Netherlands
Ileal starch fermentation in pigs fed diets differing in resistant starch	440	Rik van Erp, Wageningen University, Netherlands
Kinetics of thymol and its glucosides along the gastro-intestinal tract of weaned piglets	441	Noémie Van Noten, Ghent University, Belgium
Sources of variation in individual fecal nutrient digestibility in pigs	442	Lisanne Verschuren, Wageningen University and Research, Netherlands
Dietary N-carbamylglutamate modulate amino acid metabolism-related gene expression and liver metabolite profiles in Ningxiang pigs	443	Xin Wu, Institute of Subtropical Agriculture, the Chinese Academy of Sciences, China

Theme 4: Metabolic health and brain activity modulated by the gut

Boulevard Auditorium Foyer, BCEC

Paper title	Paper reference #	Presenting author name Organisation
Oral glucose tolerance test in weaned pigs with intrauterine growth retardation (IUGR) syndrome	444	Zdzisław Gajewski, Warsaw University of Life Sciences, Poland

Theme 5: Microbiome development and barrier function

Boulevard Auditorium Foyer, BCEC

Paper title	Paper reference #	Presenting author name Organisation
Compounds of organic acids, cinnamaldehyde and Permeabilizing Complex™ impact on growth performance and modulation of gut microbiome in weaning piglets	445	Siyeong Choi, Biomin, Singapore
The impact of diarrhoea treatments on the composition of the gastrointestinal bacterial microbiota of pigs post weaning	446	Alison Collins, NSW Department Of Primary Industries, Australia

Heat stress during late gestation of primiparous sows affects intestinal barrier of their offspring	447	Huiduo Guo, College of Animal Science and Technology, Nanjing Agricultural University, China
Linking blood metabolite and colonic metabolite and microbiota profiles to sanitary conditions in starter pigs	448	Alfons Jansman, Wageningen Livestock Research, Netherlands
Effects of dietary vitamin E on growth performance, intestinal morphology and functions of weaned piglets	449	FengJie Ji, Hunan Normal University, China
Effects of lauric acid on cell proliferation, differentiation and autophagy of IPEC-J2 cells	450	FengJie Ji, Hunan Normal University, China
The effects of dietary protein content on intestinal structure and barrier function of ileum and colon in weaned piglets	451	FengJie Ji, Hunan Normal University, China
Faecal microbiota transplantation in gestating sows and/or neonatal offspring alters lifetime intestinal microbiota and growth in offspring	452	Peadar G. Lawlor, Teagasc, Animal and Grassland Research and Innovation Centre, Ireland
Comparative effect of two dietary regimes on intestinal microbiota of post-weaning pigs	453	Paola López-Colom, Animal Nutrition and Welfare Service. Animal and Food Science Department. Universitat Autònoma de Barcelona (UAB), Spain
Effect of zinc oxide sources and doses on intestinal bacteria in weaned piglets	454	Joris Michiels, Ghent University, Belgium
The effect of therapeutic levels of dietary zinc oxide on the faecal bacterial community of piglets at weaning	455	Helen Miller, University of Leeds, United Kingdom
Effect of Bacillus subtilis supplementation on productive performance, intestinal morphology and microbiota of small intestine of heat stressed pigs	456	Adriana Morales, Universidad Autónoma de Baja California, Mexico
Influence of dietary prebiotics and arachidonic acid on development of the fecal microbiome of pigs fed milk replacer	457	Jack Odle, North Carolina State University, USA
Transfer of dietary essential oils to colostrum is associated with improved performance and potential microbial populations' shifts in weaned pigs	458	Rousset Palou, Queensland Alliance for Agriculture and Food Innovation, Australia
Dietary spray-dried porcine plasma proteins promote a probiotic profile in the fecal microbiota of mice	459	Javier Polo, APC, Spain
Differential effects of dietary copper sulphate and copper(I)oxide on gut microbiota of weaned piglets	460	Carmen Sinche Ambrosio, Sao Paulo University/Wageningen University & Research, Brazil
Effect of controlled cereal fermentation and dietary carbohydrase supplementation on intestinal microbiota in grow-finishing pigs	461	Alberto Torres-Pitarch, Teagasc, Animal and Grassland Research and Innovation Centre, Ireland
Supplementation of tryptophan alters piglet growth performance, digestibility, and Lactobacillus populations.	462	Dana Van Sambeek, University of Nebraska, USA
The relationship between fecal nutrient digestibility and microbiota composition in grower-finisher pigs at slaughter weight	463	Lisanne Verschuren, Wageningen University and Research, Netherlands
An investigation of the intestinal microbiome of pigs divergent in feed efficiency	464	Ruth Rattigan, University College Dublin, Ireland
The effect of early-life galactooligosaccharide intervention on the microbiota composition and the colonic barrier function in suckling piglets	465	Jue Wang and Jing Wang, Nanjing Agricultural University, China
Difference of gut microbiota establishment between low- and normal-birth-weight piglets during early life	466	Junjun Wang, China Agricultural University, China
Effects of enriched pig housing on gut microbiome and immunology	467	Caifang Wen, Wageningen University and Research, Netherlands
Dietary sulfur amino acids affects jejunal cell proliferation by affecting antioxidant capacity, Wnt/β-catenin and mTOR signaling pathways in weaning piglets	468	Huansheng Yang, Hunan Normal University, China
Supplementation of Lactobacillus reuteri LR1 modulates the colon microbiome and enteroendocrine cells in weaned piglets	469	Cui Zhu, Agro-biological Gene Research Center, Guangdong Academy of Agricultural Sciences, China
Effect of different sources of starch on composition and activity of a pig microbiota in a validated, dynamic in vitro model of the colon	470	Cheng Long, Maastricht University, Netherlands
Effect of rearing environment and diet on gut microbial colonization, immune and functional development in neonatal piglets	471	Jürgen Zentek, Freie Universität Berlin, Germany

