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## EDITORIAL

### Why we do need international cooperation in animal science?

The COVID-19 crisis has changed a lot of things in our lives and has given us important lessons that we will never forget. The first is certainly the fact that we are very dependent on biology. SARS viruses are tiny organisms capable of destabilizing our world in a matter of weeks or months and capable of bringing the economy to an almost complete shutdown. Even though we are capable of developing artificial intelligence, of traveling to Mars or settling on the Moon, of extending human life for longer than ever before, we are still at the mercy of an organism, that some claim is not even a living organism. We will never forget this lesson, but I believe that we can draw another from this unprecedented crisis. I propose that the incredible power of international cooperation in science has been a critical driver of scientific progress during this Covid19 crisis.

Less than ten months have elapsed between the publication of the virus's genome and the release of the first vaccine to eradicate COVID-19. Never in the history of vaccination, beginning with Jenner and Pasteur, have we had an example of such rapidity. Experts, interviewed last February or March, would never have dared to say that almost a million people would be vaccinated the following December. And yet that is what happened! This extreme speed of the first RNA vaccines put on the market did not come at the cost of less effectiveness since they have the effectiveness of the best vaccines such as those against measles, nor at the cost of the appearance of harmful side effects since these effects are those usually expected. In addition, these two vaccines are not the only ones as several dozen others are being tested around the world, thus testifying both to the very strong international mobilization and to the scientific power which resides in the world's research laboratories.

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## Editorial (continues)

It seems to me that this incredible speed and this formidable efficiency is the result of three essential elements. The first is the scientific base on which the two laboratories BioNtech and Moderna have relied to develop their RNA vaccines. The progress of knowledge in the field of molecular genetics has been tremendous over the past fifty years. It is indeed thanks to the absence of borders for science and its actors that major advances have been made so quickly and so well. Without cooperation, without international exchanges of ideas, results, researchers and students, progress would not have been so rapid. But cooperation does not mean the absence of competition. The fact that two competing laboratories manage to bring to the market almost simultaneously two similar vaccines and with the same effectiveness seems to me an excellent example of the existence of a healthy combination between cooperation and fair competition.

The second element is that of scientific excellence which takes precedence over all other forms of political considerations. The start-up BioNtech was founded and is managed by two scientists of Turkish origin who were welcomed in Germany in a scientific environment where excellence and daring were the main driving force of the approach, while Moderna, a Californian start-up has been founded by a French resident in the USA. These two examples, which highlight the scientific approach of excellence and high-level innovation to achieve the two first vaccines in the world in the fight against COVID-19, ignore the nationalities and countries of origin of scientists to demonstrate that we are now, without doubt, one humanity.

The third element is the ease with which scientific information has circulated for a year now, within the scientific community and well beyond. This facility allowed for a very broad sharing of research objectives, results and reasons why the use of messenger RNA as the basis of vaccines was particularly interesting. I have no doubt that this circulation of scientific information will continue for a few more months until the pandemic is fully under control, and I hope that it can serve as a model in other fields, particularly in animal sciences.

I like to dream a little, thinking that the incredible efficiency of the scientific world which has been used to fight against COVID-19, could also be applied to the great challenges facing animal sciences, in particular the common challenges that concern our planet.

It could be, first of all, the development of RNA vaccines to fight against the major diseases of the animal world, some of which threaten the human species. I know this will soon be the case, once the current pandemic is brought under control and I am sure that many veterinary laboratories have already taken this step. Could we also, in less than a year, understand the physiological and nutritional bases of methane emissions by ruminants and propose solid avenues, whether modelling, genetic and/or food, to hope to reduce them in a very significant and make livestock a solution to carbon storage in grassland soils? In a similar period of time, could we imagine halting the dramatic erosion of biodiversity in agricultural systems and returning livestock to its rightful place in preserving it?

We certainly have the intellectual resources in the various scientific teams working on these different subjects. Of course, we will never have the same financial means as those mobilized for COVID-19, although the importance of these three issues goes well beyond animal sciences. But, at their beginnings, BioNtech and Moderna were small structures where the essential engine was Science and Innovation and these two examples should provide inspiration to those in the Animal Sciences.

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## From WAAP

### Paper about the impact of COVID-19 on livestock farming

The World Association for Animal Production coordinated a group of representatives of its members, including EAAP, to write an opinion paper about the impact of COVID-19 on livestock farming. The paper has been recently published by our journal "animal" in gold open access and [can be found here](#).

