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e-news

**International Society
for Animal Hygiene**

N° 005 - 2019

SUMMARY

Dear members and friends of ISAH,

Please find the Christmas and New Year e-format ISAH Newsletter. It keeps record of activities of the Executive Board of ISAH and informs members about recent developments in the Society and on interesting topics in various fields of Animal Hygiene and beyond.

Hot topics today relate to:

- Christmas and New Year greetings from President and Executive Board (EB),
- latest news from the Executive Board,
- important activities of EB members,

We also take the opportunity to inform you that membership fee collection is working properly. Please look on page 16-17 for details how to pay the membership fee.

Forthcoming events and publications related to the Society are presented in the end of this issue; please visit the associated pages (18 to 25).

Enjoy reading the e-Newsletter of our Society!

Dr Christelle Fablet
General Secretary of ISAH



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EDITORIAL

By the President

Dear members of ISAH, colleagues and friends,

Close to Christmas and the turn of the year we are looking back to the past 12 months full of activities of ISAH and its members. One of the highlights was the 19th ISAH Congress in Wroclaw, Poland emphasizing the importance of **“Animal Hygiene as a Fundament of One Health and Welfare improving biosecurity, environment and food quality”** (see page 6 for more details). Important changes for the future of ISAH have been initiated during the General Assembly – GA (please see minutes of the GA page 8 to 9) and last but not least the discussion within ISAH continued about the hope for peace, freedom, prosperity and how to stop or at least mitigate the “climate change”.

One of the main hygienic and veterinary topics in 2019 was – and still is - African Swine Fever (ASF) in Europe but also in many countries in Southeast Asia. This challenge will continue in 2020 since ASF in wild boars has almost reached the German border from the east.

It is well documented that the battle against ASF can only be won by use of hygiene measures and biosecurity when strictly applied and comprehensively implemented, as long we do not have an effective vaccine or medical treatment procedure. According to various expert sources only in 2019 millions of domestic pigs and wild boars died from the fever or were culled or shot by hunters. The number of pigs that were killed since ASF broke out 2007 in Georgia at the Black Sea and spreads since then massively across Russia and the east European states including Rumania, Bulgaria, the



Baltic states Ukraine and Poland is not known. These frightening figures demonstrate the crucial importance of the understanding of hygiene and biosecurity measures, incl. effective disinfection, in order to protect the animals from disease, suffering and death and save the pig industry from heavy losses.

Therefore, ISAH will continue to emphasize its principles of preventing disease and suffering by creating conditions that support the health and welfare of animals (*The Spirit of Hygiene*). Animal Hygiene is the underlying philosophy of all disease preventing measures and their practical implementation in order to avoid poor medical conditions and poor well-being in animals. This applies also to all infectious diseases – incl. ASF.

The prominent topics of the international environment movement also touches the work of ISAH as well as some political tendencies to more isolation fragmenting the world. ISAH which is active in dozens of countries around the world advocates for more scientific cooperation which is an effective mean against the ruthless exploitation of animal and nature and the proliferation of wars.

Actual worries and concerns are expressed in the **painting** and the little **poem** below showing a currently “fragmented world” in war, heat and fire and asks questions to all of us.

The painting does not seem to symbolize at the first instance “Christmas” and I hesitated to write “Merry Christmas “ under the picture, but maybe it reminds us to work against the “fragmentation” and more for peace, quality of life for all and the protection of the whole creation.

The aims of ISAH for improving the quality of life of the animals in our custody by health care and preventing diseases and poor welfare are on the national and international agendas in research and practice worldwide. Animal friendly housing conditions that enable an infection-free and injury-free animal life without physical, mental and social suffering, production of safe and high-quality food of animal origin and the protection

of flora and fauna. Let us take up the challenges with knowledge, energy, hope and trust – again in 2020. Animal hygiene is applied sustainable science for the sake of animal, man and environment.

I wish you all a blessed and Merry Christmas and a happy, healthy and successful New Year 2020.

**Professor Dr. med. vet. Dr. h. c. mult. Jörg Hartung
President of ISAH**

In the name of the Executive Board

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Weihnachten 2019 – Christmas 2019

Frohe Weihnachten und ein friedvolles Neues Jahr
Merry Christmas and a peaceful New Year



Fragmented World 2019 *The world in pieces* (J. Hartung)

And don't we see the letters at the wall,
written by nature and enslaved cries?
Who cut this world in neatly pieces
and sent the message born of lies?

