ESPHM®

2020

12th EUROPEAN SYMPOSIUM
OF PORCINE HEALTH MANAGEMENT

PROCEEDINGS

BERN SWITZERLAND
April 29th - May 1st 2020

ESPHM®

2020

12th EUROPEAN SYMPOSIUM
OF PORCINE HEALTH MANAGEMENT

PROGRAMME BOOK

BERN SWITZERLAND
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CONTENT

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Chair of the 12th European Symposium of Porcine
Health Management Organizing Committee

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THE EUROPEAN COLLEGE OF PORCINE HEALTH MANAGEMENT

ECPHM EUROPEAN COLLEGE OF PORCINE HEALTH MANAGEMENT

www.ecphm.org

The College is a non-profit organisation and does not pursue commercial interests. The finances of the College may only be spent in accordance with the constitution. Members or officers of the College shall receive no payment from the funds of the College, except reimbursement of expenses.

The primary objective of the College shall be to advance health oriented porcine production management in the herd context in Europe and increase the competency of those who practice in this field by:

- Establishing guidelines and standards of training for postgraduate education and experience prerequisite to become a specialist in the speciality of porcine health management.
- Examining and authenticating veterinarians as specialists in porcine herd health management to serve health and welfare of the animals, the economic outcome of the herd, the production of safe quality products for consumers in a sustainable animal production by providing expert care for pigs.
- Encouraging research and other contributions to the science and practice of porcine herd health management including husbandry, reproductive management at herd level, epidemiology, pathogenesis, diagnosis, therapy, prevention, and control of diseases directly or indirectly affecting pigs and the maintenance of healthy and productive pig herds. Porcine health management also includes the impact on quality and safety of pork products and gives special consideration to herd health and production, production systems and targets and the management of pig populations.
- Promoting communication and dissemination of knowledge related to item 3. above.

THE EUROPEAN ASSOCIATION OF PORCINE HEALTH MANAGEMENT

EAphm CONNECTING VETS
EUROPEAN ASSOCIATION OF PORCINE HEALTH MANAGEMENT

www.eaphm.org

The European Association of Porcine Health Management (EAPHM) is the platform for:

- Promoting competitive and sustainable European pig production by creating and further developing common guidelines and legislation for porcine health management in Europe in order to optimise professional standards leading to the highest possible animal health status for improving food safety, public health and animal welfare in pig and pork production.
- Improving and standardising undergraduate and post-graduate education and developing continuing professional development in the area of porcine health management in Europe.
- Becoming the opinion leader throughout Europe in the field of porcine health management

The European Association of Porcine Health Management (EAPHM) is to:

- Provide one organisation for all European veterinarians and related professionals involved in porcine health management.
- Represent the interests of the European Association of Porcine Health Management (EAPHM) members in legislative and executive bodies of the EU in cooperation with appropriate organisations such as the Federation of Veterinarians of Europe.
- Develop standardised post-graduate education and life-long learning for veterinarians specialising in porcine health management in cooperation with appropriate organisations such as the European College of Porcine Health Management (ECPHM).
- Organise the Annual European Symposium on Porcine Health Management (ESPHM) in co-operation with the European College of Porcine Health Management (ECPHM).
- Organise meetings, workshops, discussion forums, and other appropriate platforms for exchanging knowledge in the area of porcine health management.
- Work closely together with associated, national and international, professional organisations.
- Promote the relationship between the veterinary profession, swine practitioners, the swine industry and the public.
- Promote understanding and goodwill among its members.
- Cooperate with veterinary and agricultural organisations and regulatory agencies.
- Do everything and anything reasonable and lawfully necessary, proper, suitable, or convenient for the achievement or furtherance of the purposes stated above.

Visit the EAPHM booth at the ESPHM2020 and JOIN THE EAPHM TODAY!

EUROPEAN SYMPOSIUM OF PORCINE HEALTH MANAGEMENT

www.esphm2020.org

The first ESPHM was organized by the EXPHM in 2009 in Copenhagen (Denmark). Subsequent meetings were organized in Hannover (Germany) and Helsinki (Finland).
After the creation of the European Association of Porcine Health Management (EAPHM) in 2010, the following symposia were organized in a three-party fashion, involving the EAPHM, the ECPHM and the local organizers.

ESPHM 2009 Copenhagen (Denmark)
ESPHM 2010 Hannover (Germany)
ESPHM 2011 Helsinki (Finland)
ESPHM 2012 Bruges (Belgium)
ESPHM 2013 Edinburgh (United Kingdom)
ESPHM 2014 Sorrento (Italy)
ESPHM 2015 Nantes (France)
ESPHM 2016 Dublin (Ireland)
ESPHM 2017 Prague (Czech Republic)
ESPHM 2018 Barcelona (Spain)
ESPHM 2019 Utrecht (The Netherlands)

By means of this organizational formula, the ESPHM has been held so far in various European Countries. The 12th edition will be held in 2020 in Bern, in the heart of Switzerland.

The ESPHM in the expression of a long-standing need at a European level. The lack of a continental swine veterinarian congress like in North-America (American Association of Swine Veterinarians Annual Meeting) and Asia (Asian Pig Veterinary Society),
prompted first the EXPHM and then the EAPHM to organize a yearly meeting devoted to all subjects of porcine health management. The symposium philosophy consists of mounting a sound program, with cutting-edge scientific-technical knowledge, practically oriented, which is able to catch the attention of swine veterinarians all over Europe, but with full international vocation. The symposium's content includes invited lectures, initiating always with the state-of-art swine production in the organizing country, as well as oral communications and posters.

Importantly, the ESPHM is an excellent platform for introducing the ECPHM Residents into the scientific world, by presenting their studies (Resident oral communication sessions) and participating in the College activities organized around the symposium (e.g., Resident workshop, farm visits). In addition, the ESPHM must serve as a vehicle for potentiating networking among pig veterinary professionals all around Europe, and emphasize the global character of a borderless profession. Also, Annual General Meetings of both EAPHM and ECPHM are organized within the program of the symposium, and facilitate that the critical masses of both organizations can join together once a year.

