Building Public Confidence in Agricultural Animal Research

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Every year at the Joint Annual Meeting attendees from the U.S. and abroad become immersed in the scientific advances and achievements that are shaping modern animal agriculture. The scholarly offerings of our dairy and animal scientists and their students are prolific, impressive and diverse, featuring findings that will improve animal production, enhance the nutritional content and quality of the world’s diet and refine the systems of management and care for the animals under our stewardship to promote their comfort, health and welfare during all life stages. Most of these findings are dependent upon data derived from agricultural research animal subjects, and the research areas of study encompass a broad range of topics including environmental and ecological impacts, animal nutrition, microbial factors in health and disease, animal ethology and agricultural economics, to name a few. As insiders, the agricultural community readily appreciates the importance and essential nature of this highly productive scientific inquiry to deliver and expand the global food supply at a reasonable cost. In contrast, the general consumer is perfectly comfortable receiving its safe, nutritious, low-cost, high-quality food, while remaining extremely vague on facts related to production, and totally oblivious to the vast amount of research that underpins the success of modern animal agriculture.

Although we should not be surprised that the general public is detached from and poorly informed about the science and practices of modern food production, we should not assume that their interest cannot be acutely piqued by sensational findings or highly visible events. One such example was the article published in the 19 January 2015 New York Times entitled, “U.S. Research Lab Lets Livestock Suffer in Quest for Profit,” by Michael Moss. Although the details of this article are beyond the scope of this comment, it stimulated a robust and rapid response from readers, prompted an external review of some U.S.D.A. Agricultural Research Service programs, policies and practices, and ultimately led to the introduction of a misguided bill (H.R. 746) into the 114th Congress. The key findings of the external review indicated that improved personnel training and documentation was needed; expansion of the medical records to include all research animal subjects was required to assure adequate care; and, aspects of Institutional Animal Care and Use Committee (IACUC) composition, training, protocol review and programmatic review required more attention to assure adequate research oversight for the protection of animal subjects during all phases of care and use. The successful resolution of problems such as these has both technical dimensions and ethical dimensions; the latter are embodied in the IACUC’s oversight activities and must animate the decisions and actions of every individual involved in the program. Ethics should lead the way in scientific advancement that is dependent upon the use of research animals.

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Recent data shared publicly in 2014 (see http://www.aaalac.org/education/2014_Conference.cfm) by AAALAC International, a private, non-profit corporation that has provided a confidential assessment and accreditation program for research animal care and use for 50 years, indicated that problems within the IACUC constituted the second-highest category of findings for which correction was mandated as a condition of accreditation in programs visited between 2011-2013. However, only four percent of accredited programs registered problems in this area, indicating that most programs have IACUCs that are adequately engaged in all aspects of oversight as defined in the guidelines applicable for their program. In the case of agricultural research animal programs, the relevant guidelines are the FASS Guide for the Care and Use of Agricultural Animals in Research and Teaching, 3rd Edition (Ag Guide), which AAALAC uses as one of its three primary standards in its international accreditation program. The role and responsibilities of the IACUC place it at the convergence of oversight, ethics, animal welfare and science. As the first defence of agricultural animal research, programs that are not conforming to the Ag Guide would be wise to do so urgently institutions can no longer rest on their laurels expecting to survive with a simple “trust us” attitude. Moreover, AAALAC’s experience has shown that established IACUCs benefit greatly from regular critical introspective analysis of their oversight functions to assure that their judgments and processes are thorough, fair and effectual but AAALAC also recognizes that doing it well does not imply doing it exhaustively or impeding science with an intrusive bureaucracy.

Occupational health and safety, institutional policies, physical plant, animal management/environment and veterinary care are the other broad areas containing the majority of significant findings that must be corrected for programs to achieve AAALAC International accreditation. AAALAC’s approach to accreditation is collegial, rigorous, and based upon the application of performance standards rather than engineering standards or prescriptive solutions. Institutions with sufficient expertise, appropriate teamwork, buy-in and a unified cause usually have no problem figuring out the solution(s) best fitting their programs. For example, in the area of personnel education in animal care and use an organization might ask, do we know and use the best procedures? Do we have an effective training process and trainers? Do we test and verify the proficiency of trainees? And finally, can we assure that trained personnel will be consistently proficient and not deviate into unacceptable practices? There is considerable latitude in the route and methods an institution can choose to achieve a successful training outcome that is well-defined and promotes animal comfort, health and welfare. (And we can all agree that a porous training strategy that results in instances of animal harm is both unethical and has adverse consequences for science.) In the five decades AAALAC has operated its accreditation program, hundreds of research programs around the world have experienced the value, efficiency and effectiveness of this type of flexible, performance standards, peer-reviewed approach to maintaining program excellence.