Who is prepared abjure the wars?
Who calls to stop the many fires?
Who wants to change the evil course?
Who builds a world that all rely us?

Tear down the walls of all these despots!
Resist, thou gunfire heavily falls.
Who tries to save himself again,
he nothing saves, but tyrants games.

Let us dispute, but not with weapons,
Live solidarity with all the poor,
with those, who cannot yet prevail.
Make free this dream and make it true.

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News from the Society

19th ISAH Congress, Wroclaw, Poland



The 19th ISAH Congress took place between the 8th and 12th of September 2019 in Wroclaw, Poland. It was organized by the Polish colleagues and friends of the Wroclaw University of Environmental and Life Sciences (WUELS). Participants from more than 20 countries from all over the world attended the congress and enjoyed the scientific programme and the great hospitality of our Polish hosts. The motto of the Congress was **“Animal Hygiene as a Fundament of One Health and Welfare improving biosecurity, environment and food quality”**.

Highlights among the keynote lectures were talks such as “The incidence of contagious diseases in poultry in the world - epizootic hazards in Europe” (Jean-Pierre Vaillancourt, University of Montréal), “Challenges of animal health and welfare at a global level” (Tomasz Grudnik, OIE) or “Fully integrated poultry production chain” (Josef Bachmeier, Veterinary Poultry Practitioner). Great interest met also the presentations of “Hygienic behaviour: the crucial issue for disease resistance in the honey bee” (Kaspar Bienefeld, Germany), “Role of veterinarians in integrated crises management (icm) experienced in syria” (Darem Tabbaa, Syria), “One health approach in combating infectious diseases” (Albert Osterhaus, Germany), “Infectious diseases in cattle in European countries – current status and threats” (Nadav Galon, Israel) and



“Epizootic situation of swine diseases in Poland as compared to Europe and other parts of the world” (Zygmunt Pejsak, Poland).

In total there were given 87 **oral presentations** during plenary and parallel sessions and more than 50 **posters** were displayed during the congress. Three posters were awarded:

1st prize: Gabriela Mala, Czech Republic, for her poster: “The effect of housing system on behaviour of dairy calves”. She will be exempted from the conference fees of the next ISAH Congress in Thailand.

2nd prize: Julia Anna Schwenker, Germany, for her poster: “Microbiological selection by teat disinfection-Implications for udder health and the spread of resistant bacteria”.

3rd prize: Arun Somagond, India, for his poster: “Socio-economic and husbandry practices of soliga tribe in Biligirirangana hills of India”.

During the congress, the President of ISAH, Prof Hartung, awarded:

- **Prof Dr. Dr. h. c. Roman Kołacz** as Honorary Membership of ISAH for his long lasting and dedicated work for the Society.
- **Prof Dr. ir. Martin Jan Marie Tielen**, Former ISAH President, Honorary Member of ISAH and Founder of the Professor Tielen Foundation (PTF), the Honorary Gold Pin of ISAH for his outstanding merits and life-long dedicated work for ISAH.
- **Assoc. Prof Dr. Sebastian Opaliński**, the Honorary Gold Pin of ISAH for his merits organizing as Vice-President the XIX ISAH Congress in Wroclaw, Poland.

Congratulations to all of them!





Short report of the General Assembly of ISAH members during the 19th ISAH Congress in Wroclaw

At the beginning of the General Assembly (GA) of ISAH President Jörg Hartung welcomed the ISAH members and guests and opened the GA. He warmly thanked the organisers of the current congress, particularly Prof Dr Roman Kołacz and Prof Sebastian Opaliński, for their huge amount of work, hospitality, intensive efforts and for their dedicated enthusiasm.

The President gave an overview of the life of ISAH since the 18th congress in Mazatlán in 2017 and thanked again the Mexican colleagues for the successful congress. Further, he thanked Secretary Christelle Fablet and the contributing EB members for producing the ISAH Newsletter, which is published twice per year.