PORCINE HEALTH MANAGEMENT

www.porcinehealthmanagement.biomedcentral.com/

Porcine Health Management (PHM) is an open access peer-reviewed journal that aims to publish relevant, novel and revised information regarding all aspects of swine health medicine and production. The journal provides a venue for global research on swine health and production, including infectious and non-infectious diseases, reproduction, epidemiology, management, economics, genetics, housing, nutrition, animal welfare and ethics, legislation, food safety, drugs and surgery. This journal is aiming at readers, and attracting authors, with different levels of experience; Diplomates and Residents of the ECPHM and other colleges as well as PhD students and experienced researchers from outside! Anticipated articles include: original research, reviews, short communications, case reports, case-studies and commentaries.

The Editors-in-Chief are Dominiek Maes (University of Ghent, Belgium) and Joaquim Segalés (Universitat Autònoma de Barcelona and CReSA-IRTA, Spain).
PHM has been published articles since 2015 and it is now indexed in different databases, including the MedLine (PubMed). Please use the online submission system to submit your manuscript. For all enquiries about the journal, technical issues, payment of article processing chargers (APCs), etc. please contact: porcinehealthmanagement@biomedcentral.com.

There are many reasons to publish in PHM:

- High visibility / PHM's open access policy allows maximum visibility of articles published in the journal as they are available to wide, global audience.
- Speed of publication / PHM offers a fast publication schedule whilst maintaining rigorous peer reviews.
- Flexibility / Online publication in PHM gives authors the opportunity to publish large datasets, large numbers of color illustrations and moving pictures, etc.
- Promotion and press coverage / Articles published in PHM are included in article alerts and regular email updates.
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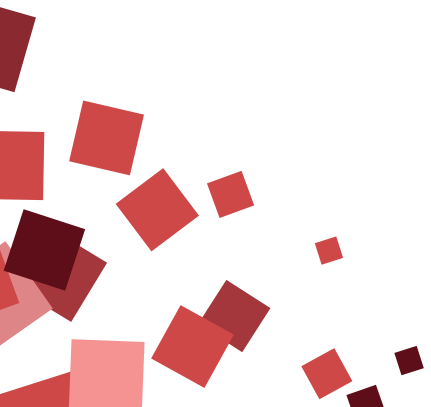

KEYNOTE LECTURES

Managing compromised pigs – should veterinarians revisit their role?

Wednesday, April 29th 13h30 – 15h00

PROF. DR. ELISABETH GROSSE BEILAGE

Biosketch

Prof. Elisabeth grosse Beilage, DVM, PhD, Dipl. ECPHM

is a veterinarian working at the University for Veterinary Medicine Hannover, Germany, since 1989; at first in the Clinic for Swine and Small Ruminants and later as a senior scientist at the Field Station for Epidemiology. Area of current research is focussed on animal welfare, clinical evaluation and epidemiology (risk factor analysis for inter- and intra-herd transmission) of infectious pig diseases and control/eradication of these infections. Other areas of expertise are pig herd health management, zoonosis control, vaccination and gross pathology.

Abstract

Pig diseases and injuries occur in all housing systems. Intensive care or treatment does not always result in healing so that animals have to be euthanized or killed to avoid further pain or suffering. As the German Ani

mal Protection Act fundamentally stipulates the protection of animal lives and well-being in seriously diseased or injured pigs, the decision which subject of protection needs to be preferred is inevitable. For pig farmers, the decision concerning killing an animal is considerably challenging and a study focussed on welfare-related findings in pig carcasses delivered to rendering plants revealed deficiencies in more than 10 % of the fattening and breeding pigs. The deficiencies are related to the time-point when diseased or injured pigs have been killed (often much too late or not killed at all) or to the way the emergency killing was performed. Criteria allowing the accurate assessment of the well-being of diseased or injured pigs are needed to make a responsible, justified decision regarding the time point of killing. The criteria should define the earliest possible time-point in the course of an illness at which an impairment of the well-being protecting life is no longer acceptable and emergency killing is inevitable. The role of the herd attending veterinarians in the management, treatment and emergency killing of seriously diseased or injured pigs might need a critical re-evaluation.

Free farrowing – status quo and future trends

Wednesday, April 29th 13h30 – 15h00

DR. VIVI AARESTRUP MOUSTSEN

Biosketch

Vivi received her M.Sc. in Animal Science from The Royal Veterinary and Agricultural University in Frederiksberg, Denmark, in 1995, and her PhD in Animal Science from the same University in 2002. Vivi has been focusing on research and development of housing of lactating sows at SEGES Danish Pig Research Centre (SEGES PRC) since 2001. From 2002 onwards the emphasis has mainly been on development of systems for loose housed farrowing and lactating sows. The research includes determination of sow and piglets dimensions, space needed for important behaviours and criteria for pen design. The aim of SEGES PRC is to develop, test and recommend the best technologies for production of pigs in Denmark.

In 2018, Vivi and her colleagues coordinated the workshop Loose Lactating Sows 2018 (LLS18) (https://www.freefarrowing.org/info/2/research/45/free_farrowing_workshops; https://www.pigprogress.net/Sows/Articles/2018/6/Loose-lactation-for-sows–fantastic-and-frustrating-292322E/) – workshop number four in a series of the subject of loose housing of lactating sows.

Abstract

Should the sows be outdoors like many are in the UK or indoors like in most other countries with a larger scale pig production? Outdoors looks great at least when the pasture is green, but from a more holistic or system approach, outdoor has challenges or weaknesses for instance when it comes to risk of leaching of nutrients. In indoor production systems, it is possible at the same time to consider climate, environment and welfare – and production economy or PPPP: Pigs (welfare and health), Price (economy), Planet (environment and climate) and People (managers, workplace, attracting skilled caretakers). And an important side effect is that caring for pig health and bio security is easier indoors too.
When working with animals, it is a motivation itself to see the animals thrive. And often the possibility to perform natural behaviour can lead to better welfare for the animals. However, loose housing of lactating sows includes challenges especially when it comes to neonatal piglet survival which limits voluntary implementation of the free farrowing.
Should we continue to use crates and keep the sows confined for the entire time they are in the farrowing unit like many countries do? Or should we ban crates and confinement completely like other countries do? Or can we choose a solution in between? There is no simple answer – or most likely will the answer depends whether we ask the sows, piglets, caretakers, owners, retailers, consumers or citizens – and their answers are likely to be different depending on land of origin.
Status quo is that the only countries where farrowing crates for the entire lactation period are not in use, are countries where they are banned like Sweden, Norway and Switzerland. In other countries, like Australia, some recommend that future efforts focus on improving welfare for sows and piglets when housed in crates instead of moving towards loose housing.

