



# 20<sup>th</sup> EUROPEAN SYMPOSIUM ON POULTRY NUTRITION

24 – 27 AUGUST, 2015

PRAGUE, CZECH REPUBLIC

# FINAL PROGRAMME

ETM

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## PRAGUE METRO MAP



### FINAL PROGRAMME



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### WELCOME MESSAGE

Dear colleagues,

It is our great pleasure to welcome you on the 20<sup>th</sup> European Symposium on Poultry Nutrition which is held between 24–27 August 2015 in Prague, Czech Republic.

We are proud that more than 1000 participants is attending this important event – among them many opinion leaders, representatives of important poultry industries and scientists, and other professionals from the entire Europe that have a chance to witness not only interesting and useful lectures and posters but also to learn about new ideas, products, solutions and technologies.

The 20<sup>th</sup> European Symposium on Poultry Nutrition also gives you a great possibility to visit the capital of the Czech Republic, a magnificent city built around the Vltava River. You can also take part in fascinating culture events during the Symposium.

I strongly believe that the 20<sup>th</sup> European Symposium on Poultry Nutrition will be an excellent opportunity to exchange views, ideas and opinions which allow all participants to be proud of the work they develop in their countries.

I am welcoming you to the beautiful city of Prague!



Pavel Trefil President of the Czech Branch of WPSA

 $\times$ 

### WELCOME FROM WORKING GROUP 2, WPSA

On behalf of Working Group 2 (WG2), it is with great pleasure that I welcome all participants to the  $20^{th}$  European Symposium on Poultry Nutrition which takes place from  $24^{th}-27^{th}$  August 2015 in Prague, The Czech Republic.

The WG2 has always been active in the planning of the ESPN in close co-operation with the local branches and organising committees in order to assemble an interesting scientific programme, and we are convinced that the scientific programme presented in Prague will have the same high quality as has been the case at the former symposia. There are no parallel sessions, and in each session, 3-4 speakers will cover different aspects of a topic. There are 6 main sessions on the programme in Prague dealing with subjects which we believe are of strong scientific and industrial interest. The subjects cover processes in the digestive tract, different aspects of amino acid research, fats and energy sources, chick guality and flock performance, and the final session on Thursday will present research on turkey and duck nutrition. One of the sessions will focus on different "hot topics" such as feed mycotoxins, the challenge to fed layers until 100 weeks and insects as poultry feed. A strong group of experts will cover the wide range of issues involved in the different sessions within their specific fields both from a scientific point of view as well as with practical nutritional approaches important in commercial situations. Very importantly, the symposium will include a display of contributed posters, and selected posters will be highlighted by the authors during 3 short communication sessions.

The WG2 meets regularly in connection with the ESPN or during the European conferences and world poultry congresses. At present, the WG2 has 30 members representing 17 European countries. The ESPN has been held every second year since 1977 at different locations in Europe and has attracted an increasing number of delegates over the years from around the world to listen to and discuss the presentations. Apart from many delegates from Europe, we also welcome participants from many countries outside Europe, and the sharing of thoughts and experiences among the delegates is an important contribution to the success of the symposium.

I wish you all an enjoyable and rewarding time during the ESPN 2015 and a wonderful stay in Prague.



Lanna Grenfeldt

Sanna Steenfeldt, Aarhus University, Denmark. Chair of WG2, WPSA.



# COMMITTEES & SYMPOSIUM SECRETARIAT

### SCIENTIFIC COMMITTEE

Dr Jiri Broz Dr Karoly Dublecz Dr Colin Fisher Dr Rene Kwakkel Dr Aidan Leek Dr Martina Lichovnikova – contact person Dr Yael Noy Dr Yves Nys Prof Dr Markus Rodehutscord Dr Sanna Steenfeldt Prof Dr Birger Svihus Prof Dr Eva Tumova Prof Colin Whitehead

#### **ORGANISING COMMITTEE**

Dr Pavel Trefil – chairman Dr Martina Lichovnikova Dr Lenka Papesova Barbora Vinsova (GUARANT International spol. s r.o.) Lucie Prichystalova (GUARANT International spol. s r.o.)