Professor Hartung asked the GA to stand up for a silent moment in memory and honour of Professor Stan Diesch, Prof Emeritus at the University of Minnesota, College of Veterinary Medicine, and Honorary Member of ISAH. From 1992 to 1994, Stan Diesch was President of ISAH and organized the congress in Minnesota, USA in 1994. He passed away in May 2017, just short of his 92nd birthday (please see e-Newsletter 004-2019 for more details about his life).

Secretary Dr Christelle Fablet concentrated her report on the list of country representatives (CR), seconded by Andres Aland. New CRs for Mexico and Slovakia were welcomed and together with the standing CRs confirmed. Presently, there are 59 CRs from 61 countries (one CR represents 3 African countries).

Treasurer Dr Hermann Schobesberger showed the financial balance of income and expenditures. He reported about difficulties to collect the fees from ISAH members and explained that the bank account had to be moved from one bank to another because of technical reasons.

The time in office of President Jörg Hartung comes to an end according to the constitution. After some discussions Prof Dr Uwe Rösler from the Veterinary Faculty of the Free University of Berlin was elected as new President of ISAH by the GA with a transition time until 2021. Prof Rösler is a world-wide recognized, outstanding scientist and leading person of Animal Hygiene in



Germany. The GA decided that Prof Hartung continues as Acting President together with Prof Rösler until the next congress in 2021 in Thailand (see below). Prof Rösler stays in office as CR for Germany.

Changes of EB Members at large were accepted by the GA. Prof Dr Stefan Gunnarsson and Prof Dr Laszlo Könyves asked to resign after serving the Society 8 years in the EB and 2 years of which as EB Members at large. The president and the GA thanked them for their long and dedicated work. Prof Dr Endong Bao agreed to continue until the next congress in Thailand because of his connections in the East Asia region. Prof Dr Jan Venglovský had expressed his wish to stay as EB Member at large until 2021. Dr Jan Paeshuyse, the CR of Belgium was appointed new EB Member at large.

The Professor Tielen Foundation (PTF) granted 11 students for the ISAH congress in Wroclaw 2019. The President and the GA thanked Prof Tielen and the foundation for supporting the young scientists.

During the GA a closer cooperation between ISAH and PTF was agreed. The lawyer of PTF prepares the necessary documents in the near future.

Since the congress in Košice in 2015, Thailand was on the short list of host countries to organize an ISAH congress. The Thai delegation, led by Dr Sujate Chaunchom (CR of Thailand), presented their bid by slides and video, and distributed a brochure with detailed information on the planned congress. The GA agreed to hold the congress in August 2021 in Pattaya, Thailand. An outline of the scientific content and the facilities were given. A specific homepage for the 20th Congress will be prepared and launched in the near future. The scientific programme and organisational details will be developed in close cooperation between with the local hosts and the EB of ISAH.

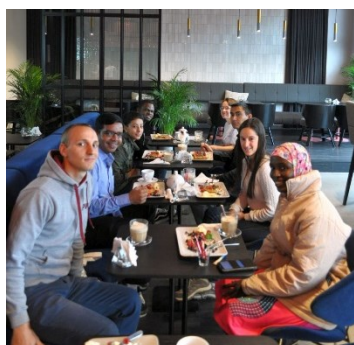
Please find more photos of the congress below:

<http://www.isah2019.com/photo/gallery.html>

The next ISAH congress will be held in Thailand in 2021.



**Professor Tielen
Foundation (PTF)**
www.PTF-Foundation.com



The “Prof Tielen Fund-Foundation” (PTF), which supports since its creation in 2000 young scientists from developing countries to attend leading veterinary congresses all over the world, financed participation of 11 young scientists in the 19th ISAH congress. This attendance gives these young scientists the opportunity to exchange scientific knowledge and to build up an international scientific network for future co-operation.

We thank the PTF and namely, Prof Martin Tielen, his son Pieter Tielen and son-in-law Mike van der Laak for contributing to pass the ISAH spirit over the generations!