There is no doubt though, that there is an increasing interest and awareness of the possibilities of housing lactating sows loose – and a keen interest across borders to overcome the challenges. In 2008, a limited group of scientists and stakeholders from just a few Northern European countries met and discussed free farrowing. In 2011, the group met again and this time with interest and engagement from more countries. Next meeting was in 2016 – and similar pattern – increasing interest and genuine perception that is the future. In 2018, the group met and this time included stakeholders and scientists from Australia, USA and Canada too. It was no longer a question of 'if' but 'how', and there was an acceptance that implementation of loose housing will be increased if there a transition period with an option to confine for the critical period (https://www.freefarrowing.org/info/2/research/45/free_farrowing_workshops).

In Austria, it has been decided that by 2033 confinement of lactating sows will only be allowed until the end of the critical phase of life. In Germany, potential legislation of limiting the period lactating sows are confined is being discussed. In Denmark, in the industry have announced that in the future lactating sows should and will be loose housed – but not at the cost of the competitiveness of the industry and the level of piglet survival must be high.

The Danish pig industry set a goal of 10 % of the lactating sows to be loose housed by 2021. For a number of reasons this will not be accomplished. First, the economic situation has led to very few investments in the industry during the last decade. And farmers that have invested have to some extent chosen crates. Why? Because the investment in crates is lower than investment in pens, the productivity in crates is most likely higher and they are unlikely to receive at premium for having loose lactating sows. However, even though there are reasons why not to invest in loose lactating, many have chosen to do so anyway because farmers are also entrepreneurs, they like to develop their enterprise, they like their pigs, they care for their employees and they care about the society's perception of their business. And successful implementation is likely to be when the implementation is done with an understanding of pigs' needs and an interest of the pigs.

There are many challenges when it comes to implementation of loose housing of lactating sows but for the pigs, their caretakers and producers, and citizens, we shouldn't give up just because we're all challenged. When we collaborate and exchange ideas and thoughts across borders, we develop at a higher pace, all of us and many more pigs benefit.

National, regional & global surveillance of pig health

Thursday, April 30th 08h30 – 10h00

PROF. KATHARINA D.C. STÄRK

Biosketch

Prof. Katharina Stärk graduated as a veterinarian from the School of Veterinary Medicine at the University of Zürich, Switzerland, and then completed a PhD at Massey University, New Zealand, in information systems for the prevention and control of infectious diseases in pigs.
Katharina then worked for two years in Denmark as a research officer for the Danish Bacon and Meat Council, and after that took a post as Head of Section of Monitoring at the Swiss Federal Veterinary Office which she held for seven years. During this time, she also worked as a part-time lecturer in Epidemiology and Veterinary Public Health at the University of Bern in 2000, and from 2002 to 2006 she was a Member of the Executive Board at the Swiss Federal Veterinary Office, Bern.
In 2005, Katharina spent four months as a Visiting Professor at the Graduate School of Agricultural Life Sciences, Faculty of Veterinary Medical Sciences, University of Tokyo, Japan. From 2007 to 2017, Katharina was Professor of Veterinary Public Health Policy at the Royal Veterinary College, London, UK. Katharina had an international role as President of the European College for Veterinary Public Health (ECVPH Website) 2007 to 2009. She remains active in the College as a certified Specialist in Population Medicine.
Katharina was the Director of Science and Quality at SAFOSO (Bern, Switzerland), an internationally-active consultancy in the fields of food safety and public health, from 2010 to 2019 and is currently the Head of the Department Animal Health at the Federal Food Safety and Veterinary Office in Switzerland.
Her research interests are in food safety risk management, surveillance and veterinary public health policy, including evaluation.

Abstract

The pig health work of industries and Veterinary Services has traditionally been focused on specific diseases and their causative pathogens. For each disease or pathogen, a surveillance programme can be designed and implemented, but not all hazard-specific surveillance is straightforward and there has been substantial innovation over the past years. For early detection, for example, the use of routinely collected data is attractive and specific algorithms are developed and evaluated to detect signals in such big data sets. However, the routine application of complex methods is still limited due to technical and legal constraints. Another development is a change in focus from specific diseases or pathogens to animal health in general. Surveillance activities in a general pig health context can be conducted by private actors (farmers and veterinarians) as well as by governments. Data analysis and sharing of results are essential for assuring utility of the data collected across sectors. Also, the link between pig health and public health has gained interest. Surveillance of pig health can inform not only veterinary policies, but also be used as a basis for agricultural and public health decision making. These aspects will be illustrated using national, regional and global examples.

Quality and feasibility of pen-site tests for surveillance

Thursday, April 30th 08h30 – 10h00

DR. GERARD MARTIN

Biosketch

Gerard E. Martín Valls obtained his veterinary degree in 2007 and Ph.D in veterinary sciences in 2012 in the Autonomous University of Barcelona (UAB). He was researcher in the Centre de Recerca en Sanitat Animal (CReSA-IRTA) from 2013 to 2016. Currently, he is a researcher in Animal Health and Anatomy Department of UAB. His research focuses on the epidemiology, molecular characterization and control of with swine viral infectious diseases such as swine influenza and porcine reproductive and respiratory syndrome.

Abstract

In pig production, surveillance of diseases is essential for decision making. It allows to determine the infection dynamics of pathogens present in the farm, helping thus to determine what control and prevention programs are needed and what measures must be prioritized. Further monitoring will be necessary to determine the efficacy of implemented control measures.
Pen-site testing for surveillance is cost-effective, reduce the time and personnel needed for sample collection, and are more efficient than pooling individual samples as larger populations are examined. The use of aggregated or pooled samples is very sensitive for monitoring presence of pathogens or antibodies. However, limitations must be considered. The age of the animals is important to select the type of pen-site sampling. Sequencing is possible but higher concentrations of the pathogen are needed and results can be difficult to interpret. Finally, detecting a pathogen in a pen-site test should not be used for diagnosis purposes, respiratory and digestive virome and microbiota are extremely complex.