### SYMPOSIUM SECRETARIAT

GUARANT International Na Pankráci 17 140 21 Prague 4, Czech Republic Phone: +420 284 001 444 E-mail: espn2015@guarant.cz Website: www.espn2015.org



# AUSPICES

The 20<sup>th</sup> European Symposium on Poultry Nutrition will is held under the auspices of Marian Jurečka Minister of Agriculture of the Czech Republic



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## **PROGRAMME AT A GLANCE**

	Monday 24 August	Tuesday 25 August	Wednesday 26 August	Thursday 27 August	
08:30–10:00		Plenary Session 1 Processes in the digestive tract	Plenary Session 3 Fats and energy sources	Plenary Session 5 Chick quality and flock performance	08:30–10:00
10:00–10:05		Break	Break	Break	10:00–10:05
10:05–10:45		Discussion Groups	Discussion Groups	Discussion Groups	10:05–10:45
10:45–11:00		Coffee Break	Coffee Break	Coffee Break	10:45–11:00
11:00–11:30		Short Oral Presentations	Short Oral Presentations	Plenary Discussion	11:00–12:00
11:30–12:30		Plenary Discussion	Plenary Discussion	Lunch Break l Exhibition l	12:00–13:30
12:30–14:00		Lunch Break I Exhibition I Posters	Lunch Break I Exhibition I Posters	Posters Plenary Session 6	
14:00–15:00		Plenary Session 2	Poster Discussion	Turkey and duck nutrition	13:30–15:00
15:00–15:30		Amino acids	Coffee Break	Break	15:00–15:05
15:30–15:35	Break		Discussion Groups	15:05–15:45	
15:35–16:15		Discussion Groups Coffee Break	Plenary Session 4	Coffee Break	15:45–16:00
16:15–16:30	Registration		Hot topics	Plenary	
16:30–17:00	Registration	Short Oral Presentations		Discussion	16:00–17:00
17:00–17:30		Plenary		Closing Ceremony	17:00–17:30
17:30–18:00		Discussion			
18:00–19:00	Opening Ceremony	Poster Discussion			
19:00–20:00	Get Together				17:30–23:00
20:00–21:00	Party	Gala Reception			
21:00–23:00		Guid Neception			

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### SCIENTIFIC PROGRAMME

#### MONDAY, AUGUST 24, 2015

- 18:00–19:00 Opening Ceremony
- 19:00–21:00 Get Together Party

FORUM HALL\* FOYER & EXHIBITION AREA

#### TUESDAY, AUGUST 25, 2015

- **08:30–10:00** Plenary Session 1: Processes in the digestive tract FORUM HALL\* Chairpersons: Rodehutscord M. (Germany) and Narcy A. (France)
- 08:30–09:00 Protein digestion re-visited by proteomics Duclos M. J. (INRA, France)
- 09:00–09:30 Relevance of gut microbiota for digestion Zentek J. (Free University of Berlin, Germany)
- 09:30–10:00 **Development of the gut associated immune system** *Kaspers B.* (University of Munich, Germany)
- 10:00-10:05 Break

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10:05–10:45 Discussion Groups

#### **DISCUSSION GROUPS ROOMS**

- 10:45–11:00 Coffee Break
- 11:00–11:30 Short Oral Presentations

#### FORUM HALL\*

Altering the Ca to P ratio in a pre-starter diet: its impact on early chick performance and bone ash in relation to chick hatch time *Muir W.* (*Australia*)

Impact of lactylates on production performance and intestinal health of broiler chickens during subclinical *Clostridium perfringens* challenge *Lima L.* (the Netherlands)

Phytase modulates ileal microbiota and enhances growth performance of the broiler chickens Ptak A. (Poland)



	Phytate degradation in broilers as affected by dietary phytate and non-phytate phosphorus content Van Krimpen M. (the Netherlands)		
	Impact of dietary phosphorus and calcium feeding strategies on intestinal gene expression of broilers <i>Valable A. (Canada)</i>		
	Bioavailability of zinc oxides in broilers Narcy A. (France)		
11:30–12:30	Plenary Discussion FORUM HALL	*	
12:30–14:00	Lunch Break & Exhibition & Posters		
14:00–15:30	Plenary Session 2: Amino acids         FORUM HALL           Chairpersons: Langhout P. (the Netherlands) and Delezie E. (Belgium)	.*	
14:00–14:30	Relevance of glycine in low protein broiler feeds Siegert W. (University of Hohenheim, Germany)		
14:30–15:00	Revisiting amino acid nutrition Tesseraud S. (INRA, France)		
15:00–15:15	The nutritional value of yellow lupin (Lupinus luteus) for broilers Kaczmarek S. (Poznań University of Life Sciences, Poland)		
15:15–15:30	Evaluation of a Lys to Arg antagonism in low crude protein diets for broiler chickens Schedle K. (University of Natural Resources and Life Science, Vienna, Austria)	;	
15:30–15:35	Break		
15:35–16:15	Discussion Groups DISCUSSION GROUPS ROOM	s	
16:15–16:30	Coffee Break		
16:30–17:00	Short Oral Presentations FORUM HALL	*	
	Guanidinoacetic acid as an additive to broiler diets Zelenka J. (Czech Republic)		
	Effects of different feeding strategies during rear and lay on incubation traits in broiler breeder females Van Emous R. (the Netherlands)		