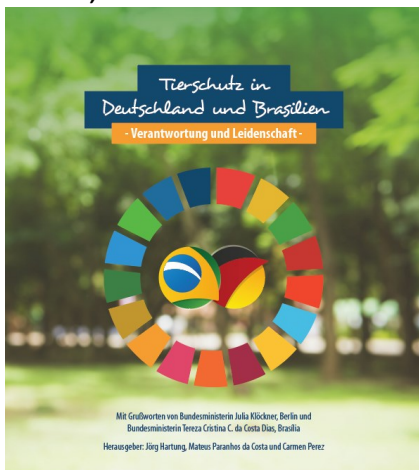


Some activities of ISAH members in recent months

Activities and invited Talks of **ISAH President Jörg Hartung** in the second half of 2019 (apart from ISAH congress):

- Prof Hartung took part in the **5th Annual Meeting of the Livestock Helminth Research Alliance (LiHRA)**, 26 to 27 August 2019, Ghent, Belgium. He gave a talk on Precision Livestock Farming entitled: 'Can Precision Livestock Farming assist veterinarians and help to improve health and welfare of farm animals?'
- He was invited to the inaugural **Ceremony Wroclaw University of Environmental and Life Sciences**, 3rd October 2019, Wroclaw, Poland to talk about digitalization and its opportunity for farm animal production.
- Prof Hartung prepared together with researchers from the Federal Research Institute for Animal Health (FLI), Franz. J. Conraths and Sandra Blome talks on prevention of African Swine Fever. He took part in several Chinese congresses and gave talks about "the battle against ASF and the concept of animal hygiene": International Symposium on Animal Environment and Welfare (ISAEW); International Symposium on Animal Health and Food Safety in Nanjing Agricultural University (NAU); International Swine Summit & 11th Animal Husbandry and Veterinary Medicine Academic Annual Conference; Student-Seminar in Nanjing Agricultural University (NAU)
- He taught courses at University Sao Paulo (USP), veterinary college 14 to 28 September (supported by DAAD), on "Animal Health, Welfare and Hygiene in poultry production".
- Prof Hartung was invited to the German-Brazilian Animal Welfare Symposium (Simpósio Brasil-Alemanha de Bem-Estar Animal), 24 September, Sao Paulo, Brazil. His presentation focused on animal welfare aspects in science and teaching and the assessment of animal welfare.
- On September, Prof Hartung presented the first German - Brazilian animal protection book entitled "Animal Welfare in Brazil and Germany - Responsibility and passion". In this framework he took part in the "Deutsch -

Brasiliianische Wirtschaftstage/Encontro Economico 2019“, 14 to 17 September, in Natal Brasil.



In the 304-page volume, there are 40 contributions written by well-known German and Brazilian authors on the protection of farm animals, horses, dogs and cats, fish, zoo and wild animals as well as on the history of animal protection, current legal provisions and the implementation of animal welfare by administrative structures. Also included are chapters on animal welfare in the veterinary curriculum incl. “skills lab” studies, the view of NGOs, media and industry on animal welfare issues.

Remarkable forewords by the German Federal Minister for Food and Agriculture, Julia Klöckner, and the Brazilian Federal Minister for Agriculture, Tereza Cristina C. Da Costa Dias, introduce to the book. A foreword by the editors Jörg Hartung, Hannover, Mateus Paranhos da Costa, Jaboticabal and Carmen Perez, Araguaiana as well as welcome addresses from the former Brazilian Minister of Agriculture Roberto Rodrigues, the journalist José Luiz Tejon Megido and the responsible personalities who very much realised the publication, Philipp Schiemer, President, and Thomas Timm General Manager of the AHK (German Chamber of Commerce) Sao Paulo complete the introductions. The book is available as complete edition in German and in Portuguese language. Inquiries (ISBN 978-8585577-44-5) should be addressed to: Jörg Hartung, Hanover (joerg.hannover@tiho-hannover.de).



On November 11th, 2019, the Department of Veterinary Medicine of the FU Berlin received the official recognition as **FAO Reference Centre for Antimicrobial Resistance** (FAO RC-AMR), making it the first and so far only reference centre of its kind in Germany and one of altogether four in the world. The new designated FAO reference centre has seven leading scientist from four institutes of the department and **ISAH EB member** professor Dr. **Uwe Rösler**, director of the Institute for Animal Hygiene and Environmental Health of Free University of Berlin is the deputy head.