Safety issues of veterinary vaccines

Thursday, April 30th 13h30 – 15h00

PROF. LARS ERIK LARSEN

Biosketch

Lars Erik Larsen (born 1963) holds a full professorship in veterinary virology and has worked with virus infections in production animals for the last 20 years. He has been involved in research on swine viruses (diagnostic tools, molecular epidemiology, vaccinology and basic pathogenesis) for the last 15 years. Since 2010, he has been responsible for the Danish diagnostic preparedness program and chairs the Danish expert committee for animal influenza viruses. Lars has participated in several national and European projects on enzootic swine viruses with focus on PRRSV, PCV-2 and swine influenza virus. He is the head of the enzootic/zoonotic virus research group at UCPH and is scientifically responsible for the national surveillance program for avian and swine influenza viruses. Lars is also responsible for the teaching of veterinary students in veterinary virology and is supervisor of a range of PhD, Master and Bachelor students. Lars is currently board member of the Danish Society of Virology and the Danish Pig Veterinary Society. He has published more than 100 international peer reviewed papers on veterinary virology and has co-authored more than 300 other publications.

Abstract

Modified live virus (MLV) vaccines have been extensively used in human and veterinary medicine for decades. Traditionally, the virus strains included in MLV vaccines have been attenuated by repeated passage in vitro to decrease its capability to induce clinical disease in the vaccinated host. Despite the attenuated phenotype, most MLVs strains are excreted from the host and may infect unvaccinated animals. This in turn imply the risk that the attenuated vaccine strain may revert to virulence.

The presentation will critically evaluate the risks and benefit of use of MLVs in pigs. Are the safety data required for MLVs to be licenced adequate... or could we do better? What is the consequence of off-label use of these vaccines, e.g. are mass-vaccination 3-4 times a year necessary, have the vaccines been tested in these settings, and what are the risks? “Unspecific effects” of vaccines is a hot topic in human vaccinology....does this apply also to veterinary vaccines?

Finally, a couple of cases with PRRSV MLVs will be presented to illustrate how wrong things can go!

Are we using drugs in pigs in the right way?

Thursday, April 30th 13h30 – 15h00

DR. LORENZO FRAILE

Biosketch

Lorenzo Fraile is a DVM (1992) and obtained a PhD (1996) in Veterinary Pharmacology at the Veterinary Faculty of Zaragoza, Spain. Afterwards, he worked as a swine practitioner for eight years in pig producing companies. From 2004 to 2010, he worked as senior researcher at CReSA (http://www.cresa.cat) focusing his work on porcine bacterial and viral diseases. From 2010 to nowadays, he has been working as Associate Professor of Epidemiology and Pharmacology at the University of Lleida (UdL), Spain. His research interests include epidemiology, pharmacology and immunology focused on developing new tools to control bacterial and viral diseases in livestock. He is member of the European College of Porcine Health and Management and European expert to evaluate drugs and vaccines for animals in the European Union (http://www.ema.europa.eu/ema/index.jsp?curl=pages/about_us/landing/experts.jsp&mid=WC0b01ac058043244a). He has published ninety-eight papers in peer-review journals.

Abstract

Efficient pig production is based on establishing preventive programs for bacterial, viral and parasitic diseases. These programs include the use of vaccines and/or drugs to manage them in an efficient way. In this keynote lecture, it will be addressed if drugs are used in the right way in pig medicine with a special focus on management of bacterial diseases.

The main families of drugs available for pigs are antimicrobials, antiparasitics, anti-inflammatories and hormones. Under the European legislation, any drug must be used in a veterinary medicinal product (VMP) that is registered across Europe (through European Medicine Agency) or only in single countries following national registration procedures. In all the cases, the use of any veterinary medicinal product is clearly specified in the summary of products characteristics (SPC). Thus, safety for the user and target animal, food safety and efficacy issues are detailed in this document. A new legislation has been recently approved for veterinary medicinal products in Europe (EU/2019/6) where special attention has been addressed to antimicrobials because the great worldwide concern about one-health issues in the treatment of bacterial diseases in humans.

The objective of antimicrobial therapy is to provide an effective drug to obtain a fast clinical recovery from the infection in affected animals but reducing the probability of generating antimicrobial resistance and avoiding the appearance of undesired effects as much as possible. There are many recommendations about prudent use of antimicrobials in Europe coming from official sources (2015/C299/04) or from federations of veterinarians in Europe. The problem arise how to tackle these recommendations with the daily practice. These points will be discussed taking into account the new European legislation for VMPs, mainly for antimicrobials, that the practitioner needs to address in his/her daily practice.

Precision pig feeding: a breakthrough toward sustainability

Thursday, April 30th 13h30 – 15h00

DR. CANDIDO POMAR

Biosketch

Dr. Pomar is a research scientist with Agriculture and Agri-Food Canada based at Sherbrooke (Lennoxville), Quebec, since 1991. He also acts as adjunct professor at Laval and Sherbrooke universities in Québec, and UNESP university in Sao Paolo, Brazil. Dr. Pomar obtained his agricultural Engineering degree in Madrid Polytechnic University (Spain) in 1980. After working for two years in the industry, he began studying at Laval University (Quebec) where he obtained a master's degree in 1985. He continued his studies at the University of Michigan, and undertook a term working on the development of a mathematical model for swine production systems at the USDA-ARS Meat Animal Research Center in Clay Center, Nebraska. This model served to complete his PhD presented at Laval University in 1989. In 2002 Dr. Pomar moved to the Scottish agricultural college near Edinburgh, UK, to review actual modelling approaches simulating population responses and predicting nutrient requirements.

Dr. Pomar is heading a research program in swine nutrition, mathematical modelling and carcass evaluation systems. Dr. Pomar pioneer the development of an innovative precision feeding and farming approach which will enhance profitability and durability of the livestock industry. Dr. Pomar has a large network of collaboration nationally and internationally and has contributed to training many graduate students. His publication record consists of 115 scientific papers, 69 of them peer reviewed, 16 book chapters, and 7 patent depositions and inventions.

Abstract

Feed is the most important cost component in commercial growing-finishing pig production systems and represents between 60 and 70% of the overall production costs. Given that nutrients that are not retained by the animal or in animal products are excreted via the urine, faeces or heat, and that the efficiency by which domestic animals transform dietary nutrients into animal products is generally low, improving the nutrient efficiency can largely contribute to reducing production costs and improve the sustainability of livestock production systems. In growing animals fed with cereal-based diets, the sum of the undigested nitrogen and the losses associated with digestion, maintenance functions, and body protein deposition may represent more than 40% of the total ingested nitrogen and can reach values as high as 85%. Precision feeding offers immediate and tangible benefits to the pork producer given that feeding pigs individually with daily tailored diets reduces protein intake by more than 25%, feeding costs by more than 8%, N and P excretion by nearly 40%, and GHG emission by 6%.

