POULTRY BEYOND 2023

6th INTERNATIONAL BROILER NUTRITIONISTS’ CONFERENCE

QUEENSTOWN, NEW ZEALAND

16 - 20 OCTOBER 2017

CONFERENCE PROGRAMME

(preliminary programme as at February 2017)
**Monday 16 October**

11.00 am  Conference Registration  (Hotel St Moritz Lobby)

6pm – 8pm  Opening Ceremony  (Hotel St Moritz Lobby)

Registration desk will be open again from 7pm until 8pm

**Tuesday 17 October**

7.30 am  Buses start leaving for conference venue from Hotel St Moritz – organised in groups based on lanyard colour.

Please refer to your lanyard colour and the notice board in the lobby of the Hotel St Moritz.

8:30 am  Welcome and Official Opening – John Foulds

**SESSION 1**

Theme:  Towards an Ever-Challenging Environment

CHAIR:  tba

9:00 am  Predicting the unpredictable – When will “Peak Feed” be reached?

*Rick Kleyn, Spesfeed Pty Ltd, Rivonia, South Africa*

9:45 am  Present status and future trends and feed evaluation

*Professor Ravi Ravindran, Massey University, Palmerston North, New Zealand*

10.30 am  Morning Tea
SESSION 2

Theme: Emerging technologies to expand feed ingredient options

CHAIR: tba

11.00 am Insects as sustainable feed ingredients

Dr Elaine Fitches, Durham University, Durham, UK

11.45 am Algae and novel plant proteins

Professor Marinus van Krimpen, Wageningen UR, The Netherlands

12.30 pm Lunch

SESSION 3

Theme: Factors underpinning broiler potential

CHAIR: tba

1.30 pm Epigenetics: feeding the genes of the broiler

Dr Chris Ashwell, North Carolina State University, Raleigh, NC, USA

2:15 pm Broiler Life Cycle Analysis: Breeding for Sustainability and Welfare

Dr Santiago Avendano, Aviagen, Edinburgh, UK

3.00 pm Afternoon Tea
Workshops

3.20 pm WORKSHOPS

5.00 pm Workshops Conclude

After workshops conclude please make your way to the gondola

5:15 pm Buses begin departing back to Hotel St Moritz

Evening: own arrangements / sponsor arrangements

Wednesday 18 October

7.30 am Buses start leaving for conference venue from Hotel St Moritz – organised in groups.

Please refer to your lanyard colour and the notice board in the lobby of the Hotel St Moritz for transfer details

SESSION 4

Theme: Gut development and function

CHAIR: tba

8:30 am Implications of digestion dynamics for modern broilers

Dr Sonia Liu, University of Sydney, Camden, NSW, Australia

9.15 am Development of digestive tract: physiology and function, including immune development

Professor Doug Korver, University of Alberta, Edmonton, Alberta, Canada

10.00 am Morning Tea
SESSION 5

Theme: Nutritional Solutions for the Future

CHAIR: tba

10:30 am Has the full potential of current enzymes been realised and what’s next?

*Dr Aaron Cowieson, DSM Nutritional Products, Kaiseraugst, Switzerland*

11.15 am Enteric health challenges and nutritional solutions in today’s poultry industry

*Dr Mercedes Vázquez-Añón, Novus International, Inc., St. Louis, MO, USA*

12:00 pm Calcium appetite in broilers and implications for phosphorus

*Dr Reza Abdollahi, Massey University, Palmerston North, New Zealand*

12.30 pm Lunch

SESSION 6

Theme: The development of the gut environment – Future Tends

CHAIR: tba

1.30 pm Fibre for gut development, microbial management and performance

*Professor Gonzalo Mateos, Polytechnic University of Madrid, Madrid, Spain*

2.15 pm Influencing gut microbiota for broiler performance

*Dr Juha Apajalahti, Alimetrics Group Ltd., Helsinki, Finland*

3.00 pm Afternoon Tea
Workshops

3.20 pm WORKSHOP

5.00 pm Workshops Conclude

After workshops conclude please make your way to the Gondola

5:15 pm Buses begin departing back to Hotel St Moritz

Evening: own arrangements / sponsor arrangements

Thursday 19 October

7.30 am Buses start leaving for conference venue from Hotel St Moritz – organised in groups based on lanyard colour.