\*Live streaming of sessions from Forum Hall will be projected at Meeting Hall V.

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The effects of low dietary protein levels on feed intake and hypothalamic AMPK of broiler chicks Wang Y. (Belgium)

Solid-State Fermented Cereals Promises a Growth Promoting Effect in Broiler Chicken Yasar S. (Turkey)

Influence of combined effect of temperature stimulation during the last days of incubation and of different protein and energy concentrations in the feed on growing performance of cockerels of different strains Halle I. (Germany)

Standardized ileal amino acid digestibility in pea products fed to growing turkeys Kozłowski K. (Poland)

- 17:00–18:00 Plenary Discussion
- 18:00 Poster Discussion

20:00 Gala Reception

FORUM HALL\* POSTER AREA NATIONAL HOUSE OF VINOHRADY

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#### WEDNESDAY, AUGUST 26, 2015

- 08:30–10:00 Plenary Session 3: Fats and energy sources FORUM HALL\* Chairpersons: Kwakkel R. (the Netherlands) and Svihus B. (Norway)
- 08:30–09:00 Fiber in poultry nutrition: Bonus or burden? de Vries S. (Trouw Nutrition R&D, the Netherlands)
- 09:00–09:30 **Comparative interests and limits of metabolizable energy and net energy for evaluating poultry and pig feeds** *Noblet J. (INRA, France)*
- 09:30–10:00 Evaluating the energy content of ingredients in poultry diets An update Mateos G. G. (Technical University of Madrid, Spain)
- 10:00-10:05 Break
- 10:05–10:45 Discussion Groups

**DISCUSSION GROUPS ROOMS** 

- 10:45–11:00 Coffee Break
- 11:00–11:30 Short Oral Presentations

#### **FORUM HALL\***

Cereal type but not the length of adaptation to experimental diets influenced dietary metabolisable energy for broilers Olukosi O. (United Kingdom)

Dietary fat source and vitamin E level affect the humoral immunity in broilers Konieczka P. (Poland)

Energy partitioning in broiler chickens fed diets containing a high level of canola meal supplemented with a carbohydrase enzyme Choct M. on behalf of Toghyani M. (Australia)

Effect of different dosages of coated butyric acid on growth performance and energy utilization in broilers *Kaczmarek S. (Poland)* 

Effect of iso-energetic exchange of dietary fat and starch on the growth performance and body composition of broilers Veldkamp T. (the Netherlands)

Starch digestion in xylanase supplemented maize-soy diets Lee S. (United Kingdom) 20<sup>th</sup> EUROPEAN SYMPOSIUM ON POULTRY NUTRITION

11:30-12:30	Plenary Discussion	FORUM HALL*
12:30-14:00	Lunch Break & Exhibition & Posters	
14:00-15:00	Poster Discussion	POSTER AREA
15:00–15:30	Coffee Break	
15:30–17:00	Plenary Session 4: Hot topics Chairpersons: Calini F. (Italy) and Uni Z. (Israe	FORUM HALL*
15:30–16:00	Impact of feed mycotoxins on performan Dänicke S. (Federal Research Institute for Ar	
16:00–16:30	How to feed layers until 100 weeks? – A Pottgueter R. (Lohmann Tierzucht GmbH, C	
16:30–17:00	Insects as poultry feed Józefiak D. (Poznań University of Life Science	re, Poland)



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#### THURSDAY, AUGUST 27, 2015