‘Controlled fermentation’ – a feeding concept for pigs with diverse effects of veterinary interest!

Thursday, April 30th 13h30 – 15h00

PROF. DR. JOSEF KAMPHUES

Biosketch

Josef Kamphues was born in Saerbeck (Westfalia, Germany) in 1952. He studied Agricultural Science at the University of Bonn (Dipl. Ing. agr. Animal Production) and thereafter Veterinary Medicine in Hannover (Vet. Degree). After obtaining his doctoral degree and habilitation, he became Professor and Head of the Institute for Animal Nutrition at the Free University of Berlin in 1990. Three years later, he moved back to Hannover as the Director of the Institute for Animal Nutrition at the University of Veterinary Medicine Hannover, Foundation. Josef Kamphues is a Dipl. ECVCN and Dipl. ECPHM. Since 2019, he retired from the official position but still engaged in research as he was during his whole career. He focused on feeding strategies against gastric ulcers/Salmonella in pigs, foot pad dermatitis in broilers/turkeys at different dietary treatments, quality/standards in drinking water for food producing animals, pancreatic duct ligated pigs for studies on human exocrine pancreatic insufficiency; feeds and feeding for special purposes (dietetics), re-evaluation of rye for swine diets, etc.

Prof. Kamphues is member of the Society of Nutrition Physiology, European Society of Veterinary and Comparative Nutrition; the European College of Pig Health Management; the German Committee for Setting Requirement Standards of the Society of Nutrition Physiology; chief editor of the German Journal: Übersichten zur Tierernährung; member of the editorial board of different scientific veterinary journals

He was awarded with “James G. Morris Lectureship in Companion Animal Nutrition” (University of California, Davis) in 2012 and the Main prize/award of the Henneberg-Lehmann-Foundation (University of Göttingen, Germany) in 2014.

Abstract

‘Controlled fermentation‘is a specific type of feeding liquid diets which are fermented for about 24 hours by lactic acid producing bacteria added at the process’ start, at a temperature of about 37 °C before offered to pigs. This pretreatment of the main ingredients including cereals and protein sources like canola meal (solvent extracted) aims at favored palatability and digestibility of distinct nutrients, at reducing levels/activity of undesirable constituents (like phytate, glucosinolates), at elimination of microbial contaminants (pathogens like Salmonella), and finally at the use of the fermented liquid diet like a probiotic (lactic acid producing bacteria) and as a source of lactic acid substituting other organic acids (like formic acid as feed additive) used for dietetic purposes.

Regarding the emission of nitrogen and phosphorus there are welcome effects due to the increased digestibility of protein and phosphorus; furthermore during the fermentation process high shares of phytate (using rye for fermentation: almost complete phytate degradation), non-starch polysaccharides and glucosinolates are degraded. Also it is worth to be mentioned that the high lactic acid content in liquid diets results in marked reduction (elimination of bacterial contaminants in the feed and infectious bacteria in the pig's GIT like E. coli, Salmonella ssp., C. perfringens). But there are also some unintended effects/changes during fermentation: On the one side a loss of 'structure' in the diet is occurring, i. e. high shares of particles ≤ 0.2 mm. This means elevated risks for gastric ulcers in pigs fed fermented liquid diets in high shares. Gastric ulcers can be prevented by using non-fermented, rolled cereals in liquid diets which in parts are based on fermented ingredients. Furthermore, in spite of high lactic acid levels and very low pH-values (< pH 3.8 – 4.0), in the liquid feed/diets sometimes high counts/activities of yeasts might occur. Regarding the economic effects the fermentation process needs technical equipment and energy for heating the water/to maintain optimum conditions for fermentation (fast reduction of pH!). There are additional costs, e. g. for the microorganisms for starting the process or for cleaning the fermenters. From an economical point of view it has to be emphasized that the feeding costs might be reduced by using cheap ingredients instead of expensive ones (like a combination of rye and canola meal instead of wheat and soybean meal).

WEDNESDAY APRIL 29th

ARENA ROOM

11h00 – 19h00	Registrations and poster display
13h00 – 13h10	**Welcome and opening** Prof. Heiko Nathues
13h10 - 13h30	**Pig farming in Switzerland** Prof. Hans Wyss
13h30 – 15h00	Keynote session **WELFARE** *Chairs: Prof. Tijs Tobias and Dr. Thomas Würth*
	Managing compromised pigs – should veterinarians re-evaluate their role? Prof. Elisabeth grosse Beilage
	Free farrowing – status quo and future trends Dr. Vivi Aarestrup Moustsen
	Round table discussion
15h00 – 15h30	Coffee break and poster viewing

WEDNESDAY APRIL 29TH

15h30 – 17h30 - Parallel sessions

ARENA ROOM

Herd Health Management & Economy

Chairs: Dr. Giovanbattista Guadagnini and Dr. Dolf Kümmerlen

HHM-OP-01

DETAILED ANALYSIS OF FARMERS' RECORDS OF PIGLET MORTALITY IN FREE FARROWING SYSTEMS IN SWITZERLAND

Vontobel Cornelia, Grahofer Alexander, Wechsler Beat, Burla Joan-Bryce

HHM-OP-02

EXPLORATION OF NEWBORN PIGLETS MORTALITY BY A 10 POINTS AUDIT

Font-I-Furnols Maria, Gispert Marina, Soler Joaquim, Alvarez Alberto, Aldaz Alvaro

HHM-OP-03

TRUST MEASUREMENT BETWEEN FARMERS AND VETERINARIAN IN PIG VETERINARY MEDICINE: A FIRST STEP TO IMPROVE FARMER'S COMPLIANCE

Meyer Anne, Faverjon Céline, Howden Krista, Schuppers Manon, Buholzer Patrik, Cameron Angus

HHM-OP-04

FACTORS INFLUENCING FARMERS' SATISFACTION AND MOTIVATION REGARDING ERADICATION OF SWINE DYSENTERY FROM THEIR HERDS

Drouet Adèle, Le Mat Julie, Bellet Camille, Charron Camilo, Belloc Catherine, Leblanc-Maridor Mily

HHM-OP-05

COMPARATIVE EFFECT OF TWO DIFFERENT PRODUCTS FOR IMMUNOLOGICAL CASTRATION OF PIGS ON PRODUCTIVE PERFORMANCE AND TESTIS SIZE

Vidondo Beatriz, Cadetg Rebekka S. S., Nathues Heiko, Schüpbach Gertraud, Zeeh Friederike