## From WAAP Members

### **Australian Association of Animal Science (AAAS)**

#### 33rd Biennial Conference “The new face of animal science in Australia”

The 33rd biennial conference of the [Australian Association of Animal Sciences \(AAAS\)](#) will be held from 1st to 3rd February 2021 and will be a hybrid event broadcast from the Esplanade Hotel in the beautiful city of Fremantle, Western Australia. In 2020/2021 the AAAS is delighted to extend this forum to an even broader range of participants with the relaunching of its Association to include all animal scientists, rather than the narrow pane of production animals. Hence the theme this year does not have a specifically scientific or consumer focus, but simply extends a warm welcome: “The New Face of Animal Science in Australia”. With content designed and delivered for Industry and Academia by Industry and Academia, the 2021 AAAS Conference program will allow you to expand your knowledge and your industry connections. For more details on the 33rd biennial AAAS Conference, including registration details and program, please visit the [conference website](#).

### Check out “A koala-ty webinar with wombats: climate change and disease in wildlife”

The most recent AAAS webinar focused on Australian wild animal sector of the animal sciences. Two koala-ty Aussie scientists Dr Scott Carver from the University of Tasmania and our own Dr Dalene Adam from the University of Queensland enlightened us about diseases in these important Australian animals. Dr Scott Carver reviewed Sarcoptic mange in koalas and wombats. Mange, or scabies is a parasitic disease that can affect humans, but also koalas and wombats. Scott said Sarcoptic mange is one of the earliest known diseases in humans (1647AD!) and continues to be one of the 50 most prevalent pathogens with 100 million humans infected (Ew!) at any one time. Molecular analysis suggests that it emigrated to Australia aboard the First Fleet. Ship records indicate that some early settlers had scabies on board and these early European settlers brought with them dogs and other companion animals that helped spread it further throughout the wild animal population. A fully-fledged outbreak was observed in wombats in 1937. [To read more click here](#).

### **American Dairy Science Association® (ADSA®)**

#### 2021 ADSA Annual meeting

The 2021 Annual Meeting of the American Dairy Science Association® (ADSA®) will be held as hybrid meeting with a virtual component and a corresponding in-person meeting in Louisville, Kentucky. It will be the most comprehensive dairy science meeting in the world. The in-person registration to the meeting will be opened soon. The registration fee includes the opening reception, coffee and pastries during morning poster sessions, afternoon ice cream breaks in the exhibit hall and the ice cream social. The abstract submission deadline is on **March 4, 2021**. ADSA 2021 will be a hybrid meeting. The Program Committee is planning to have a robust in-person program and an online meeting, including virtual events live

from Louisville, that enable scientists from around the world to join us virtually if they are unable to travel to Louisville. The hybrid meeting means that the American Society of Animal Science (ASAS) is meeting in Louisville too. The ADSA meeting will be directly followed by the ASAS annual meeting. There is a shared programming day on Wednesday, July 14, and a shared social event later that evening.

23 ADSA symposia are planned during the meeting, to mention some:

- Animal Behavior and Well-Being Platform Session: New Frontiers in Understanding Dairy Cattle Emotions
- Animal Behavior and Well-Being Symposium: Translating Animal Welfare Science—Animal Experiences, Dairy Production Implications, and Societal Viewpoints
- ARPAS Symposium: Building a Resilient Food Production System: What Covid-19 and Other Black Swan Events Have Exposed about Modern Food Production
- Breeding and Genetics Symposium: Not Just Another Liquid—The Genetics of Milk CSAS Symposium
- Dairy Foods Symposium: Making Lactose the Carbohydrate of Choice—Innovations in Valorizing Lactose into Novel Ingredients to Address Current Consumer Needs
- EAAP Exchange Symposium: Limits in Production Growth on Level of Cow, Farm, and Industry (Physiological, Genetic, Management, Environmental Aspects)
- Extension Education Symposium: Social Media Influencers—Facts and Fiction About Consumers and the Dairy Community
- Forages and Pastures Symposium: Linking Forage

Quality to Herd Productivity

- Lactation Biology Symposium: Mammary Innate and Adaptive Immune Responses During Involution and Disease: Mammary Gland Immunity and Health
- Ruminant Nutrition Symposium: Balancing Dietary Carbohydrates to Optimize Nutrient Intake and Partitioning

For more information about the meeting visit the [2021 ADSA Annual Meeting website](#). The info will be updated frequently.