08:30–10:00	Plenary Session 5: Chick quality and flock performance Chairpersons: Steenfeldt S. (Denmar	FORUM HALL* (israel)	
08:30–09:00	Imprinting – pre/post hatch as a nutritional tool Angel R. (University of Maryland, United States)		
09:00–09:30	Improving broiler performance through breeder nutritional management Zuidhof M. J. (University of Alberta, Canada)		
09:30–10:00	Nutritional solutions to improve broiler uniformity Gous R. M. (University of KwaZulu-Natal, South Africa)		
10:00-10:05	Break		
10:05-10:45	Discussion Groups	DISCUSSION GROUPS ROOMS	
10:45-11:00	Coffee Break		
11:00-12:00	Plenary Discussion	FORUM HALL*	
12:00-13:30	Lunch Break & Exhibition & Poste	ers	
13:30–15:00	Plenary Session 6: Turkey and due Chairpersons: Dublecz K. (Hungary)		
13:30-14:00	Nutritional requirements and feeding management of meat type		
	ducks Baéza E. (INRA, France)		
14:00–14:30	Nutritional determinants for gut health and litter characteristics		
	in turkeys Grimes J. L. (North Carolina State U	niversity, United States)	
14:30–15:00	Differences in amino acid and phosphorus digestibility between broiler chickens, turkeys and ducks Rodehutscord M. (University of Hohenheim, Germany)		
15:00–15:05	Break		
15:05–15:45	Discussion Groups	DISCUSSION GROUPS ROOMS	



- 15:45–16:00 Coffee Break
- 16:00–17:00 Plenary Discussion
- 17:00–17:30 Closing Ceremony

FORUM HALL\*

Last update on August 7, 2015.





### POSTERS

Posters should be set up in the Poster Area from 15:00 on August 24 and must be removed by 17:00 on August 27 at the latest. Those posters which will remain in the Poster Area after its closing will not be kept.

There will be no organized or moderated discussions over posters. The presenting author should be available near the poster during the Poster Discussion on Tuesday, August 25, 2015 (18:00–19:00) and on Wednesday, August 26, 2015 (14:00–15:00) to discuss his/her poster with interested colleagues.

#### ADDITIVES

#### P-001 (ID 94)

THE EFFICACY OF CERTAIN FEED ADDITIVES FOR THE PREVENTION OF CAMPYLOBACTER JEJUNI INFECTION IN BROILER CHICKENS

Wafaa Abd El-Ghany, Mohammed Awaad, Nagwa Rabie (Egypt)

#### P-002 (ID 62)

EVALUATION OF THE EFFECTS OF PROBIOTICS ON BACTERIAL CHONDRONECROSIS WITH OSTEOMYELITIS LAMENESS AND ANTIBIOTICS USE IN BROILER CHICKENS UNDER COMMERCIAL CONDITIONS

<u>Wael Abdelrahman</u>, Michaela Mohnl, Luca Vandi, Gino Totté, Liesbeth Dingboom, Peter Jacobs (Austria & the Netherlands)

#### P-003 (ID 130)

THE USE OF PROBIOTICS IN COCCIDIOSIS CONTROL AND ITS EFFECT ON PERFORMANCE IN BROILERS UNDER COMMERCIAL FIELD CONDITION

Wael Abdelrahman, Michaela Mohnl, Isabelle Dewaele (Austria & Belgium)

P-005 (ID 28) EFFECT OF SODIUM BENTONITE AND SEEDS OF *SILYBUM MARIANUM* ON LIVER ENZYMES, LYMPH ORGANS AND IMMUNE SYSTEM OF BROILER CHICKENS FED WITH AFLATOXIN Nazar Afzali, Pouyan Malekinejad, Abbas Mohamadi, Hadi Sarir (Iran)

P-006 (ID 293) EFFECT OF A HYDROLYSABLE TANNIN FROM CHESTNUT WOOD (SAVIOTAN®) ON DIGESTIBILITY AND NITROGEN BALANCE IN BROILER CHICKENS Mauro Antongiovanni, Sara Minieri, Arianna Buccioni (Italy)

P-007 (ID 213) A VALUE-BASED APPROACH TO DETERMINE THE OPTIMAL DOSE OF AN *E. COLI* PHYTASE IN TERMS OF P REPLACEMENT AND IMPROVEMENTS IN BROILER PERFORMANCE Luke Barnard, Farina Khattak, Luis Romero (UK)

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P-008 (ID 146) COMPARATIVE EFFICIENCY OF TWO MARIGOLD-BASED YELLOW PIGMENTS ON EGGS TARGETING PASTA INDUSTRY