The newly established FAO RC-AMR will focus on antimicrobial and antiparasitic resistance in veterinary medicine and the underlying infectious diseases in animals. In addition, the knowledge generated is made available to veterinarians and animal farmers in Germany and abroad, in particular in Africa and Southeast Asia, with a broad and differentiated training concept and in this context also intensively cooperate with ISAH. The aim is to combat resistance to anti-infectives in veterinary medicine and animal husbandry in a holistic approach.

The Reference Centre will be located in the newly built Veterinary Centre for Resistance Research (VCR²) at the Free University of Berlin.

For further information please see at:

<https://www.vetmed.fu-berlin.de/en/einrichtungen/sonstige/tzr/FAO-RC-AMR/index.html>



ISAH member, associate professor Dr. **Jacek Koziel**, of agricultural and biosystems engineering IOWA State University, and his team developed the concept of using microbial VOCs as “signature markers” to provide a faster and non-invasive diagnosis of diseases. They validated a platform that can be useful for minimally invasive and biosecure collection of biomarkers associated with human, wildlife and livestock diseases for development of diagnostic point-of-care and field surveillance.

Please have a look of their discovery:

<https://www.nature.com/articles/s41598-019-47907-w>

**SCIENTIFIC
REPORTS**
nature research

OPEN

Screening of Microbial Volatile Organic Compounds for Detection of Disease in Cattle: Development of Lab-scale Method

Received: 23 November 2016
Accepted: 26 July 2019
Published online: 20 August 2019

Devin L. Maurer¹, Christine K. Ellis², Tyler C. Thacker³, Somchai Rice⁴, Jacek A. Koziel⁵, Pauline Nol⁴ & Kurt C. VerCauteren²

The primary hurdle for diagnosis of some diseases is the long incubation required to culture and confirm the presence of bacteria. The concept of using microbial VOCs as “signature markers” could provide a faster and noninvasive diagnosis. Finding biomarkers is challenging due to the specificity required in complex matrices. The objectives of this study were to (1) build/test a lab-scale platform for screening of microbial VOCs and (2) apply it to *Mycobacterium avium paratuberculosis*; the vaccine strain of *M. bovis* Bacillus Calmette-Guérin; and *M. kansasii* to demonstrate detection times greater those typically required for culture. SPME-GC-MS was used for sampling, sample preparation, and analyses. For objective (1), a testing platform was built for headspace sampling of bacterial cultures grown in standard culture flasks via a biosecure closed-loop circulating airflow system. For (2), results show that the suites of VOCs produced by *Mycobacteria* ssp. change over time and that individual strains produce different VOCs. The developed method was successful in discriminating between strains using a pooled multi-group analysis, and in timepoint-specific multi- and pair-wise comparisons. The developed testing platform can be useful for minimally invasive and biosecure collection of biomarkers associated



Nomination

The University of Environmental and Life Sciences has awarded Professor Dr. vet med. Dr. h. c. Jörg Hartung, President of the International Society for Animal Hygiene (ISAH), former head of the Institute for Animal Hygiene, Animal Welfare and Farm Animal Behaviour at the University of Veterinary Medicine Hannover, Foundation (TiHo), the title of *Doctor honoris causa* 3rd October 2019 in Wroclaw, Poland. The university honoured his scientific work and his services to Polish and international scientific cooperation in the fields of animal health, animal protection and animal hygiene. His name was placed on the marble tablet of honorary doctorates from the University of Wroclaw. The *Doctor honoris causa* from Wroclaw is his second honorary doctorate. The Swedish University of Agricultural Sciences in Uppsala also awarded him an honorary doctorate in 2010.

***We warmly congratulate him for his second
Dr. honoris causa!***





Join ISAH
*and become a member
of a community of science
& a circle of lifelong friendship*



Scientists, veterinary practitioners and other persons with a special interest in the field of Animal Hygiene are cordially welcome to become a member of the International Society on Animal Hygiene.

Entering the society is absolutely easy! Just send an informal email to the ISAH Secretary and upon receiving of the invoice by paying the biannual membership fee of 40 Euros for two (2) calendar years in between the ISAH-congresses. Alternatively you can also use our entry form on the Society's web page.

ISAH membership fee is effective from the 1st of January and runs for 24 consecutive months. Members who pay their fee in due time get a discount on the congress fee for the upcoming ISAH congress in that period.