As AAALAC International celebrates its 50th Anniversary, we proudly note that our voluntary, expert peer review process has advanced research animal welfare and improved the conditions for scientific inquiry. We also hope the number of AAALAC accredited programs in the research animal agricultural community will continue to grow in the coming years. However, regardless of the method chosen to assure program quality and benchmark against contemporary standards and practices, we should all join together in educating the public about our research endeavours and assure them that our programs of support for agricultural animal research are comprehensive, thoughtful, effective and caring. This will not only assuage the public’s concerns, but will also help build support for the research mission and vision for the future that fuels our collective dedication.
American Dairy Science Association

**ADSA Foundation Announces Plan to Publish Third Edition of Large Dairy Herd Management**

To benefit a broad segment of the global dairy sector, the ADSA Foundation will undertake a major initiative to meet the growing information needs of dairy farmers, service professionals, and students worldwide. In 1978, a symposium designed specifically to produce a book, Large Dairy Herd Management (LDHM), was held in Gainesville, Florida. Speakers’ presentations were developed into book chapters. In 1992, the book was updated under the co-editorship of Jack Van Horn and Charlie Wilcox. In view of continuing interest in the second edition (1992) of LDHM and requests for an update, the Foundation will undertake publication of a third edition of LDHM. The third edition will be available in e-book or print-on-demand options with completely new content, designed to allow for convenient updating, sold at member, non-member, and student rates, and distributed directly by ADSA. The ADSA Foundation will sponsor a LDHM Conference on May 1 - 4, 2016, Hilton, Chicago/Oak Brook Resort and Conference Center, Oak Brook, Illinois, for presentation of chapter content to facilitate development of the updated third edition. Dairy experts from around the world will be selected to prepare and make chapter presentations as a first step in creating a comprehensive and essential resource-the third edition of LDHM. Publication is anticipated for spring 2017.

**ADSA DISCOVER Conference**

The 30th DISCOVER Conference ‘Creating an Enduring U.S. Dairy Production Sector’ is scheduled November 2-5, 2015 at the Eaglewood Resort & Spa, Itasca (Chicago area), IL. Background and goals are creating an enduring U.S. dairy production sector addressing various economic, environmental and social issues facing the industry today. Organizations and individuals engage with these challenges and opportunities in U.S. dairy production - each biased by their own perspective. The Conference goals are to provide a cross-section of key discipline experts and a venue for discussion and integration of these issues across animal physiology, nutrition, welfare, climate change, economics and marketing, social issues and policy, among others. Continued success of the U.S. dairy production sector requires engagement in topics that usually do not surface in dairy production meetings, but are essential for improving the U.S. dairy sector and becoming more sustainable and vital for generations to come.

American Society of Animal Science

**ASAS releases updated Grand Challenges**

The ASAS Grand Challenges documents have been recently updated. The documents address seven important issues in animal agriculture: Animal health, climate change, food safety, global food security, animal well-being, water quantity and quality, and training the future workforce. The Grand Challenges documents were prepared to clearly articulate our priorities, to provide science-based information for shaping public policy, and to enhance future funding for research and education programs in animal science. Read the documents at: [https://asas.org/membership-services/public-policy/asas-grand-challenges](https://asas.org/membership-services/public-policy/asas-grand-challenges)

**e-Posters coming to 2016 JAM**

Posters will be electronic at the 2016 Joint Annual Meeting (JAM), to be held July 19-23, 2016, in Salt Lake City, Utah. The new format will allow posters to be interactive and more in-depth. Authors will have the ability to embed files and links, such as videos, url links and support data. The e-Poster format also will eliminate the need to limit poster size to the traditional 4-foot by 8-foot space. During JAM, attendees will be able to view any poster, no matter what day of the meeting it is. When poster sessions are not actively going on, all
of the e-Poster screens will return to their home screen. Each home screen contains links to every poster shown on that screen during JAM. Learn more at: http://takingstock.asas.org/?p=17196

Animal Frontiers and Journal of Animal Science now include Google Translate

The Google Translate tool is now included on the Animal Frontiers and Journal of Animal Science websites. Now, all articles on the websites, including those within the Archives, can be read in 90 different languages!