Marta Blanch, Wei Kong, Tom Hampton, Juan Valle (Spain & USA)

P-009 (ID 261) IMPACT OF LACTYLATES ON PRODUCTION PERFORMANCE AND INTESTINAL HEALTH OF BROILERS IN TWO DIFFERENT CLOSTRIDIUM PERFRINGENS CHALLENGE MODELS Bart Boomsma, Syrena Powell, Delphine Melchior, Symone Kok (the Netherlands & USA)

P-010 (ID 277) EFFECTS OF FEEDING ORIGINAL XPC ON SALMONELLA TYPHIMURIUM OR S. HEIDELBERG PREVALENCE AND LOAD IN BROILER CHICKENS Jonathan Broomhead, Doug Smith, Don McIntyre (USA)

P-011 (ID 220) VITAMIN D ENRICHMENT OF EGGS FOR HUMAN HEALTH Linda Browning, Aaron Cowieson (Australia)

P-012 (ID 198) EFFECT OF NUCLEOTIDES ENRICHED YEAST EXTRACTS ON VILLUS LENGTH AND GOBLET CELL COUNTING IN BROILER INTESTINE

<u>M Teresa Brufau</u>, Nerea González-Jurado, Anna M Pérez-Vendrell, Romain D'Inca, Eric Auclair, Borja Vilà, Joaquim Brufau, Ruth Ferrer, Raquel Martín-Venegas (Spain & France)

P-013 (ID 193)

EFFECTS OF THE INCLUSION OF NA-BUTYRATE IN DIETS BASED ON CORN OR WHEAT WITH DIFFERENT AMEN CONTENT EFFECTS ON GROWTH PERFORMANCE OF BROILERS REARED UNDER POOR HYGIENE CONDITIONS

Lourdes Cámara, Mohammad Vahid Kimiaetalab, Irene Solís, Pilar Guzmán, Andrés Ortíz, Gonzalo G. Mateos (Spain)

P-014 (ID 195)

EFFECT OF FEEDING DIFFERENT COMBINATIONS OF ORGANIC ACIDS, MONO-GLYCERIDES AND PROBIOTICS ON CAMPYLOBACTER COLONIZATION IN BROILERS

**Oscar Casabuena, M. Chemally, M. Den Hartog, P. Vesseur**, <u>Marta I. Gracia</u> (Spain, France & the Netherlands)

P-016 (ID 51)

THE EFFECTS OF DIETARY PLANT ALKALOIDS SUPPLEMENTATION WITH VARIOUS LEVELS OF DIGESTIBLE LYSINE-METHIONINE AND CALCIUM-NON PHYTIC PHOSPHORUS RATIO ON PRODUCTIVE PERFORMANCES, CARCASS CHARACTERISTICS AND MEAT QUALITY OF BROILER

Nantana Chauychuwong, Keatisak Soisuwan (Thailand)



#### P-017 (ID 329) EFFICACY OF COATED CALCIUM BUTYRATE ON PERFORMANCE, EGG QUALITY AND INCUBATION PARAMETERS IN BROILER BREEDERS

Evelyne Delezie, Beatrice Wegge, Luc Goethals, Sam De Campeneere (Belgium)

#### P-018 (ID 239) HISTOLOGICAL STUDIES ON THE EFFECT OF PREBIOTICS ON BURSA OF FABRICIUS AND CAECAL TONSILS OF BROILERS

Hany El Habback, Abd El-Aleem El-Saba, Mohamed Abd, Elhadi AL-Werfaly (Egypt & Libya)

P-019 (ID 216) INFLUENCE OF DIETARY STEARIDONIC ACID (18:4N-3) ON VERY LONG-CHAIN OMEGA-3 FATTY ACID DEPOSITION IN BROILER CHICKEN TISSUES Robert Elkin, Yun Ying, Kevin Harvatine (USA)

#### P-020 (ID 100)

EFFECT OF BEE POLLEN ON GROWTH PERFORMANCE AND IMMUNE STATUS OF YOUNG **BROILER CHICKS** 

Alireza Fazayeli-Rad, Nazar Afzali, Homayoun Farhangfar, Mohammad Reza Asghari (Iran)

P-021 (ID 101)