Please refer to your lanyard colour and the notice board in the lobby of the Hotel St Moritz.

SESSION 7

Theme: Gut health management and welfare

CHAIR: tbc

8.30 am Nutritional management the gut microbiome under AGP-free conditions – the European Experience

Loek de Lange, Schothorst Feed Research, Lelystad, The Netherlands

9.15 am Management of Bird welfare with nutrition

Dr Tom Rehberger, Agrobiosciences, Milwaukee, WI, USA
10.00 am  Gut microbiota, gut leakage and Bacterial Chondronecrosis with Osteomyelitis

Professor Robert Wideman, Jr., University of Arkansas, Fayetteville, AR, USA

10.45 am  Morning Tea

SESSION 8

Theme:  Challenges in Amino Acid Nutrition

CHAIR: tbc

11.15 am  Minimising protein; how far down the essential amino acid list do we go?

Professor Bill Dozier, Auburn University, Auburn, AL, USA

12.00 pm  Branched-chain amino acids; re-evaluating ideal amino acid ratios

Dr Mike Kidd, University of Arkansas, Fayetteville, AR, USA

12.45 pm  Lunch

SESSION 9

Theme:  Hot Topic

CHAIR:  tbc

1.45 pm  Gut flora in broilers – are they important?

Dr Peter Selle, University of Sydney, Camden, NSW, Australia
Workshops

2:30 pm  Workshop
3.30 pm  Afternoon Tea
3.50 pm  Workshops Continue
5.00 pm  Workshops Conclude

After workshops conclude please make your way to the gondola

5:15 pm  Buses begin departing back to Hotel St Moritz

Evening: own arrangements / sponsor arrangements

Friday 20 October

7.30 am  Buses start leaving for conference venue from Hotel St Moritz – organised in groups based on lanyard colour.

Please refer to your lanyard colour and the notice board in the lobby of the Hotel St Moritz.

SESSION 10

Theme:  Hot Topics
CHAIR: tbc

8.30 am  Re-thinking calcium and phosphorus nutrition in broilers

Professor Roselina Angel, University of Maryland, College Park, MD, USA
9.15 am  Emerging trends in broiler nutrition

Professor Mingan Choct, University of New England, Armidale, NSW, Australia

10.00 am  Morning Tea (working) and Workshop

11:00 am  Panel Discussion

1.00 pm  Final wrap up and conference close

1.15 pm  Lunch

After lunch please make your way to the gondola

2:15 pm  Buses begin departing back to Hotel St Moritz

GALA DINNER

A social evening event for all
(please refer to registration details for partner attendance)

5.00 pm  Please meet in St. Moritz hotel lobby for walking to departure point. (if mobility assistance is required, please see the conference organisers on the day who will make transport arrangements – approx 7 minute downhill walk)

END
Speakers:

Rick Kleyn
Spesfeed (Pty) Limited, Rivonia, South Africa

Topic: Predicting the unpredictable - When will "Peak Feed" be reached?

Rick Kleyn is a graduate of the University of Natal where he obtained a Masters degree in Poultry Nutrition under the supervision of Prof. Rob Gous. After spending some time in the feed industry, he started his own nutritional consultancy company, SPESFEED (Pty) Ltd. The company has been established for 27 years, and its client base includes feed millers, premix companies, poultry producers and ingredient suppliers in a number of countries. He sells and supports feed formulation software and has a particular interest in non-linear feed formulation systems. Rick operates mainly in Africa, where he has clients in 16 countries, but has also had considerable exposure to European production systems. He has recently published a book entitled “Chicken Nutrition: A guide for nutritionists and poultry professionals.” Of late Rick has become involved with training and runs well subscribed “Master Classes” in poultry nutrition together with Steve Leeson.