For instance, those having paid the fee in 2020 or 2021, will have a discount for 2021 ISAH congress!

Membership fee can currently be paid only by money transfer. Alternatives are currently explored and might become available in the future.

Please visit our webpage for more details:

<https://www.isah-soc.org/?Members/Membership-fee>

XXXXXXXX

Gentle Payment Reminder



As the year comes to its end, ISAH's would kindly like to reach out to you and thank all those members who have paid their membership fee for this year!

We are truly grateful for your contribution!

All others we would kindly like to ask to check their balance and to remind you to satisfy their balance by the end of the year. If your fees are overdue please contact ISAH'S Treasurer for an invoice and pay the amount due (Hermann.Schobesberger@vetmeduni.ac.at).

Thank you!

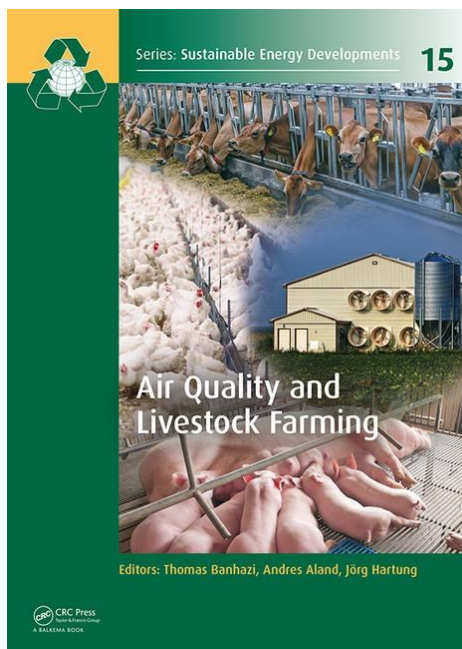
ISAH's Treasurer wishes you a festive season, relaxing holidays and may the new year bring you joy, happiness, prosperity and good health!

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Publications

4th book under ISAH auspice: "Air Quality and Livestock Farming"



Prof Thomas Banhazi, Prof Andres Aland and Prof Hartung have edited the 4th book under the ISAH auspice! There is in total 23 chapters covering the wide and important topic of air quality in livestock buildings. It addresses the raising awareness of the importance of optimal health and welfare for livestock species and provide-up-to-date information for professionals involved in modern animal production. With many contributions from international specialists and researchers, the book is available.

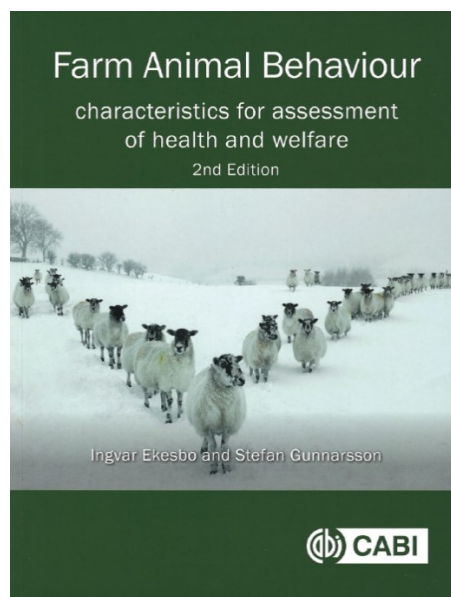
To buy one, visit: <https://www.crcpress.com/Air-and-Environmental-Quality-in-Livestock-and-Agricultural-Buildings/Banhazi-Aland-Hartung/p/book/9781138027039>

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Publications

Farm Animal Behaviour 2nd edition



Prof Ekesbo and Assoc. Prof Stefan Gunnarsson edited the 2nd edition of book *Farm Animal Behaviour - Characteristics for assessment of health and welfare*. This edition provides essential information on normal and stereotypic behaviors in a wide variety of farm animals to help in the assessment and diagnosis of their welfare. The book describes normal and abnormal behaviour (innate, learned and social) of farm animals (horses, pigs, cattle, sheep, goats, rabbits) and poultry (hens, turkeys, geese and ducks) but also other non-domesticated farmed animals (fallow deer, red deer and ratites: ostrich, rhea or nandu and emu). It provides a comprehensive yet concise background for all students, postgraduates and practitioners in veterinary medicine, animal science welfare and ethology.