HHM-OP-06

COMPARTMENTALIZATION IN COMMERCIAL SWINE HERDS – PREPARING FOR BUSINESS CONTINUITY IN THE FACE OF ASF

Leneveu Philippe, Turci Silvia, Amenna-Bernard Nadia, Brilland Sophie, Jardin Agnès, Lewandowski Eric, Belloc Catherine

15h30 – 17h30 - Parallel sessions

SZENARIO ROOM

ECPHM Residents' session

Chairs: Dr. Andrea Ladinig and Prof. Mari Heinonen

RES-OP-01

CO-INFECTION WITH MYCOPLASMA HYORHINIS AND HAEMOPHILUS (GLAESSERELLA) PARASUIS CAUSING RESPIRATORY DISTRESS IN WEANED PIGLETS – A CASE REPORT"

RES-OP-02

A COMPREHENSIVE INVESTIGATION OF PIG LAMENESS ASSOCIATED TO MYCOPLASMA HYOSYNOVIAE

RES-OP-03

WHY VACCINATION TIMING MATTERS: A CASE STUDY ON THE IMPORTANCE OF VACCINATION AGE AND DIFFERENT PRODUCTION FLOWS TO CONTROL ACTINOBACILLUS PLEUROPNEUMONIAE ON A FARROW-TO-FINISH FARM

RES-OP-04

A CASE OF ABORTION OF SOWS IN MID-GESTATION – A DIAGNOSTIC MARATHON

RES-OP-05

IMPLEMENTATION OF "BEST PRACTICE" AT FARROWING – ARE SWEDISH FARMERS DOING WHAT THEY SHOULD DO TO INCREASE PIGLET SURVIVAL?

RES-OP-06

PREVALENCE OF LAWSONIA INTRACELLULARIS IN SIX EUROPEAN COUNTRIES IN PIG HERDS WITH A HISTORY OF DIARRHEA

WEDNESDAY APRIL 29TH

SZENARIO ROOM

17h40 – 18h40 ECPHM Annual General Meeting-ECPHM Diplomates and Residents only

FORUM

18h00 – 19h30 Welcome Cocktail

THURSDAY APRIL 30th

THURSDAY APRIL 30TH

ARENA ROOM

08h00 – 18h00 Registrations

08h30 – 10h00 Keynote session **SURVEILLANCE**

Chairs: Dr. Nicolas Rose and Dr. Alex Eggen

National, regional & global surveillance of pig health

Prof. Katharina Stärk

Quality and feasibility of pen-site tests for surveillance

Prof. Gerard Martin

Round table discussion

10h00 – 10h30 Coffee break and poster viewing

10h30 – 12h30 - Parallel sessions

ARENA ROOM

Viral Diseases

Chairs: Dr. Monica Balasch and Dr. Marco Terreni

SZENARIO ROOM

Veterinary Public Health

Chairs: by Dr. Daniela Hadorn and Prof. Helle Stege

THURSDAY APRIL 30TH

12h30 – 13h30 Lunch break and poster viewing

13h30 – 15h00 Keynote session

SAFETY & SECURITY OF USE OF VETERINARY MEDICINES

Prof. Lars Larsen and Dr. Lorenzo Fraile

chaired by Prof. Francisco Javier Martinez Lobo and Dr. Annalisa Scollo

15h00 – 16h20 Parallel session

Flash Talks incl. EAPHM Peter Hogedal Award & PHM journal presentation

chaired by Prof. Heiko Nathues and Dr. Giovanbattista Guadagnini

Bacterial Diseases

chaired by Prof. Kazimierz Tarasiuk and Prof. Friederike Zeeh

16h20 – 16h40 Coffee break and poster viewing

16h40 – 18h00 Parallel sessions

HHP-OP-01

COLOSTRUM INTAKE IN PIGS: ANALYSIS OF THE VARYING FACTORS IN 10 COMMERCIAL FARMS

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SPONSORS

GOLD SPONSORS

BAYER ANIMAL HEALTH
www.bayer.com

Bayer Animal Health is a leading research-based veterinary medicine company that ranks among the top five in the world. The company offers a broad range of innovative therapies and solutions for the prevention and treatment of diseases, focusing on improving the health and well-being of animals.
Bayer Animal Health is a recognized partner to swine veterinarians and farmers, with a broad portfolio that includes innovative parasiticides, anti-infectives, pharmacological, biological and farm hygiene solutions. The company continually develops new, better products and improved forms of administration for the benefit of animals and livestock professionals. As the global leader in piglet coccidiosis research and control, Bayer Animal Health developed and recently launched in Europe an innovative combination therapy for the prevention of clinical signs of coccidiosis and iron deficiency anemia in piglets: Baycox® Iron Injection.
In fiscal year 2018, Bayer Animal Health employed more than 3,800 people globally and achieved sales of EUR 1.5 billion. More information at www.animalhealth.bayer.com. Connect with us on LinkedIn, and as Bayer4Animals on Facebook and Twitter.

BOEHRINGER INGELHEIM
www.boehringer-ingelheim.com

Boehringer Ingelheim is the second largest animal health business in the world, with net sales of almost 4 billion euros in 2018 and presence in more than 150 markets.
Across the globe, our 10,000 employees create the future of animal wellbeing through their daily work. We believe in prevention over treatment and therefore, we focus on developing innovative solutions in the field of vaccines, parasiticides and therapeutics. With a large portfolio of advanced, preventive healthcare products, tools and services, we support our customers in taking care of the health of their animals.
For more information visit: www.boehringer-ingelheim.com/animal-health/overview

CEVA
www.ceva.com

Driven to innovate and with a proven record of double-digit growth, Ceva is one of the fastest growing top 10 animal healthcare companies. Our vision reaches far beyond animal health and welfare.
We're truly global, based in 45 countries and working across more than 110. We have 12 R&D centers, 25 production sites and more than 5000 employees worldwide.
Ceva is a key partner for the swine sector, thanks to a broad range of veterinary products providing the right responses to the sanitary and zootechnical objectives of modern swine farming. The Group has invested heavily, especially in R&D, to offer the right products to meet the needs of professionals, notably in vaccines, reproduction and anti-infectives.
In 2019, Ceva acquired IDT's veterinary biopharmaceutical portfolio and R&D activities which delivers early promise with salmonella vaccine go-ahead in several European countries.
Ceva, as a gold Sponsor at ESPHM 2020 is taking the opportunity to communicate the strength in SW vaccines in Europe, being 3rd in the SW biologicals ranking and present the Ceva Lung Program, our exclusive tool to monitor PRDC (Porcine Respiratory Disease Complex) problems.