Professor Ravi Ravindran
Massey University, Palmerston North, New Zealand

Topic: Present Status and Future Trends and Feed Evaluation

Velmurugu (Ravi) Ravindran is the Professor of Poultry Science at Massey University. He graduated with BSc (Agric.) degree from the University of Sri Lanka and, MSc and PhD degrees in Animal Nutrition from Virginia Tech University, USA. He has held academic and research positions in Sri Lanka, Canada, USA and Australia, prior to moving to New Zealand in 1998. He has had a distinguished international career in nutritional science, having published in excess of 500 scientific communications.
Dr Elaine Fitches, PhD

Durham University, Durham, UK

Topic: Insects as Sustainable feed ingredients

Elaine Fitches, Ph.D. is a Research Fellow at Durham University, UK. Her dedicated research focus lies in the field of applied entomology and more specifically, the development of novel biopesticides (fusion proteins and RNA interference) for the control of invertebrate pests. Growing involvement in the field of “insect biotechnology”, investigating potential for the exploitation of insects as sustainable sources of products for use in animal feed. Co-ordinator of “PROteINSECT”, an EU funded programme that investigated the potential of insects as a source of protein for animal feed.

Professor Marinus van Krimpen, PhD

Wageningen University & Research, The Netherlands

Topic: Algae and novel plant proteins

After his MSc graduation at Wageningen University (Animal Husbandry), Marinus van Krimpen worked as a nutritionist specialized in pigs and poultry for a feed company. Since 1999, he is appointed as researcher in pig and poultry nutrition at Wageningen Livestock Research. In 2008, he finished his PhD-project regarding the effect of nutritional factors on reducing feather pecking behaviour in laying hens. Since 2010, he is appointed as senior researcher in animal nutrition at the same institute. The focus of his projects regards nutritional requirements of laying hens and broilers, development of alternative protein sources, improving the phosphorus and nitrogen efficacy of pigs and poultry, improving bird welfare, and stimulating immune competence by nutrition.

Dr. Chris Ashwell, PhD

North Carolina State University, Raleigh, NC, USA

Topic: Epigenetics: Feeding the genes of the broiler

A native of Virginia, Chris Ashwell attended Virginia Tech and Wake Forest University where he obtained a PhD in Biochemistry. Prior to joining NC State University’s Prestage Department of Poultry Science in 2003, Dr. Ashwell spent time as a postdoctoral fellow and staff scientist with USDA’s Agricultural Research Service. The major research focus of Dr Ashwell’s laboratory is to identify the gene(s) underlying traits of economic importance in poultry. These efforts include the use of resource populations and the collection of relevant phenotypes to search for the causative genome variants for specific traits which may be used to incorporate marker
assisted selection into commercial operations. Other efforts include the use of functional genomics to evaluate gene expression profiles. These approaches have been used recently to evaluate the response of chickens to nutritional manipulation in ovo, post hatch, and throughout the growth period. His nutrigenomics studies have been some of the first to focus on nutritional and thus environmental impact of poultry production from a genetic point of view. This work led to the investigation of epigenetic effects of dietary manipulation on the chicken and its effect on DNA methylation. The outcome of this research will provide a means to improve the innate ability of poultry via nutritional conditioning or programming to utilize environmentally important nutrients such as Nitrogen and Phosphorous, therefore reducing their excretion and impact on the environment.

Dr Santiago Avendano, PhD
Aviagen, Edinburgh, UK

Topic: Broiler Life Cycle Analysis: Breeding for Sustainability and Welfare

Santiago Avendaño is originally from Uruguay and joined Aviagen in 2003 after graduating from Edinburgh University with a PhD in Quantitative Genetics and Genome Analysis. He is Global Director of Genetics for the Aviagen Group being responsible for the development, evaluation and implementation of new technologies within Aviagen’s breeding programmes. Previously to joining Aviagen, Santiago was a researcher and technical advisor in beef cattle and sheep breeding in pasture based production systems.