**40th ADSA Discover Conference on NASEM  
Nutrient Requirements of Dairy Cattle**

**June 1-4, 2021, Eaglewood Resort & Spa.**

The National Academies of Sciences, Engineering, and Medicine (NASEM, previously known as NRC) anticipates the 2021 release of the 8th revised edition of the “Nutrient Requirements of Dairy Cattle”, a much-cited reference on dairy cattle feeding. This [40th Discover Conference](#) will focus on the scientific advancements in dairy cattle feeding used in revising the 2001 edition. The program will bridge from the fundamental science to applied dairy cattle feeding:

Conference Topics Include:

- Feed Intake, Fats, Carbohydrates and Energy
- Proteins and Amino Acids
- Minerals, Vitamins and Water
- Dry Cows, Calves and Replacement Heifers
- Application of the New Requirements

For more details [visit the website](#).

**41st Discover Conference “Health Management of Calves: From Intrauterine Life to Successful Weaning”**

**October 25-28, 2021, Eaglewood Resort & Spa in Itasca, IL**

This 41ST ADSA Discover Conference will explore the many changes in dairy calf management practices, and research conducted over the last decade.

Potential Conference Topics include:

- Opportunities and Key Knowledge Gaps in Calf Management
- Fetal Programming, Influence of Cow Stressors on Calf Development
- Neonatal Disease Management
- Transition to the Ruminant Calf: Weaning Strategies to Optimize Future Health and Productivity

A poster session will be included to allow participants to share and discuss research findings. Details will be posted on the meeting site as they are finalized.

**4th Edition Guide for the Care and Use of Agricultural Animals in Research & Teaching**

The American Dairy Science Association® (ADSA®), the American Society of Animal Science (ASAS), and the Poultry Science Association (PSA) have announced the release of the 4th edition of the Guide for the Care and Use of Agricultural Animals in Research and Teaching, commonly known as the Ag Guide. The Ag Guide is available open access free of charge in two formats: PDF and ePub. It is housed on each of the society websites.

**American Society of Animal Science (ASAS)**

**Singapore Approves Lab-Grown Meat for Sale**

Chicken bites, produced by the United States company Eat Just, have passed a safety review by the Singapore Food Agency (SFA) and are now approved for sale by the regulatory agency for the first time. The cultured meat is produced in a 1,200-litre bioreactor and is combined with plant-based ingredients. The cells used to start the process came from a cell bank and did not require the slaughter of a chicken because cells can be taken from biopsies of live animals. *To read more click here.*

**Genetically modified pigs approved by USA Administration for Biomedicine and Food**

The United States Food and Drug Administration (FDA) announced the approval for a genetically modified line of pigs for biomedicine and food. The GalSafe pigs, by Revivacor Inc., eliminate the alpha-gal sugar on the surface of the pigs' cells. People with Alpha-gal syndrome (AGS) may have mild to severe allergic reactions to alpha-gal sugar found in red meat, and typically begins by a Lone Star tick bite. This is the first time approval has been granted for both purposes concurrently. *To read more click here.*

**European Federation of Animal Science (EAAP)**

**1st Joint meeting EAAP Mountain Livestock Farming & FAO-CIHEAM Mountain Pasture**

EAAP Mountain Livestock Farming Working Group (MLF), FAO-CIHEAM Mountain Pastures Sub-Network (MP) and the University of Ljubljana are promoting a joint meeting focused on the topic of the mountains in the function of agroecosystems for people. The meeting will cover a broad range of topics related to farming in mountain areas, precision mountain farming, smart agriculture (digitalisation),

mountain product quality, value chains, management options for ecosystem services and conflicting priorities in the mountain areas (wild animals, natural resources and human needs). The meeting will be held from 7th to 9th June 2021 in Bled, Slovenia. The pre-registration and abstract submission are already open and will close on the **1st March, 2021**. Registration at reduced fees will be possible before **30th April 2021**. Please note that, even though we strongly encourage the participation in person, the whole meeting will be also available as online live streaming. In case Covid-19 restrictions will forbid meeting face-to-face, the 1st Joint Meeting of EAAP MLF and FAO-CIHEAM will be organized only as online live event. For more information [read the attached document](#) or [visit the website](#).