Theme 6: Other

Boulevard Auditorium Foyer, BCEC

Paper title	Paper reference #	Presenting author name Organisation
High dietary zinc oxide and chlortetracycline increase antibiotic resistance genes unrelated to chlortetracycline in weaned pigs	472	Jürgen Zentek, Freie Universität Berlin, Germany
Effects of dietary protease on growth performance and gut microbiota of growing-finishing pigs	473	J Baek, Chungnam National University, South Korea
Increased total butyrate concentration from high amylose wheat lines during in vitro fermentation by pig faeces	474	Alexander Bui, QAAFI - CNAFS, Australia
Benzoic acid and essential oils improve performance in nursery to finish pigs	475	Vinicius Cantarelli, Federal University of Lavras, Brazil
Carpal gland secretions as an alternative maternal fluid to evaluate the transfer of dietary volatile compounds in pigs	476	Carla Castro, The University of Queensland, Australia
Digestible energy content of Camelina sativa co-products for growing pigs	477	Alba Cerisuelo, Instituto Valenciano De Investigaciones Agrarias, Spain
Higher boron supplementation of a diet for weaner pigs arrested growth performance whereas no effect on intestinal morphology	478	Hyun Min Cho, Chungnam National University, South Korea
Piglets prefer low (25mM) over high (100mM) concentrations of acids without improving the hedonic values for sugar or glutamate (MSG)	479	Sungbo Cho, The University of Queensland, Australia
Differentiating disease versus reduced feed intake on apparent total tract digestibility of Porcine Reproductive and Respiratory Syndrome Virus-challenged pigs	480	Carson De Mille, Iowa State University, USA
Variation in pig performance and nutrient digestion among farms seems unrelated to long-term farm health status	481	Sonja de Vries, Wageningen University, Netherlands
Does the source of citrus pulp affect digestion in pigs?	482	Pablo Ferrer, Instituto Valenciano De Investigaciones Agrarias, Spain
Comparison of sow urine production measured by total collection and para-aminohippuric acid infusion	483	Takele Feyera, Aarhus University, Denmark
Flavour variety increases the acceptability of feed in nursery pigs	484	Jaime Figueroa, Pontificia Universidad Católica De Chile, Chile
Intestinal function and integrity responses to the use of in-feed sub-therapeutic antibiotics	485	Nicholas Gabler, Iowa State University, USA
The variety of whole grain cereal differentially impacts the gut microbiota	486	Emma Ivarsson, Swedish University of Agricultural Sciences, Sweden
Effects of birth weight on nitrogen digestion and utilization in grower pigs	487	Alfons Jansman, Wageningen Livestock Research, Netherlands
Effects of oral monosodium glutamate administration on serum metabolomics of suckling piglets	488	Huansheng Yang, Hunan Normal University, China
Weaning stress affects protein degradation in intestinal upper villus epithelial cells	489	Fengjie Ji, Hunan Normal University, China
Effects of dietary protease on growth performance, nutrient digestibility, and gut microbiota of growing pigs	490	Joowon Kang, Chungnam National university, South Korea
Heart rate as predictor of heat production at different reproductive stages in second parity free-ranging sows	491	Uffe Krogh, Aarhus University, Denmark
Net portal appearance of proteinogenic amino acids in Iberian pigs fed betaine and conjugated linoleic acid supplemented diets	492	Manuel Lachica and Ignacio Fernández-Figares, CSIC, Spain
Net portal appearance of amino acids in Iberian compared to Landrace pigs fed two diets of different protein content	493	Manuel Lachica and Ignacio Fernández-Figares, CSIC, Spain
The Effects of Super-dosing Phytase on Finisher Pig Performance, Inositol Phosphate Degradation and Myo-inositol Production	494	Steven Laird, University of Leeds, United Kingdom
Standardized blend of capsicum and turmeric oleoresins given during late gestation improves performance of sows vaccinated against E. Coli	495	Josselin le Cour Grandmaison, Pancosma SA, Switzerland
Sows in mid-gestation have reduced digestibility and retention of calcium and phosphorus compared with growing pigs	496	Su Lee, University of Illinois, USA
In vitro degradation of plant cell wall analogues using porcine faeces	497	Shiyi Lu, The University of Queensland, Australia
Stomach capacity of newborn piglets	498	Julie Christiane Lynegaard, Copenhagen University, Denmark
"Super diet" beats antibiotic treatments	499	Hanne Maribo, Seges, Denmark
Effects of dietary protease on growth performance, nutrient digestibility, and gut microbiota of finishing pigs	500	Daye Mun, Chungnam National University, South Korea