EFFECT OF BEE POLLEN ON INTESTINAL MORPHOMETRY AND SELECTED BLOOD PARAMETERS IN BROILER CHICKS

Alireza Fazayeli-Rad, Nazar Afzali, Homayoun Farhangfar, Mohammad Reza Asghari (Iran)

#### P-023 (ID 332)

EXAMINATION OF BROILER CHICKEN VILLI EVOLUTION AFTER HERBAL EXTRACT FEEDING János Gál (Hungary)

P-024 (ID 165) EFFECT OF AN ALGAE-CLAY MIX ON THE USE BY BROILER CHICKENS OF A DIET **CONTAINING CORN DDGS** 

Marie Gallissot, Mohamed El Hassimou Dia, Eve Coueron, Anne Trotel, Eric Pagot (France)

P-025 (ID 10) EFFECTS OF ANTIBIOTIC AND PROBIOTIC FEED ADDITIVES ON GROWTH PERFORMANCE AND DIGESTIBILITY OF FEED NUTRIENTS IN GIT OF BROILER CHICKENS Alena Grozina, Georgy Laptev (Russian Federation)

P-026 (ID 9) INFLUENCE OF ANTIBIOTIC AND PROBIOTIC FEED ADDITIVES ON GUT MICROFLORA OF **BROILER CHICKENS** Alena Grozina, Georgy Laptev (Russian Federation)

P-027 (ID 200) EFFECT OF DIETARY INCLUSION OF MEDIUM CHAIN FATTY ACIDS AND BUTYRATE ON PERFORMANCE OF LAYING HENS AND FATTY ACIDS PROFILE: SENSORY AND TEXTURAL **PROPERTIES OF EGGS** 

Romas Gruzauskas, Vilma Sasyte, Vilma Kliseviciute, Asta Raceviciute-Stupeliene, Virginijus Slausgalvis, Jamal Al-Saifi, Aldona Miezeliene, Gitana Alencikiene, Gintautas-Juozas Svirmickas (Lithuania & Belgium)

P-028 (ID 214) CANTHAXANTHIN FROM CAROPHYLL® RED CAN IMPROVE THE VITELLINE MEMBRANE STRENGTH IN STORED EGGS FROM BREEDER HENS

Catherine Hamelin, Fernando Cisneros (France & Switzerland)

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#### P-029 (ID 244) SUPPLEMENTATION OF BUTYRIC ACID PRODUCING PROBIOTIC VERSUS DIETARY BUTYRATE

Veerle Hautekiet, Alain Kanora, Motomichi Takahashi (Belgium & Japan)

P-031 (ID 196) EFFECT OF MEDIUM CHAIN FATTY ACIDS ON BROILER PERFORMANCE IN ENERGY REDUCED DIETS David Hermans, Manu De Laet, Ellen Van Meenen (Belgium)

P-032 (ID 325) **GROWTH PROMOTING EFFECT OF** ASPERGILLUS LUCHUENSIS IN BROILER Kumiko Hioki, Chihoko Kawasaki, Masahiro Yamamoto, Kunioki Hayashi (Japan)

P-033 (ID 182) CAN ADDITIONAL ENZYME IMPROVE PERFORMANCE IN BROILERS FED A LOW PROTEIN DIET? Emma Ivarsson, Ida Elgåsen, Helena Wall (Sweden)

P-034 (ID 263) EFFECT OF DIFFERENT LEVELS OF ARTICHOKE (CYNARASCOLYMUS L.) EXTRACT SUPPLEMENTATION IN DRINKING WATER ON THE IMMUNOLOGICAL RESPONSE AND YOLK RETENTION OF BROILER CHICKENS

Patipan Jaipeng, Jamlong Mitchaothai, Kornkamon Paditporn, Rachakris Lertpatarakomol, Sunisa Sirimongkolvorakul (Thailand)

P-035 (ID 330) EFFECT OF A PHYTOGENIC FEED ADDITIVE ON PROTEIN AND AMINO ACID DIGESTIBILITY IN BROILERS Leopold Jungbauer, A. Müller, J. D. van der Klis (Austria)



P-036 (ID 331) EFFECTS OF COMBINING A PHYTOGENIC SUBSTANCES WITH ESTERS OF SHORT AND MEDIUM CHAIN FATTY ACIDS ON PRODUCTION PERFORMANCE IN BROILERS Leopold Jungbauer, Jan Dirk van der Klis (Austria)