The incorporation of the Google Translate tool into the Animal Frontiers and Journal of Animal Science websites is the largest step we have taken to date to make sure these publications can be read and utilized globally.

JAM pre-conference to focus on gut microbiome

Plans are underway for the 2016 Joint Annual Meeting (JAM) to kick off with a pre-conference symposium on “Gut Microbiota, Diet, and Health.” The symposium will be hosted by ASAS and ASN (American Society for Nutrition).

The goal of the symposium is to provide the latest science regarding the interplay of nutrition and the microbiome by bringing together experts in nutrition science, animal science, microbiology, gastroenterology, neuroscience, and metabolism.


Canadian Society of Animal Science

President’s Vision for the Society

The new president of the Canadian Society of Animal Science, Dr Tim Reuter, assumed office in May 2015 for a period of one year. He thanks the membership for entrusting on him and the entire executive committee the responsibility of managing the affairs of the society, which is both an honour and a privilege. He pledges to serve and to sustain the society for its various roles and values by setting short and long-term goals:

About the long-term goal: at the global and national stage, agriculture, food production and nutrition are topics that often do not get the attention they deserve. Taking the security and safety of food for granted is a risk. Food is, after clean air and water, the most vital component of our physiological needs. The future positive images are clouded when we forget to support a sustainable food production. Our society needs to foster a scientific hub to strengthen the relationship between applying science and governmental policies for a holistic and sustainable development for our future and the generations to come. According to U.N. estimates, the world demand for water, food and energy will increase by more than 30 per cent for each resource within the next or two decades. In order to address these challenges, the demand for scientific know-how, vision and solutions will increase. Investment in livestock research and the development of future expertise is an essential component to solve a number of our pressing agricultural problems now and in the future. The long-term goal is for our society to be a catalyst in the preparation of the next generation of agricultural leaders.

And about the short-term management plan: Besides the bigger picture, there is need to be aware of the challenges confronting our society, notably: declining membership and conference travel restrictions for government scientists is affecting our society’s long-term sustainability. It is necessary to explore new initiatives to grow our society forward into a vibrant animal science platform which finds solutions for current limitations.

CSAS is the place for students and young professionals!

During this year’s CSAS annual meeting in Ottawa, several students were given the opportunity to attend and present their work through travel scholarships, undergraduate achievement award and poster/oral presentation awards.

The CSAS gives awards to Undergraduate in Academic Excellence. It recognizes academic excellence during three to four years of undergraduate studies in animal science. The 2015 winners are:
And about the CSAS Student Travel Awards, the Graduate Student Travel Award recognizes outstanding performance within our student membership by providing partial financial support for qualified students to attend our annual scientific meeting. The 2015 recipients are:

1. Mr. Atmir Romero Perez, University of Alberta
2. Ms. Stephanie Lam, University of Guelph
3. Ms. Faezeh Kharazyan, Dalhousie University
4. Ms. Bridget Fomenky, Université Laval

We are excited to announce that Genome Canada has approved a major genomics-based research project aimed at improving feed efficiency and reducing methane emissions in dairy cattle in Canada. The 4-year project with a total budget of $10.3M is led by Dr. Filippo Miglior, Adjunct Professor at the University of Guelph, Chief of Research & Strategic Development at Canadian Dairy Network (CDN) and CSAS President elect, with project co-leader Dr. Paul Stothard, Associate Professor at the University of Alberta. The Canadian dairy cattle improvement industry through the Canadian Dairy Network also committed $400,000 in cash as well as $460,000 as an in-kind contribution to this important research initiative. This project will undoubtedly position Canada among world leaders in terms of the opportunity for genetic and genomic selection to improve feed efficiency and decrease methane emissions in dairy cattle. The CSAS upcoming Meetings are:


Chinese Association of Animal Science and Veterinary Medicine

Know more about CAAV

The Chinese Association of Animal Science and Veterinary Medicine (CAAV) is an academic and public-welfare social incorporated association voluntarily organized by the scientists and technologists, who are dedicated to education and research in the field of animal production sectors and veterinary medicine. CAAV is a nationwide, non-profit organization, registered in the ministry of Civil Affairs. As part of the Chinese Association for Science and Technology, CAAV also keeps very close working relationship with Ministry of Agriculture, Ministry of science and technology etc.