Dietary oleic acid (C18:1) is efficiently transferred to pork loin fat particularly when finisher pigs are fed a corn-soybean diet	501	Marta Navarro, The University of Queensland, Australia
Identification of novel bitter compounds and their effect on performance parameters in finisher pigs	502	Shahram Niknafs, The University of Queensland, Australia
Fermentation end-products at four areas of the porcine large intestine change in response to dietary fruit (mango)	503	Barbara A. Williams, The University of Queensland, Australia
Fermentation end-products in the porcine small intestine change in response to fruit (mango) in the diet	504	Barbara A. Williams, The University of Queensland, Australia
Feeding sows a gestation, a transition or a lactation diet around parturition	505	Trine Friis Pedersen, Aarhus University, Denmark
Fat soluble vitamins values in serum of wild boar (SUS SCROFA)	506	Estefania Perez Calvo, DSM Nutritional Products, France
Targeting taste and phytonutrient sensors to improve performance in piglets	507	Mathilde Ramillien, PANCOSMA SA, Switzerland
The effect of different concentrations of dietary fibre and fat in odour offensiveness and feed conversion efficiency in finishing pigs.	508	Alanna Reid, Agri-Food and Biosciences Institute Northern Ireland, United Kingdom
Effects of isoquinoline alkaloids on nutrient absorption and growth performance of weanling pigs fed corn-soybean meal diets	509	Carly Rundle, University of Illinois Urbana-Champaign, USA
Influence of naturally-produced dietary deoxynivalenol on performance and organ accumulation of growing pigs	510	Ah Reum Son, Konkuk University, South Korea
A longer adaptation period is required as pigs consume less amount of feed in total tract digestibility experiments	511	Ah Reum Son, Konkuk University, South Korea
Reduced phosphorus supply during pregnancy and lactation affects protein uptake, digestion, net absorption and utilization in the young sow	512	Kristina Ulrich Sørensen, Aarhus University, Denmark
Grass intake of sows quantified by plasma metabolites	513	Peter Kappel Theil, Aarhus University, Denmark
Identification of fecal hyodeoxycholic acid as a marker of Tylosin-elicited microbiome modification in pigs	514	Michaela Trudeau, University of Minnesota, USA
Variable fermentability of dietary fibres from selected vegetables	515	Widaningrum Widaningrum, CNAFS, Queensland Alliance for Agriculture and Food Innovation, University of Queensland, Australia
Effects of dietary electrolyte balance on growth performance, blood parameters and gastrointestinal tract pH of weaning piglets	516	Huansheng Yang, Hunan Normal University, China
Effects of glutamate on intestinal morphology and luminal short-chain fatty acids contents in suckling piglets	517	Huansheng Yang, Hunan Normal University, China
CircRNA profile of longissimus muscle between Ningxiang pigs and Large White pigs.	518	Huansheng Yang, Hunan Normal University, China
Lipid Metabolism of Pigs Feed With Fresh or Oxidized Fish Oil	519	Yulong Yin, Institute Of Subtropical Agriculture, Chinese Academy Of Sciences, China
Effect of maternal supplementation with L-Cysteine during late gestation on productive performance and plasma biochemical index of sows	520	Yulong Yin, Institute Of Subtropical Agriculture, Chinese Academy Of Sciences, China
Effect of maternal supplementation with L-Cysteine during late gestation and lactation on productive performance and serum biochemical index of piglets	521	Yulong Yin, Institute Of Subtropical Agriculture, Chinese Academy Of Sciences, China
Foetal development of the GIT was constrained by plasma levels of amino acids in sows fed standard gestation diets	522	Elham A. Soumeih, The University of Queensland, Australia