#### P-037 (ID 162)

A BACILLUS SUBTILIS BASED PROBIOTIC AIDS IN OVERCOMING THE PERFORMANCE LOSS ASSOCIATED WITH DIETS REDUCED IN ENERGY

Anée Kehlet, Michael Sims (Denmark & USA)

P-040 (ID 250) EVALUATION OF CHOLINE CHLORIDE REPLACEMENT BY A POLYHERBAL MIXTURE IN INTENSIVE BROILER PRODUCTION Jean Francois Le Roux, Homero Borin, Christophe Alleno (France & Switzerland)

#### P-041 (ID 222)

EFFECT OF ARTICHOKE (CYNARA SCOLYMUS L.) EXTRACT SUPPLEMENTATION IN DRINKING WATER ON GROWTH PERFORMANCE OF BROILER CHICKENS Rachakris Lertpatarakomol, Patiparn Jaipeng, Sunisa Sirimongkolworakul, Kornkamol Paditporn, Jamlong Mitchaothai (Thailand)

P-042 (ID 234) EFFECT OF DIETARY SODIUM DIFORMATE ON GROWTH PERFORMANCE, NUTRIENT DIGESTIBILITY, GUT HEALTH AND PROFITABILITY IN BROILERS Christian Lückstädt (Germanv)

#### P-043 (ID 256)

EFFECT OF DIETARY SUPPLEMENTATION OF ENZYMES PRODUCED FROM TRICHODERMA SP. AND ASPERGILLUS NIGER ON PRODUCTION PERFORMANCE AND EGG PRODUCTION Achara Lukkananukool, Theerapon Kaeo-wieng, Paitoon Kaewhom, Navaporn Chauynarong, Jamlong Mitchaothai (Thailand)

P-044 (ID 168) THE ADDITION OF A NUTRITIONAL EMULSIFIER IMPROVES BROILER PERFORMANCE IN AN ENERGY DILUTED DIET

Luc Maertens, Saskia Leleu, Marc Rovers, Ludo Segers, Evelyne Delezie (Belgium & the Netherlands)

#### P-045 (ID 29)

DIFFERENT LEVELS OF SODIUM BENTONITE AND SILYBUM MARIANUM SEEDS IN REDUCING THE ADVERSE EFFECTS OF AFLATOXIN ON BLOOD LIPID LEVELS AND THE RELATIVE WEIGHT OF DIGESTIVE ORGANS OF BROILER CHICKENS Pouyan Malekinejad, Nazar Afzali, Abbas Mohamadi, Hadi Sarir (Iran)



P-046 (ID 122) EFFECT OF LIGNOCELLULOSE ON EGG PRODUCTION AND EGG QUALITY Niko Milošević, Mirjana Đukić Stojčić, Lidija Perić, Marina Vukić-Vranješ (Serbia)

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#### P-047 (ID 226)

#### EFFECT OF DIETARY SUPPLEMENTATION OF BOESENBERGIA PUNDURATA ON SMALL INTESTINAL MORPHOLOGY AND IMMUNOLOGICAL RESPONSE OF BROILER CHICKENS Jamlong Mitchaothaij, Patipan Jaipeng, Rachakis Lertpatarakomol, Kiatchai

<u>Jamiong Mitchaothail</u>, Patipan Jaipeng, Rachakis Lertpatarakomoi, Kiatchai <mark>Rojanamongkol</mark> (Thailand)

#### P-048 (ID 232) A NOVEL IN VITRO POULTRY MODEL TO COMPARE RELEASE KINETICS OF (UN) PROTECTED BUTYRATE

<u>Pierre C. A. Moquet</u>, Lonneke Onrust, Rosalie van Emous, René P. Kwakkel (the Netherlands & Belgium)

#### P-049 (ID 147)

EFFECTS OF SACCHAROMYCES CEREVISIAE VAR. BOULARDII DIETARY SUPPLEMENTATION ON BROILER GROWTH PERFORMANCE AND SALMONELLA LOAD IN THE GUT AND CARCASS SKIN FOLLOWING CHALLENGE WITH SALMONELLA ENTERITIDIS

Konstantinos Mountzouris, Irida Palamidi, Vasileios Paraskeuas, Vanessa Demey, <u>Florence</u> <u>Barbe</u>, Georgios Theodoropoulos, Konstantinos Fegeros (Greece & France)