CAAV was established in 1936 and is one of the oldest academic organizations. Today there are 36 branches and more than 60,000 members, covering subjects such as: animal genetic breeding, nutrition, veterinary and medicine, environment protection, Chinese veterinary medicine, etc.

The mission of CAAV are: organizing Chinese scientists and researchers to take part in the national science and technical policy making decisions on national affairs in scientific base; dedicating to animal husbandry and veterinary scientific and technological exchange, participate fully in academic exchange in transferring and application of the knowledge into animal production industry, and promoting the prosperity of science and advancement of technology; carrying out international science and technology exchange and promote the communication and cooperation between Chinese and international academic organizations and individuals; steering and encouraging innovation, research and development in field of animal science and veterinary medicine.

Japanese Society of Animal Science

The Japanese Society of Animal Science announce that the 17th Animal Science Congress of AAAP will be held at Kyushu Sangyo University, Fukuoka, Kyusyu Area in Japan, from 22 to 25 August 2016. The aim of this congress is to provide a forum
for the exchange of new information on animal sciences and technology, with a focus on successful strategies for the sustainable promotion of livestock considering the environment and welfare of livestock and human beings. At the same time, the congress will provide a venue for people from both inside and outside of the Asian Australasian region to make new contacts and renew friendships. The Japanese Society of Animal Science is organizing the 17th AAAP Congress and is pleased to welcome everyone in this congress who are interested in animal science and production.

**News from Science**

*Animal feed safety addressed during the Codex Alimentarius Commission*

The safety of animal feed is crucial for the safety of the food we consume. Stakeholders from around the world addressed the matter during a side event organized within the 38th Session of the Codex Alimentarius Commission. Codex Alimentarius has addressed the safety of animal feed through the years in a dedicated manner, adopting three specific documents: the Code of Practice on Good Animal Feeding, the Guidance for Governments on Prioritizing Hazards in Feed and the Guidelines on the Application of Risk Assessment for Feed. In addition, animal feed has been included in a number of other codes.

But “the adoption on the specific text is not enough” said Eva Reinhard, Deputy Director General, Federal Office for Agriculture, Switzerland and Chair of the last Codex Ad Hoc Intergovernmental Task Force on Animal Feeding, during a side event organized within the 38th Session of the Codex Alimentarius Commission and dedicated to feed safety. “The documents need to be brought to life. The objective is to make them effective in all regions of the world”. Raising awareness on the importance of feed safety and of implementing the Codex requirements was the aim of the side event. More specifically, it updated participants on the latest scientific information on the food safety hazards associated with animal feed and presented the key findings, conclusions and recommendations of an FAO/WHO Expert Meeting which took place recently in Rome.

The key findings are: hazards in feed can have a risk for human health and negative impact on animal health, welfare and productivity. Pursuing prevention of contamination and implementing the relevant Codex recommendations is paramount; for this scope, support through adequate capacity development with the involvement of a variety of stakeholders is needed. The prioritization of hazards is not feasible at the international level but should be done at the country or regional level; Codex guidance can facilitate this process. Since the environment in which feed is produced and used is changing (farming practices, climate change, feed sources) regular reviews of the state of the art on hazards in feed are needed, while risk management systems should adapt to changes.

The defined challenges are: there is an important need for generating data on feed contaminations and to develop sampling approaches and plans. Also the collection and sharing of these data is important. Methodologies are needed that can facilitate risk assessment. Data should come from industry as well as from competent authorities. A dedicated mechanisms is needed to developed and share data. And finally the selected recommendations: Feed should be considered when drafting or revising Codex texts on biological and chemical contaminants. Feed and feed production technologies of increasing relevance (e.g. insects, former food and food processing by-products and biofuels by-products, aquatic plants and marine resources) might require the collection of relevant data and updated regulatory frameworks.