### 2021 EAAP Annual Meeting, Abstracts Submission

EAAP and the Swiss Local Organizers for the 2021 EAAP Annual Meeting inform you that, despite the troubles of Covid-19 pandemic, the 2021 annual meeting will be held. The structure of the meeting is not decided yet, since it depends on future pandemic developments and the related governmental restrictions. The option that we currently consider is to hold a hybrid meeting, that is to have on-site meeting in Davos with selected sessions offered virtually. Our objective is to meet in person in Davos and at the same time offer a robust virtual scientific program for those who can't join us in person. The EAAP Scientific Committee is already defining the draft of the scientific program and the local organizers are taking care of all necessary arrangements. All other practical organizations that take place at every normal year will soon be processed. Therefore, we confirm you that the abstracts submission will open soon to end, like every year, on March 1st. The registration process will delay few weeks since we wish to be sure about the organization structure. In any case the deadline for early registrations will be certainly delayed. EAAP is looking forward to see you in Davos!

## News from Science

### **Symposium in honour of Professor John A. Woolliams, Roslin Institute**

**28th January 2021, 11:30-17:30 (CET)**

Join this online event to honour the career of Professor John Woolliams, who has been Personal Chair of Mathematical Genetics at the University of Edinburgh's Roslin Institute, and has retired on 18th November 2020. For more details, please [visit the webpage](#).

### **Keeping calf pneumonia at bay**

It is well-known that calves are susceptible to pneumonia and it is a significant disease that can be costly for any dairy farm. But which factors can keep pneumonia at bay? [Read the full article on DairyGlobal](#).



## News from Industry

### **Webinar: Animal Welfare Supporting Sustainable Production**

**27th January 2021 13:00 – 15:00 hours GMT**

The first Webinar Series event of 2021 looks at the roles of animal welfare to address key challenges for livestock in the future: sustainable production and use of antimicrobials. A group of qualified experts from different sectors will discuss on-the-ground and higher-level policy action on how animal welfare can and should be used to tackle current global challenges. The webinar is organized and moderated

by the Animal Welfare Action Network (AWAN) of the [Global Agenda for Sustainable Livestock \(GASL\)](#) and will host important high-level experts, including Andrea Gavinelli, Head of the Animal Welfare and Antimicrobial Resistance Unit of the European Commission; Linda Keeling, Professor in Animal Welfare, Swedish University of Agricultural Sciences; Robyn Alders, Senior Consulting Fellow, Centre for Universal Health, Chatham House; Ulf Magnusson, Professor, Swedish University of Agricultural Sciences and leader of the GASL Action Network on Antimicrobial Resistance; and Danilo Rodriguez, Regional Coordinator for Mexico, Haiti and Cuba, World Horse Welfare. When: **Wednesday 27 January 2021**, 13:00 – 15:00 hours GMT (14:00 – 16:00 hours CET). For more information read [the attached document](#). Register [here](#).

**Webinar: Rural Poultry at the heart of the European Green Deal**  
**2nd February 2021 13:00 – 15:00 hours CET**

Achieving greater sustainability in the agri-food chain is one of the objectives set by the European Green Deal. In this context, the webinar will address the essential contribution of rural poultry to a more sustainable and resilient European food system. It will also provide an opportunity to exchange views on the future tools that could be developed in the framework of the "Farm to Fork" Strategy to support this production. The webinar is organised by [the European Rural Poultry Association \(ERPA\)](#) on 2nd February 2021, 13:00 – 15:00 (CET). Deadline registration: **28th January 2021**. For the agenda [click here](#). For more information and registration [visit event page](#).

**Poultry farmers given advice on cyber security**

Rapid adoption of digital technology across the poultry sector to optimise production processes is presenting farmers with a new challenge: ensuring

their cyber security is up to scratch. [Read the full article on PoultryWorld](#).



**Job Offers**

**Postdoctoral Associate Molecular & Developmental Biology at Sanford Burnham Prebys Medical Discovery Institute, La Jolla, California, USA**

An NIH-funded postdoctoral position is available at Sanford Burnham Prebys Medical Discovery Institute that will focus on investigating the signaling functions of retinoic acid during mouse embryonic development. Candidates should possess a Ph.D. with a strong background in molecular biology, particularly RNA-seq and ChIP-seq. For more information and application [read the job vacancy](#).