Dr Sonia Liu, PhD
University of Sydney, NSW, Australia

Topic: Implications of digestion dynamics for modern broilers

Dr Sonia Liu completed her PhD at the Poultry Research Foundation within The University of Sydney in 2014 and now she works as a Lecturer in Poultry Nutrition. Her research interests include digestive dynamics of nutrients, nutritional geometry, whole grain feeding, implications of exogenous feed enzymes and utilisations of synthetic amino acids. Sonia has published 32 papers in peer-reviewed journals and she was the winner of 2015 Science and Innovation Awards for Young People in Agriculture, supported by Australian Federal Department of Agriculture and Water Resources.
Professor Doug Korver, PhD
University of Alberta, Edmonton, Alberta, Canada

Topic: Development of digestive tract: physiology and function including immune development

Doug Korver received a Ph.D. from the University of California, Davis. Doug’s research program has a strong applied research focus; relevance to the poultry industry remains an important consideration in his approach to research. In addition to practical research on feedstuff quality and dietary supplement evaluation in poultry diets, Doug’s work focuses on nutrition-immune function interactions and bone biology in meat- and egg-type poultry. Doug currently teaches introductory animal nutrition and poultry nutrition courses at the undergraduate level, and is a co-instructor for graduate-level courses in advanced animal metabolism and advanced feed science and technology. In 2016, he spent a 6-month sabbatical in Colombia, working with a major broiler integrator. Doug is married to Michelle; they have 2 children – Erin, 13 and Joel, 11.

Dr. Aaron Cowieson
DSM Nutritional Products, Kaiseraugst, Switzerland

Topic: Has the full potential of current enzymes been realised and what’s next?

Dr. Aaron Cowieson hails originally from Scotland, having read for his PhD at the University of Aberdeen, completing in 2001. From 2001-2010, Dr Cowieson worked for two major biotechnology businesses where his research focus was feed enzymes, ingredient quality and amino acid and mineral nutrition of poultry. From 2010-2013 Dr Cowieson was Associate Professor of Poultry Nutrition and Director of the Poultry Research Foundation within the Faculty of Veterinary Science at the University of Sydney, Australia. Currently Dr. Cowieson is Principal Scientist at DSM Nutritional Products, specializing in various aspects of feed enzyme biotechnology and monogastric nutrition and is retained by the University of Sydney as Adjunct Professor – Poultry Nutrition. Dr. Cowieson has published more than 250 scientific articles including more than 100 in peer-reviewed journals and was the recipient of the 2016 American Feed Industry Association Poultry Nutrition Research Award.
Dr Mercedes Vázquez-Añón

Novus International Inc., St Louis, MO, USA

Topic: Enteric health challenges and nutritional solutions in today’s poultry industry

Dr. Mercedes Vázquez-Añón is the senior director of animal nutrition research and facilities at Novus International. She received her B.S. in Agriculture Engineer and Animal Science from Universidad Politécnica- Madrid, Spain in 1989, her M.S. from Penn State University in 1992, and her Ph.D. in Nutritional Science from University of Wisconsin-Madison in 1996. Dr. Vázquez-Añón joined Novus International in 1996 as research manager where she developed the application of several Novus products across species, became Fellow Scientist in 2006, director of animal nutrition research in 2007, and in 2012 became responsible for global animal research and facilities. Her research expertise encompass amino acid, trace mineral, antioxidant, enzymes, and lipid nutrition and metabolism in ruminants and monogastrics, holds patents of different technologies, has published more than 40 refereed scientific publications, and numerous conferences proceedings. She is bilingual in English and Spanish.

Dr Reza Abdollahi, PhD

Massey University, Palmerston North, New Zealand

Topic: Calcium appetite in broilers and implications for phosphorus nutrition

Reza Abdollahi is a Lecturer in Poultry Production / Nutrition in Monogastric Research Centre, Institute of Veterinary, Animal and Biomedical Sciences (IVABS), Massey University, New Zealand. Reza graduated with Bachelor’s and Master of Science degrees in animal Science from Tehran University, Iran, and subsequently a PhD degree in Poultry Nutrition from Massey University. He was awarded his PhD in 2011 on the influence of feed processing on the performance, nutrient utilization and gut development of poultry. He has published in top ranking Animal Science Journals and already has over 80 scientific communications, including 21 peer-reviewed articles, one book chapter and two edited conference proceedings, to his credit. Reza is the Secretary of World’s Poultry Science Association (NZ Branch), and also serves as the Secretary of the Asia-Pacific Poultry Federation. Reza’s current interest is poultry nutrition focusing on feed evaluation and processing.
**Professor Gonzalo Mateos, PhD**