At the Side Event, FAO, WHO, Codex and the International Feed Industry Federation (IFIF) presented also their response to the recommendations of the Expert Meeting:

FAO and WHO will support their members to follow-up on these recommendations through raising awareness and through capacity development activities, including by stimulating adequate policies.
and regulations. The Global Environment Monitoring Systems (GEMS) developed by WHO will be extended, in collaboration with FAO, to collect and share data on feed.

FAO and WHO will continue addressing the needs for guidance for the production and use of the above mentioned feed and feed production technologies of increasing relevance. A wide multi-stakeholder programme for capacity development to ensure a safe production and supply of feed and feed ingredients through adherence to Codex Alimentarius recommendations, the implementation of good animal feeding practices and good manufacturing practices is under development.

Codex has already anticipated the recommendation of the Expert Meeting and is addressing feed and hazards in feed in a number of relevant Committees: on Contaminants in Foods, on Pesticide Residues, on Residues of Veterinary Drugs in Foods and on Food Hygiene.

IFIF confirmed the willingness to share data and information, as well as to continue the successful collaboration with FAO to raise awareness of both regulators and industry and to discuss priorities for feed safety. It recognized the role of Codex as the forum with the science expertise best positioned to address the regulatory aspects of feed safety at an international level and highlighted how much work has already been done to bring parties together and collaborate further.

The extensive discussion during the side event highlighted the need to continue information and knowledge sharing among the parties, as well as to make a step forward and discuss a common action plan for feed safety that would give direction and increase the commitment of the “feed community” to work together towards a common goal.


**Virus in cattle linked to human breast cancer**

A new study by University of California-Berkeley researchers establishes, for the first time, a link between infection with the bovine leukemia virus (BLV) and human breast cancer.

In the study, published this month in the journal PLOS ONE and available online, researchers analysed breast tissue from 239 women, comparing samples from women who had breast cancer with women who had no history of the disease for the presence of BLV. They found that 59% of breast cancer samples had evidence of exposure to BLV, as determined by the presence of viral DNA. By contrast, 29% of the tissue samples from women who never had breast cancer showed exposure to BLV.

“The association between BLV infection and breast cancer was surprising to many previous reviewers of the study, but it’s important to note that our results do not prove that the virus causes cancer,” said study lead author Gertrude Buehring, a professor of virology in the Division of Infectious Diseases & Vaccinology at UC Berkeley’s School of Public Health. “However, this is the most important first step. We still need to confirm that the infection with the virus happened before, not after, breast cancer developed, and if so, how.”

BLV infects dairy and beef cattle’s blood cells and mammary tissue. The retrovirus is easily transmitted among cattle primarily through infected blood and milk, but it only causes disease in fewer than 5% of infected animals.

Buehring emphasized that this study does not identify how the virus infected the breast tissue samples in the study. The virus could have come through the consumption of unpasteurized milk or undercooked meat, or it could have been transmitted by other humans, she said.

**Publications**


For those interested in energy, energy metabolism (biological energy exchanges), and nutrition there
is a new book published and titled Nutritional Energetics, History, Basics and Annotated Notes (by Bull, L. S., S. T. Bull and J. T. Reid that is obtainable as an electronic offering (CD, word or pdf). The “book” has over 650 pages, and hundreds of references and tables of data not available easily any more. For those who are interested please contact Len Bull at homebull@aol.com for details or to order.

Meetings and Conferences

Sustainability of Livestock Farming in Europe: A question of food security, the climate and innovation, October 20th 2015

The K4I Forum Conference on “Sustainability of Livestock Farming in Europe: A question of food security, the climate and innovation”, will take place on Tuesday, 20 October from 13h00 to 15h00 in the European Parliament in Brussels. The event will be hosted by Sean Kelly MEP, Member of the K4I Forum Governing Board.

Europe has a big role to play to address global food and nutrition security, both by supplying more quality livestock products and also by showcasing sustainable livestock production models that are environmentally sound, socially responsible, and economically viable.

This conference aims to bring forward ideas and start a discussion on policies enabling a sustainable approach to the livestock sector in the EU, with a focus on livestock production. A policy paper with these ideas will be launched during this conference.

Symposium on Milk Genomics and Human Health, October 26th-28th, 2015

In Amora Hotel Jamison, Sydney (Australia) there will be the 12th International Symposium on Milk Genomics and Human Health, Translation of Omics into Production and Health.