**Postdoctoral position “Sensitivity analysis of the INRA 2018 feeding system for Ruminants” at INRAE, France**

A postdoctoral position is available at INRAE, Centre Clermont-Auvergne-Rhône-Alpes ([UMR 1231 Herbivores](#)). Experience in statistical sensitivity analysis is essential. The candidate must be able to learn the concepts of the INRA 2018 model, thus previous experience with feeding systems (preferably ruminants) would be a valuable asset. The candidate must be able to work in a network and to report on its results. Deadline: **30th January 2021**. For more information and application [read the job vacancy](#).

**KTP Associate in Insect quantitative genetics at Roslin Institute, Edinburgh, UK**

Roslin Institute is looking for an ambitious post-graduate to work on the quantitative genetics platform DATA-BEAST for an insect breeding operation - a Knowledge Transfer Partnership between The Roslin Institute and Beta Bugs Ltd., at the Easter Bush Campus of University of Edinburgh. Deadline: **16th February 2021**. For more information and application [read the job vacancy](#).

**Publications**

**I. New technical articles have been recently published on Engormix:**

I. [Research Shows Pigs Benefit from Soy-Protein Diet](#)

II. [Development of a subunit vaccine targeting Clostridium perfringens enzymes for the control of necrotic enteritis in broilers](#)

III. [Mycotoxin Contamination in Wheat from Poland harvested in 2020](#)

IV. [Sustainable dairy production with Evonik's amino acid balancing approach](#)

**Meetings and Conferences**

WAAP invites you to check the validity of the dates for every single event published below and in the Calendar of the website, due to the state of sanitary emergency that World is currently dealing with.

**Hybrid event, February 1-3, 2021**

**33rd Conference of the Australian Society of Animal Sciences**

AAAS invites you to join online or in Fremantle, Western Australia the 33rd conference of the Australian Association of Animal Sciences (formerly Australian Society of Animal Production). The event will be held at and broadcast from the Esplanade Hotel in the beautiful city of Fremantle, 1st – 3rd February 2021. For more information and registration [visit the website](#).

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**Online meeting, June 1-2, 2021**

**Spanish Animal Production Conference (19th Edition)**

This conference is organized every two years by AIDA (Asociación Interprofesional para el Desarrollo Agrario, Spain), and usually attended by more 300 scientists in its previous on-site editions. In 2021 it will be held online. The latest advances in Animal Production R&D will be presented in six parallel scientific sessions: Livestock Farming Systems, Nutrition and Feeding, Reproduction, Health and Welfare, Genetics and Product Quality. Contributions can be in oral or poster form, and must be submitted before **February 1, 2021**. For further information and registration, please visit the [event webpage](#).

**New Announcement: 7th – 9th June 2021 in  
Bled, Slovenia****1st Joint meeting EAAP Mountain Livestock  
Farming & FAO-CIHEAM Mountain Pasture**

The Joint Meeting of EAAP Mountain Livestock Farming Working Group & FAO-CIHEAM Mountain Pasture Sub-Network “Mountains are agroecosystems for people” has been postponed due to the COVID-19 outbreak. The meeting will be held from 7th to 9th June 2021 in Bled, Slovenia. The pre-registration and abstract submission are already open and will close on the **1st March, 2021**. Registration at reduced fees will be possible before **30th April 2021**. For more information read the attached document or [visit the website](#).

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**August 30th – September 3rd 2021 in Davos,  
Switzerland****72nd EAAP Annual Meeting**

EAAP is delighted to invite you to the 72nd Annual Meeting. It will take place from August 30th to September 3rd, 2021 in Davos, the highest town in Europe situated in the alpine mountains of Switzerland and home to the World Economic Forum (WEF). Detailed information can be found on [EAAP2021 website](#).

**October 21st – 22nd 2021, Paris, France****2nd Amino acid Academy Workshop**

The 2nd Amino Acid Academy, organized by EAAP and Ajinomoto Animal Nutrition Europe, has been postponed due to the COVID-19 pandemic. The Academy will take place on the 21st and 22nd October 2021 in Paris, France. The location remains the same – the Grand Amphitheatre of the National Museum of Natural History. Stay tuned for more information in the upcoming months and save the date!

More conferences and workshops [are available on EAAP website](#).

The **World Animal Science News** is the Official WAAP Newsletter. This interesting update about activities of the global animal science community presents information on leading research institutions in the entire world and also informs on developments in the industry sector related to animal science and production. The Newsletter is sent to all WAAP member organizations and to their associates. You are all invited to submit information for the newsletter. Please send information, news, text, photos and logo to [waap@waap.it](mailto:waap@waap.it).

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