To buy one, visit:

<https://www.cabi.org/vetmedresource/ebook/20183343840>



Proceedings of 70th Annual Meeting of the European Federation of Animal Science (EAAP)

The congress was held in the city of Ghent (Belgium) from **26th to 30th August 2019**. **Around** 1000 participants from more than 50 countries took part in the meeting this year.

The meeting hosted scientists and experts from the field of animal science, not only from Europe but also from other countries around the globe. The EAAP Congress provided insights into the latest research results from many areas of animal science.

Every year, the Annual meeting is a unique opportunity for scientists and industry to meet and acquire new knowledge and to exchange experience. Carried out through many sessions, plenary meeting, a poster and exhibition presentations, and discussions about scientific achievements in the European and world livestock production, the 70th Annual Meeting gave another opportunity for the application of new ideas in practice. All these preferences make the EAAP one of the largest animal science congresses in the world.

Interested in the book of proceedings?

Please visit the dedicated webpage:

<https://www.eaap2019.org/EN/ContactDownloads/tabid/9661/Default.aspx>

Publications

Of interest for ISAH members

About cattle & animal hygiene

- ▶ Maurer, D.L., Ellis, C.K., Thacker, T.C. *et al.* Screening of Microbial Volatile Organic Compounds for Detection of Disease in Cattle: Development of Lab-scale Method. *Sci Rep* **9**, 12103 (2019) doi:10.1038/s41598-019-47907-w. <https://www.nature.com/articles/s41598-019-47907-w>

About poultry production & animal hygiene

- ▶ Andronico A., Courcoul A., Bronner A., Scoizec A., Le Bouquin-Leneveu S., Guinat C., Paul M.C., Durand B., Cauchemez S. 2019. Highly pathogenic avian influenza H5N8 in south-west France 2016-2017: A modeling study of control strategies. *Epidemics*. *Epidemics*, 28:100340
- ▶ Coton J., Guinebretiere M., Guesdon V., Chiron G., Mindus C., Laravoire A., Pauthier G., Balaine L., Descamps M., Bignon L., Huneau-Salaun A., Michel V. 2019. Feather pecking in laying hens housed in free-range or furnished-cage systems on French farms. *British poultry science* 60 : 617-627.
- ▶ Souillard R., Reperant J.M., Experton C., Huneau-Salaun A., Coton J., Balaine L., Le Bouquin S., 2019. Husbandry Practices Health and Welfare Status of Organic Broilers in France. *Animals*, 9:97.

About pig production & animal hygiene

- ▶ Andraud M., Halasa T., Boklund A., Rose N. 2019. Threat to the French Swine Industry of African Swine Fever: Surveillance Spread and Control Perspectives. *Frontiers in veterinary science*, 6:248.
- ▶ Salines M., Rose N., Andraud M., 2019. Tackling hepatitis E virus spread and persistence on farrow-to-finish pig farms: Insights from a stochastic individual-based multi-pathogen model. *Epidemics* in press.



- ▶ Van Gompel L., Luiken R.E.C., Sarrazin S., Munk P., Knudsen B.E., Hansen R.B., Bossers A., Aarestrup F.M., Dewulf J., Wagenaar J.A., Mevius D.J., Schmitt H., Heederik D.J.J., Dorado-Garcia A., Smit L.A.M., Graveland H., Van Essen A., Gonzalez-Zorn B., Moyano G., Sanders P., Chauvin C., David J., Battisti A., Caprioli A., Blaha T., Wadepohl K., Brandt M., Hald T., Ribeiro Duarte A.S., Wasyl D., Skarzynska M., Zajac M., Hoszowski A., Daskalov H., Saatkamp H., Stärk K., 2019. The antimicrobial resistome in relation to antimicrobial use and biosecurity in pig farming a metagenome-wide association study in nine European countries. *The Journal of antimicrobial chemotherapy*, 74:865-876.
- ▶ Wadepohl, K., Blaha, T., Van Gompel, L., Duarte, A.S.R., Nielsen, C., Saatkamp, H., Wagenaar, J.A., Meemken, D., Graveland, H., Schmitt, H., Heederik, D., Luiken, R.E.C., Mevius, D., van Essen, A., Gonzalez-Zorn, B., Moyano, G., Saunders, P., Chauvin, C., David, J., Battisti, A., Caprioli, A., Dewulf, J., Brandt, M., Aarestrup, F., Hald, T., Wasyl, D., Skarzyńska, M., Zajac, M., Daskalov, H., Stärk, K., 2019. Development of a simplified on-farm animal health and welfare benchmarking tool for pig herds. *Berliner und Münchener Tierärztliche Wochenschrift* 132, 504–512.