The three-day event will bring together international experts in nutrition, genomics, bioinformatics and milk research to discuss and share the latest research. The goal is to bring together the research and dairy communities to share, translate, and interpret data that are happening within the fields of the “-omics” science. For more information and to register visit: http://www.milkgenomics.org

European Network on Rabbit Genome Biology, November 3rd-4th 2015

The final meeting of the COST Action “A Collaborative European Network on Rabbit Genome Biology “ RGB-Net will be held together with the 6th Rabbit Biotechnology Meeting in Lyon (France) on the 3rd-4th of November 2015 at the Institute of Cognitive Science in Lyon, France. Useful information can be found at: http://www.biocomp.unibo.it/rabbit/events.php

Annual Dairy Sheep Association of North America Symposium, November 5th-7th 2015

The Dairy Sheep Symposium Comes Back to Wisconsin. The 21st Annual Dairy Sheep Association of North America (DSANA) Symposium will be held in Madison, Wisconsin on November 5-7, 2015 with a pre-symposium sheep milk cheese-making course on November 4, 2015. Twelve presentations by 16 animal scientists, dairy sheep producers, veterinarians, and sheep milk cheese makers and marketers will be held on November 5-6 at the Pyle Center on the University of Wisconsin-Madison campus. A sampling of topics and presenters are: “Milking Machine Basics and Special Considerations for Small Ruminants” by Dr. Doug Reinemann, University of Wisconsin-Madison; “Impacts on Non-GMO Labeling on Artisan Cheese Production” by Cathy Strange, Global Cheese Buyer, Whole Foods Market, Austin, Texas; “Best Practices for Raising Lambs on Milk Replacer” by Dr. Tom Earlywine, Land O’Lakes, St. Paul, MN; and “Principles of Dairy Nutrition” by Dr. Michel Wattiaux, University of Wisconsin-Madison.

Tour buses on Saturday, November 7 will take participants to Cedar Grove Cheese in Plain, Wisconsin operated by Master Cheesemaker, Bob Wills, and to Hidden Springs Creamery in Westby,
Wisconsin where participants will visit the modern dairy sheep farm and artisan cheese plant operated by Dean and Brenda Jensen.

The pre-symposium sheep milk cheese-making course will be offered on November 4 at the Centre for Dairy Research on the UW-Madison campus for symposium participants and DSANA members for an extra fee.

The complete program and registration and hotel information can be accessed at the DSANA web site (www.dsana.org) or the University of Wisconsin-Madison Sheep and Goat Extension web site (http://fyi.uwex.edu/wisheepandgoat/) or by contacting Bill Halligan, DSANA Treasurer, P.O. Box 96, Bushnell, NE 69128 (308-235-5900, bill.halligan@hotmail.com) or Dave Thomas, UW-Madison, 1675 Observatory Dr., Madison, WI 53706 (608-263-4306, dlthomas@wisc.edu).

**XXIV Latin American Society of Animal Production (ALPA), November 9th-13th**

The biennial international meeting of the Latin American Society of Animal Production (ALPA) will soon be held in Chile and the local animal science society, SOCHIPA, will host the conference in Puerto Varas. There will be a very large participation from Central and South American animal scientists. WAAP will be also present at this conference and gives support for there will be the President of WAAP, Jim Sartin, and the Secretary General, Andrea Rosati, who will have theatre presentations.

**International Precision Dairy Farming Conference, June 21st-23rd 2016**

Precision Dairy Farming is one of the major topics that influences dairy farming developments worldwide. After three successful North American Precision Dairy Farming Conferences (in Toronto, Canada (2010) and Rochester, USA (2013 and 2015)), the first International Precision Dairy Farming Conference will be organized in 2016, in Leeuwarden, the Netherlands. Leeuwarden is the capital of the province Friesland and the centre of dairy farming in the Netherlands. We are working on a programme on the crossroads of science and practice and aim at a conference that brings together the scientists, who are interested in applied Precision Dairy Farming technology, technology manufacturers who will be the key drivers in product and service development, and veterinarians/advisors who are the key users in the latest scientific developments. Of course the conference will be open for all who are interested in Precision Dairy Farming developments. Please visit the website: [http://www.precisiondairyfarming.com/2016/](http://www.precisiondairyfarming.com/2016/)