For more information, please come and visit us on our booth #15

MSD Animal Health
www.msd-animal-health.com

As a global healthcare leader, MSD works to help the world be well. MSD Animal Health, known as Merck Animal Health in the United States and Canada, is the global animal health business unit of MSD. We offer one of the industry's most innovative portfolios to prevent, treat and control diseases across all major farm and companion animal species. Our mission – The Science of Healthier Animals – guides all of our work. Healthier animals mean a sustainable food supply, protection for humans against diseases passed from animals, and longer, healthier lives for pets.

Our products fight diseases that can devastate animals, threaten human health, and disrupt the supply of food. We continually introduce new technologies to help our customers maximize their efficiency while improving animal wellbeing, such as the new innovative Porcilis Lawsonia vaccine for piglets.

MSD Animal Health's robust R&D pipeline spans key therapeutic areas, providing a solid platform for further advances in veterinary medicine. Our customers expect more from us than just medicines, and we continue to deliver the information, technologies and veterinary services to meet their needs around the world.

GOLD SPONSORS

PHARMACOSMOS
www.pharmacosmos.com

At Pharmacosmos, we are specialists in iron therapy. We develop, manufacture and market medicines for the treatment of iron deficiency anaemia in humans and animals. We are furthermore specialists in developing and producing advanced carbohydrates for pharmaceutical and technical uses.
We have our headquarters in Holbæk, Denmark and affiliates in the US, UK, Ireland, Germany, Sweden and Norway. We have grown considerably over the years and are at present more than 245 people working with all aspects of a fully integrated pharmaceutical company.

TROUW NUTRITION
www.trouwnutrition.com

Trouw Nutrition, a Nutreco company, is a global leader in innovative feed, farm and health management solutions for animal production, offering a range of products, models and services to boost productivity and support animal health. Trouw Nutrition has been meeting the needs of farmers and home-mixers, feed producers and integrators since 1931. Headquartered in the Netherlands, our company has locations in 28 countries, employing approximately 8,000 people.
Trouw Nutrition is committed to sustainably feed the world's growing population with healthy and safe foods of animal origin by driving the transition from current animal nutrition practices to new, sustainable, integrated farming solutions.
Trouw Nutrition's innovation focus areas are Early Life Nutrition, Healthy Life, Precision Farming and Feed Safety & Quality. We conduct more than 70 global R&D studies annually at our 6 global in-house research facilities to develop nutritional products, models and services or further explore mode of action of our ingredients. These high-tech facilities include electronic feeding and water stations that allow our researchers to individually monitor feeding behaviour of animals in group-housed facilities.
Passion and science are our core drivers. By providing knowledge-based solutions, we are able to ensure the profitability of our customers around the world. Our unique, integrated, approach delivers the highest quality of feed, best farm-management practices and optimal animal health and performance.

GOLD SPONSORS

VETOQUINOL
www.vetoquinol.com

Vetoquinol is a leading global animal health company that supplies drugs and non-medicinal products for the livestock (cattle and pigs) and pet (dogs and cats) markets.

As an independent pure player, Vetoquinol designs, develops and sells veterinary drugs and non-medicinal products in Europe, the Americas and the Asia Pacific region. Since its foundation in 1933, Vetoquinol has pursued a strategy combining innovation with geographical diversification. The Group's growth is driven by the reinforcement of its product portfolio coupled with acquisitions in high potential markets. Our company's culture is based on trusted relationships with veterinarians, breeders and pet owners alike with a commitment to « Achieve more together.

ZOETIS
www.zoetis.com

Zoetis is the leading animal health company, dedicated to supporting its customers and their businesses. Building on more than 65 years of experience in animal health, Zoetis discovers, develops, manufactures and commercializes veterinary vaccines, medicines and diagnostics, which are complemented by genetic tests, biodevices and a range of services. Zoetis serves veterinarians, livestock producers and people who raise and care for farm and companion animals with sales of its products in more than 100 countries. In 2018, the company generated annual revenue of $5.8 billion with approximately 10,000 employees.

SILVER SPONSORS

CHR HANSEN
www.chr-hansen.com

Chr. Hansen has been improving food and health for more than 140 years, and to this day we produce ingredients consumed daily by more than 1 billion people worldwide.
With an ever-expanding range of probiotics, we work continuously to develop the products of tomorrow, enabling farmers to produce the high quality, sustainable, and safe food that global consumers demand.
We have the world's largest commercial bank of bacterial strains, and from this strong foundation, we continue to innovate and produce the best bacterial solutions for poultry, swine, cattle and silage. Our probiotics for swine help pig producers keep their businesses both sustainable and successful, from gestation to farrow to finish.

All this is accomplished from our strong platforms in bioscience technologies combined with extensive research and in close dialogue with our customers and business partners.

BRONZE SPONSORS

BIOCHEK
www.biochek.com

The complete BioChek package for Swine & Poultry health and food safety is used all over the world. We offer a wide range of diagnostic ELISA and PCR test kits, with reference controls for ELISA and standards for PCR. We also offer a user-friendly monitoring software for easy data management, with 24/7 access to test results, and the BioChek ELISA Assay Robot (BEAR), a complete solution for running ELISA. BioChek is able to assist the swine, poultry and food safety industries in perfecting health and improving productivity of animals. BioChek: adding value to test results.

EXOPOL
www.exopol.com

Exopol is a laboratory dedicated to veterinary diagnosis and the production of autogenous vaccines and qPCR kits. Our philosofy is to always obtain the best results, that is why we dedicate a very high effort to R+D.
We have been helping veterinarian and other laboratories with our services for 25 years, always with the same goal: to ensure animal health.

GENIA
www.genia.fr

A leading supplier of veterinary material in France for over 70 years, GENIA is characterized by its strong experience and daily involvement with animal health professionals.
Our Research and Development department is designing innovative products which aim to simplify veterinarians' daily practice.
The needs of our collaborators and clients are the top priority during the creation process which allows us to expand our ranges and supply innovative and practical products.
Our continuous improvement approach has allowed Genia to gain ISO 9001 since 2007.
Working in long-standing partnership with veterinary pharmaceutical companies, we are constantly seeking to consolidate this collaborative relationship.