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Forthcoming events

European Symposium of Porcine Health Management (ESPHM)



The ESPHM is a joint collaboration among three parties including the European College of Porcine Health Management (ECPHM), the European Association of Porcine Health Management (EAPHM) and, for the ESPHM 2020, the Vetsuisse Faculty from the University of Bern. The Local Organizing Committee (LOC) includes also representatives from the Vetsuisse Faculty in Zurich, the Swiss Association of Swine Veterinarians and the Federal Food Safety and Veterinary Office (FSVO).

The ESPHM in Bern will be the 12th edition of the symposium, representing the complete consolidation of a meeting that started in Copenhagen (Denmark) in 2009 with 220 delegates. Since then, the congress has evolved at all levels, with more than 1,900 delegates in the most recent edition in Barcelona, Spain, in 2018. This is an evident proof of the increasing interest that the scientific contents of the ESPHM offers, not only for European veterinarians but also to the international community. Although settled in Europe, the ESPHM aspires to be a source of updated knowledge and knowhow in its field for the whole world.

Interested in the congress?

Please visit the dedicated webpage:

<https://www.esphm2020.org/welcome/>



Forthcoming events

26th World Poultry Congress (WPC)



The World's Poultry Science Association (WPSA) organized every four years a World's Poultry Congress (WPC). This Association is a long established and unique organization that strives to advance knowledge and understanding of all aspects of poultry science and the poultry industry. Its major role is to encourage, and help facilitate, liaison among research scientists and educators, and between those in research and education and those working in the many diverse sectors of the industry.

First WPC held in the Hague, the Netherlands in 1921. The spirit of international collaboration established at that time has continued to be a strong characteristic of the WPSA ever since. From the first, these scientific and technical events have been associated with exhibitions of poultry and the commercial sector, so helping to strengthen the bridges between science and practice.

The 26th WPC will be held in Paris, France, from March 16th to 20th 2020.

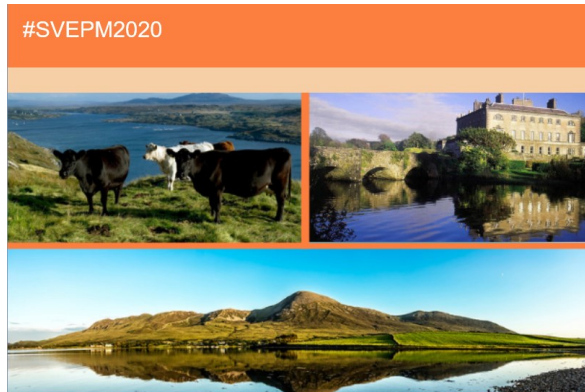
Interested in getting more information? Please follow this link:

<https://www.wpcparis2020.com/>





Forthcoming events



Annual Meeting of the Society for Veterinary Epidemiology and Preventive Medicine (SVEPM)

SVEPM was founded in 1982 and comprises approximately 250 veterinary and non-veterinary members from 24 countries. The mission of SVEPM is to enable professionals to meet and share knowledge to improve the health of animals, humans and the environment. The **Annual Conference in 2020** will be held in Westport, Ireland, from March 25th to 27th.

This conference will follow the standard SVEPM format, with a programme of workshop sessions, invited and presented papers, a poster display and the all-important accompanying social events.

For more info, we invite you to visit the dedicated webpage:

<https://www.svepm2020.ie/>



The Newsletter is sent to all ISAH Members. You are all invited to submit information for the newsletter. Please send information, news, text, photos and logo to: christelle.fablet@anses.fr and joerg.hartung@tiho-hannover.de

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