**EAAP International Symposium on Energy and Protein Metabolism and Nutrition, September 12th-15th 2016**

The 5th EAAP International Symposium on Energy and Protein Metabolism and Nutrition, which will take place in Krakow, Poland, on 12-15th September, 2016. Continuing the strategy, the 5th EAAP ISEP will focus on combining basic and applied research, and practical applications. Invited lectures and oral and poster presentations of the participants are planned. The program will cover the following topics: Physiological aspects of protein and energy metabolism and nutrition, Animal product quality and health in the light of protein and energy metabolism and nutrition, Environmental and animal welfare aspects of protein and energy nutrition, Feed sources and feed processing related to energy and protein digestion and metabolism or Methodological aspects of research on protein and energy metabolism and nutrition.

The organizers of the 5th EAAP ISEP are: The Kielanowski Institute of Animal Physiology and Nutrition PAS in Jabłonna, University of Agriculture in Krakow and Warsaw University of Life Sciences – SGGW in Warsaw.

The conference website is [www.isep2016.pl](http://www.isep2016.pl)

**35th International Society for Animal Genetics Conference (2016)**

Join us at the Hilton Salt Lake City Center on July
23 through July 27, 2016 for the ISAG Conference. The conference will follow the 2016 ASAS-ADSA-CSAS-WSASAS Joint Annual meeting (July 19-23, 2016).

The ISAG Conference will return to the United States for the first time in 16 years and we invite you to attend. The International Society for Animal Genetics is devoted to the study of the immunogenetics, molecular genetics and functional genomics of economically important and domesticated animal species. We are planning an outstanding scientific program for our members that will blend plenary sessions, posters, and workshops of interest to animal geneticists from around the world. True to longstanding ISAG traditions, there will be an exciting social program for delegates and accompanying persons that we expect will be talked about for years. Check back regularly for additional information.

Abstracts will be accepted in the following areas:

- Bioinformatics, statistical genetics, and genomic technologies
- Epigenetics and epigenomics
- Functional genomics
- Genetic diversity and polymorphisms
- Genetic markers and selection
- Genetics and disease
- Genome editing and transgenic animals
- Structural and comparative genomics

The abstract submission site and registration will open in October 2015.

**Vacant Positions**

**Genomics Research Scientist with Genus plc**

The position location is in Hendersonville, TN (USA). The position aim is to design, manage and analyze research projects oriented toward novel genomics and biostatistical methods and technologies to drive genetic improvement and value differentiation of Genus genetics. The expected qualifications and experience are:

- Ph.D. in animal/plant breeding and/or quantitative genetics.
- Sound knowledge in statistical genetics/biostatistics technologies that are used to make genetic improvement.
- Good understanding of the application of complex statistical models.
- Proficiency in the use of statistical software packages.
- Excellent understanding of utilizing genomics (e.g. SNP, CNV, Haplotypes, Sequence, Genome editing, etc) to make genetic improvement.
- Experience with analysis of large genomic data sets.

And the responsibilities:

- Implementation of novel statistical approaches to genomic data analyses.
- Incorporate new genomics tools to drive genetic improvement.
- Develop new innovative research projects.
- Development of methodology for genetic evaluation of complex traits through integration of genomic information into genetic evaluations to improve selection accuracy.
- Remain current in area of responsibility and establishing a network of industry & academic contacts.

The applications should be submit via email a complete curriculum vita to: joseph.deeb@genusplc.com
The review of applications will start immediately and continue until a successful candidate is identified.

**Post doctoral to assist in genomic for horses**

Currently, a multidisciplinary, international team is working to develop a new reference genome for the domestic horse by incorporating a variety of complementary next generation sequencing data sets with legacy Sanger sequence data. We are looking to hire a postdoctoral fellow to assist in the finishing, analysis, and publication of this new reference genome. The two-year appointment will also provide opportunities to work on the functional annotation of the equine genome. The location will be at School of Medicine, University of Louisville, Louisville, KY 40202

The necessary qualifications are: Ph.D. level qualifications in a life science or computational biology discipline, along with experience in the mapping and analysis of next generation sequence data. Familiarity in working in the command line environment on Linux/Unix machines is a plus.