*University of Madrid, Madrid, Spain*

**Topic:** Fibre for gut development, microbial management and performance

Dr Mateos holds a PhD in Animal Production for Madrid University, a PhD in Veterinary Science for Barcelona University, and a PhD in Animal Science (Poultry) for Iowa State University. He worked for the industry both in Spain and in the USA as Technical and Product Manager of American Cyanamid Company (Wayne, NJ) and as Technical Manager, Chief Nutritionist, and Feed Mill Manager of one of the biggest Coops in Spain. Currently, he is Professor of Animal Science at University of Madrid. He has published more than 120 papers in SCI Journals and given more than 450 talks seminars, lectures, and communications in International congresses. He was Editor in Chief of the Scientific Journal Animal Feed Science and Technology (2005-2013) and currently, he is a member of the Editorial Board of Poultry Science and Animal Feed Science and Technology. Dr Mateos works as a consultant for the Animal Feed Industry, all over the world.

---

**Dr Juha Apajalahti**

*Alimetrics Group Limited, Helsinki, Finland*

**Topic:** Influencing gut microbiota for broiler performance

Dr Juha Apajalahti is a founder and managing director of Alimetrics Ltd, an independent contract research company that during its 13 year history has completed hundreds of research projects for the industry developing products for animal and human health. In his earlier position as a research director in Danisco-Cultor, Dr Apajalahti was in charge of R&D projects for several business units of the group, including Finnfeeds International Ltd /Danisco Animal Nutrition and Ewos.

His scientific background is in intestinal health and microbiology and he has published over hundred scientific papers, book chapters and invited conference papers. Dr Apajalahti is also an innovator in 30+ patents/applications.
Loek de Lange
Schothorst Feed Research, The Netherlands

**Topic:** Nutritional management of the gut microbiome under AGP - free conditions

After graduation from the Agricultural University in Wageningen in 1980, Loek started working as animal nutritionist at Dutch feed companies being responsible for feed formulation. Before joining Schothorst Feed Research (SFR) in 2013 he has been manager Research and Development for a period of 12 years at an international feed company De Heus from The Netherlands. At SFR he is senior consultant poultry nutrition with as expert field's intestinal health and feed processing technology.

Dr Tom Rehberger, PhD
Agrobiosciences, Milwaukee, WI, USA

**Topic:** Managing Bird welfare with nutrition

R&D and business manager with broad base of experience coming from academia and industry positions ranging from founding start-ups to leading R&D teams in large corporations. Pioneered the use of high throughput molecular microbial ecology methods to develop customized solutions direct-fed microbials for the livestock industry.

Professor Robert Wideman, Jr, PhD
University of Arkansas, Fayetteville, AR, USA

**Topic:** Gut microbiota, gut leakage and BCO

Dr. Wideman began his career at Penn State University, where he rose to the rank of Professor of Poultry Science while teaching graduate and undergraduate courses in Physiology, and conducting research related to calcium metabolism and kidney damage in laying hens.

In 1993 Professor Wideman was recruited as the Distinguished Professor of Poultry Science and Arkansas Poultry Federation Chair at the University of Arkansas. He served as Professor and Associate Director of the Center of Excellence for Poultry Science while teaching physiology and conducting research focused on pulmonary hypertension syndrome (ascites) and lameness in broilers.
Professor Wideman published 18 review articles and book chapters, over 180 refereed journal articles, 100 technical or poultry industry articles, and he has four U.S. patents. He has been an invited speaker at over 100 national and international seminars and technical symposia.

Professor Wideman recently retired as an Emeritus Professor and remains actively engaged in research, writing and consulting.

Professor Bill Dozier, PhD
Auburn University, Auburn, AL, USA

Topic: Minimising protein; how far down the essential amino acid list do we go?

Dr. Bill Dozier currently serves as a Professor at Auburn University in the Department of Poultry Science. He received a B.S. in Animal and Dairy Science from Auburn University, a M.S. in Animal Science from the University of Kentucky, and a Ph.D. in Poultry Science from Auburn University. Dr. Dozier has been awarded for his contribution in poultry research, such as the 2012 AFIA Poultry Nutrition Award, 2006 Poultry Science Hy-Line International Research Award, 2007 Federal Consortium Southeast Region Excellence in Technology Transfer, 2007 Mid-South Area USDA-ARS Early Career Scientist Award, and 2008 USDA-ARS Technology Transfer Award. Currently, Dr. Dozier’s research program evaluates nutrition programs to improve nutrient digestibility, the efficiency of growth, and subsequent meat yield of broiler chickens.