BRONZE SPONSORS

HENKE-SASS, WOLF
www.henkesasswolf.de

Henke-Sass, Wolf GmbH is one of the leading manufacturers of high quality, durable and reliable application and injection systems. The HSW products are innovative, user-friendly and are especially designed for their intended application in the veterinary field. The outstanding high quality product solutions are very well known and popular in the veterinary practice as well as in the pharmaceutical industry and with farmers.
To ensure easy and gentle treatment of the animals and economic and safe work conditions for the user, HSW presents at the ESPHM 2020 a number of new developments and innovations.

HUVEPHARMA
www.huvepharma.com

Huvepharma is a global pharmaceutical company with a focus on developing, manufacturing and marketing human and animal health products.
The company is building its organization on the strong foundations and longstanding reputation of the businesses that make up our group.
Huvepharma's expertise lies in the creation of close partnerships with the customers with an emphasis on best addressing their needs.

IDEXX LABORATORIES
www.idex.com

IDEXX Laboratories, Inc. serves practicing veterinarians around the world with a broad range of diagnostic and information technology-based products and services. IDEXX products enhance the ability of veterinarians to provide advanced medical care, improve staff efficiency and to build more economically successful practices. IDEXX is a worldwide leader in providing livestock and poultry diagnostic tests and tests for the quality and safety of water and milk. Headquartered in Maine, USA, IDEXX Laboratories offers products to customers in more than 175 countries. Laboratories, veterinarians and producers depend on IDEXX diagnostics to make confident decisions and better manage and control diseases that affect swine. IDEXX diagnostics have been run around the world to eradicate swine diseases and to address emerging diseases.

BRONZE SPONSORS

IMV TECHNOLOGIES
www.imv-imaging.com

The IMV Technologies group, a global leader in reproduction biotechnologies.
IMV Technologies provide customers with solutions for assisted reproduction. IMV imaging are specialists in veterinary imaging; ultrasound, X-ray, CT, MRI and PACS.
From collection to pregnancy diagnosis, whatever the species, we are with you every step of the way.
All our equipment is designed and manufactured in-house or sourced from the world's leading healthcare and imaging providers. Our mission is to ensure our equipment is fully fit for the purpose it will be used.

KEMIN
www.kemin.com

As the world's population continues to grow, the demand for protein soars. Kemin is dedicated to developing ingredients that help producers raise healthy livestock and poultry. We are a trusted market leader in the animal feed, beef, dairy, poultry and swine industries. Our wide variety of science-backed solutions help optimize nutrition, improve gut health, support immune function, improve the absorption of nutrients, extend feed's shelf life and reduce harmful pathogens in the feed and water animals consume. Our solutions are backed by a team of experts, as well as rigorous quality and safety standards, to ensure our customers get the most out of every product.

MAGAPOR
www.magapor.com

Magapor develops, manufactures and implements the latest technology in artificial swine insemination, providing profitable and eminently practical solutions for all reproduction processes for boar studs and sow farms. The distinction lies in:
- Unique products
- Specialization in swine
- Focused on technical service with the aim of improving our customers´ productivity.

The main innovations appear in our High Performance Extenders, catheters for post-Cervical Insemination, and packaging for semen doses with Reproductive Toxicity Control (RTC) of reprotoxic effects in the sperm quality.

GENERAL INFORMATION

GENERAL INFORMATION

Conference venue
Kursaal Bern
Kornhausstrasse 3
CH-3000 Bern 22

Registration desk opening hours
Wednesday April 29th: from
Thursday April 30th: from
Friday May 1st: from

Official Language
The official language is English.

Name badge
A name badge will be required for access to the congress area. Participants will receive a name badge when they check in at the registration desk. It must be worn at all times.

Currency
The currency in Switzerland is the Swiss franc (CHF). Merchants may accept Euros but are not obliged to do so. Change given back to the client will most likely be in Swiss francs. Credit and debit cards are widely accepted.

Electricity and plugs
Current throughout Switzerland is supplied at 230 volts. Type C (euro plug, two-pin) plugs and type J (three-pin) plugs are used. The type F ("Schuko") plugs widely used in Europe cannot be used without an adapter.
Dialing codes
The national dialing code for Switzerland is +41. The following 0 is omitted. Dialing codes from Switzerland are as follows:
Germany: 0049
France: 0033
Italy: 0039
Japan: 0081
Netherlands: 0031
Austria: 0043
USA: 001
UK: 0044

Shopping

Stores in Bern usually have the following opening times:

Monday – Wednesday 09:00 – 06:30
Thursday 09:00 – 08:00
Friday 09:00 – 06:30
Saturday 09:00 – 05:00
Sunday close

Times may vary slightly from store to store. Some stores in the lower Old Town, from the Clock Tower (Zytglogge) upwards, don't open until 10:00 a.m. If you would like to visit a particular store, we recommend finding out its opening times in advance.

Bern's main station is home to more than 80 stores that are open 365 days a year, from early till late. The large shopping centers in the city also have longer opening times.

Tips

Tips are generally included in the price for all services. However, in restaurants it is usual to round up the bill by a reasonable amount.

Public transport

The City of Bern has an extensive public transport network with different tram and bus lines. Tickets for Bern public transport can be bought at machines and in the LIBERO shop at Bern main station. No tickets are sold on buses and trams. In addition to the normal tickets, and the multiple journey tickets, Bernmobil also sells short journey tickets at a more affordable price. The ticket machines at the tram and bus stops show which routes the short journey ticket is valid for.

Overnight visitors don't need to worry about tickets in Bern. From your first overnight stay in tourist accommodation in the city, you will receive a Bern Ticket for your whole stay. This lets you travel for free in zones 100/101 operated by LIBERO. The Bern Ticket also includes the Gurten funicular, the Marzilibahn funicular and the lift to Bern's cathedral platform, as well as your journey to and from Bern Airport.

On the day you arrive in Bern, your reservation confirmation counts as a transfer ticket from the train station or Bern Airport to where you are staying. You will receive the Bern Ticket when you check in. It is only valid if fully filled in. If asked, please show your ticket to the ticket.

Tourist information

You can find information and brochures about your stay in the city and region of Bern at Tourist Information at the Main Station:
Bahnhofplatz 10a
3011 Bern

T +41 31 328 12 12
E info@bern.com
https://www.bern.com/en

Opening hours Tourist Information
Monday – Saturday 09:00 – 19:00
Sunday and generally feasts 09:00 – 18:00