Qualified applicants should submit their resume/curriculum vitae to the attention of Dr. Ted Kalbfleisch to ted.kalbfleisch@louisville.edu.

A Postdoc position in optimization of breeding plans

A Postdoc position in optimization of breeding plans for crops using genomic information is available at the Centre for Quantitative Genetics and Genomics http://mbg.au.dk/en/research/research-centres/center-for-quantitative-genetics-and-genomics/, at Aarhus University. Primary focus will be on designing and evaluating cereals and perennial ryegrass for breeding programs implementing genomic tools.

The application must be in English and include a curriculum vitae, degree certificate, a complete list of publications, a statement of future research plans and information about research activities, teaching portfolio and verified information on previous teaching experience (if any). Guidelines for applicants can be found here: http://scitech.au.dk/en/about-science-and-technology/vacant-positions/application-form-guide/

The salary depends on seniority as agreed between the Danish Ministry of Finance and the Confederation of Professional Associations.

**Two open positions at Zoetis Genetics, Kalamazoo MI (USA)**


2. Genetic Evaluation Lead Specialist. For the full list of responsibilities and requirements, and to submit your application, visit: https://zoetis.wd5.myworkdayjobs.com/en-US/zoetis/job/Kalamazoo---at_Downtown-Portage-Street/Genetic-Evaluation-Lead-Specialist_JR00000402-4

**Assistant Professor Animal Science**

In Michigan State, East Lansing MI (USA) is offered an Assistant Professor of Animal Science position. The Department of Animal Science at Michigan State University is seeking applicants for a 9-month, tenure-track position at the Assistant Professor level (75% Teaching, 20% Research, 5% Service). The successful candidate will contribute to the teaching mission of the department by teaching or co-teaching approximately 2 courses per semester including leading an introductory undergraduate course in animal breeding and genetics, and instructing and contributing to teaching of other animal science courses as appropriate, such as introductory animal science, anatomy and physiology, or advanced animal breeding. The successful candidate will conduct and publish research in the scholarship of teaching and learning in STEM disciplines with a focus on
the animal sciences, including student learning outcomes and assessment, as well as participate in collaborative research in animal breeding and genetics. The candidate will also engage in co-curricular activities including undergraduate research. Advising and mentoring of undergraduate and graduate students is expected, as well as service in the form of outreach and leadership activities within the university, greater community and profession. The candidates must possess a PhD in animal science, dairy science, genetics, or closely related field.

For questions about the application process, please contact Robbyn Davenport, 517-355-8383, smithro@msu.edu. For questions about the position, please contact Dr. Cathy Ernst, 517-432-1941, ernstc@msu.edu. To ensure full consideration, all application materials must be received by November 1, 2015. Applications will be accepted until a suitable candidate is found.

Other

The U.S. Department of Agriculture’s National Institute of Food & Agriculture (NIFA) announced Aug. 11 more than $27.6 million in funding for projects that will boost food security through improved animal production and health. The awards to support research, education and extension projects were made through NIFA’s Agriculture & Food Research Initiative (AFRI), which is authorized by the 2014 Farm Bill. “As we continue to face major challenges in agriculture production, such as the extreme weather events and droughts, diminishing water resources, climate change, pests and global competition, producers are looking for viable solutions,” NIFA director Sonny Ramaswamy said. “These grants allow American agriculture to remain a competitive force by providing food that is not only nutritious, but safe, and abundant.”

NIFA made the awards mostly through the AFRI Foundational program, as well as an interagency program with the National Institute of Health. The outcomes of these projects will advance genome-enabled precision breeding and enhance animal production by improving animal growth, reproductive efficiency and animal well-being. These projects will also increase the understanding of antimicrobial resistance and enhance animal health by tackling new, foreign or emerging disease threats through vaccine development, prevention, early detection and recovery. These projects target improvements in livestock and aquaculture species. Examples of AFRI-funded animal health projects include a conference on vaccine development for agricultural species to reduce diseases and the need for antibiotic treatments; a Michigan State University to create a health-monitoring tool to assess the risk of developing metabolic stress in dairy cattle; an Ohio State University led-consortia to control poultry respiratory diseases in the U.S.; a University of Rhode Island project sequencing the genome of the eastern oyster to improve breeding stock, and a University of Connecticut project to broaden the immunity of swine using an improved foot and mouth disease vaccine.