Dr. Michael Kidd
University of Arkansas, Fayetteville, AR, USA

Topic: Branched-chain amino acids; re-evaluating ideal amino acid ratios

Mike Kidd is a poultry science graduate from the University of Arkansas and was a recipient of the Arkansas Feed Mill Scholarship. He has a master’s degree from the University of Arkansas and a Ph.D. from North Carolina State University. He has been a lab tech for Hudson Foods, a research director and research manager for Nutri-Quest, has consulted in over 30 countries, and has more than 355 peer reviewed manuscripts. He has served as president of the Poultry Science Association and department head at the department of poultry science at Mississippi State University.
Dr. Peter Selle
University of Sydney, NSW, Australia

Topic: Gut flora in broilers - are they important?

Dr. Peter Selle has been with the Poultry Research Foundation within The University of Sydney since 2002. His interests include the phytate/phytase axis in poultry nutrition, sorghum as a feed grain for chicken-meat production, synthetic amino acids and low protein diets, and the bilateral bioavailability of starch and protein.

Professor C. Roselina Angel, PhD
University of Maryland, College Park, Maryland, USA

Topic: Rethinking calcium and phosphorus nutrition in broilers

Dr. Roselina Angel received her Ph.D. in Poultry Nutrition from Iowa State University in 1990 after which she worked as a Research Manager of Purina Mills Specialty Business Group until 1998. Dr. Angel joined the University of Maryland as an Assistant Professor in 1998 and rose through the ranks to her current position Professor. She was Co-editor of the nutrition section of the Journal of Applied Poultry Research from 2009 to 2011 and served four 2-year terms as an Associate Editor for the Journal of Poultry Science. Dr. Angel was a member of the Poultry Science Association’s Board of Directors from 2001 to 2004. She has been a member of the program committee for the Poultry Science’s Informal Nutrition Conference since 1998 and now chairs that Conference. She has been a panel member for USDA’s National Research Initiative competitive grants program and an Ad Hoc reviewer for USDA-NRI, the Binational Agricultural Research and Development Fund, and other funding agencies. Dr. Angel has published seven book chapters, 95 articles in refereed journals and more than 160 abstracts. Since 2000 she has given more than 180 invited presentations, more than half of which have been presented overseas. In 2002 she was named to the Committee on Animal Nutrition (CAN), at that time the only standing committee of the National Research Council of the National Academy of Sciences. Dr. Angel has been the recipient of one regional and three national awards including the Medal of Achievement Award from the Delmarva Poultry Industry in 2003, and the National Chicken Council, Broiler Research Award, the American Feed Industries Poultry Nutrition Award, and the Informal Nutrition Conference Teacher, Advisor, and Life Mentor Award, from the Poultry Science Association in 2006, 2007, and 2014, respectively. She also received the Merrill Scholar Faculty Advisor award in 2010 (University of Maryland). She was named a Fellow of the Poultry Science Association in 2016. This is the highest recognition PSA can bestow on a member and it is.
awarded based on their professional distinction and contributions to the field of poultry science without regard to longevity.

Dr. Angel’s recent focus has also been on improvement in phosphorus nutrition through optimizing calcium use. Her research has had a direct measurable impact on water and air quality and the environmental and economic sustainability of the poultry industry.

**Professor Mingan Choct**  
University of New England, Armidale, NSW, Australia

**Topic:** Emerging trends in broiler nutrition

Mingan is the CEO of the Poultry Cooperative Research Centre and a professor at the University of New England. Mingan set up the Poultry CRC with a total funding of $174 Million over fifteen years to address scientific and educational challenges facing the Australian poultry industry. Mingan’s personal academic interests include carbohydrate chemistry and nutrition, feed enzymes, energy evaluation and nutrition x disease interaction in poultry. He has supervised more than 45 postgraduate students and published over 300 papers in journals and proceedings. He is an active member of the scientific community, serving as editor, assistant editor and on editorial boards of many journals.