#### P-050 (ID 324) FOOD ADDITIVES IN POULTRY FEEDING <u>Kakha Nadiradze</u>, Lamara Jikia, Nana Phirosmanashvili, Mariami Goginashvili (Georgia)

P-053 (ID 98) EFFECTS OF ACIDIFIED AND ALKALINIZED DIETS ON GROWTH PERFORMANCE AND INTESTINAL MORPHOMETRY OF BROILER CHICKENS Rouhollah Nourmohammadi, Heshmatollah Khosravinia, <u>Nazar Afzali</u> (Iran)

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<u>Kornkamon Paditporn</u>, Patipan Jaipeng, Jamlong Mitchaothai, Rachakrit Lertpatarakomol, Sunisa Sirimongkolworakul (Thailand)



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Anja Pastor, Mauro Morlacchini, Giorgio Fusconi (Germany & Italy)

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Sabine Pruckner, Attila Kovács, Luca Vandi, Paola Massi, Giovanni Tosi (Austria & Italy)

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Yuwares Ruangpanit, Seksom Attamangkune, Sukanya Rattanatubtimtong, Chudapa Janchang (Thailand)

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P-065 (ID 194) EFFECT OF SUPPLEMENTING VIA DRINKING WATER A BLEND OF MONO-GLYCERIDES, ALONE OR IN COMBINATION WITH ORGANIC ACIDS, ON CAMPYLOBACTER COLONIZATION IN BROILERS

Jaime Sánchez, A. Parra, Y. Carre, A. Csorbai, Marta I. Gracia (Spain & France)

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Simone Schaumberger, Bertrand Grenier, Sabine Masching, Ursula Hofstetter, Gerd Schatzmayr (Austria)

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<u>Samuel Emmanuel Alu</u>, Sylvanus Ngbede Carew, Fabian, G Kaankuka, Comfort Dooshima Tuleun (Nigeria)

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Lourdes Cámara, Mohammad Vahid Kimiaeitalab, Beatriz Saldaña, Husham Mandalawi, Clara Roselina Angel, Adam Smith, <u>Gonzalo G. Mateos</u> (Spain, USA & UK)



#### P-091 (ID 284) INFLUENCE OF PROTEASE ENZYME SUPPLEMENTATION ON APPARENT ILEAL DIGESTIBILITY OF AMINO ACIDS OF CORN, WHEAT AND BARLEY GRAINS

Lourdes Cámara, Mohammad Vahid Kimiaeitalab, Julio Díaz Berrocoso, Clovis Gewehr, Pilar Guzmán, Clara Roselina Angel, Adam Smith, <u>Gonzalo G. Mateos</u> (Spain, Brazil, USA & UK)

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#### P-093 (ID 202)

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#### P-094 (ID 249)

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<u>Mammo M. Erdaw</u>, Paul A. Iji, Rider A. Perez-Maldonado, Momenuzzaman Bhuiyan (Australia & Singapore)

#### P-095 (ID 179)

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Maria Francesch, Anna Maria Perez-Vendrell, Jiri Broz (Spain & Switzerland)

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Vinícius Gonsales Schramm, <u>José Otávio Berti Sorbara</u>, Rafael Hermes, Lidiane Priscila Domingues, Ananda Portella Félix, Vitor Augusto Bernadini Zavelinski, Lucas Newton Ezaki Barrilli, Jean Fagner Durau, Lucas Barbosa de Lima, Alex Maiorka (Brazil)

#### P-098 (ID 73)

#### MICROBIAL PHYTASE IMPROVES PERFORMANCE AND BONE TRAITS IN BROILERS FED DIETS BASED ON SOYBEAN MEAL AND CONTAINING LUPIN MEAL

<u>Sebastian Kaczmarek</u>, Aaron Cowieson, Marcin Hejdysz, Andrzej Rutkowski (Poland & Switzerland)

#### P-099 (ID 326) EFFECTS OF NSP-ENZYMES ON PRECECAL NUTRIENT DIGESTIBILITY AND ARABINOXYLAN DEGRADATION IN TURKEYS

Holger Kluge, Elke von Heimendahl, Stefan L. Kinzinger, Gabriele Stangl (Germany)

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P-100 (ID 199) EFFECT OF AN ENDO-1,4-ARABINOXYLANASE, ENDO-1,4-SS-GLUCANASE PREPARATION ON DIGESTIBILITY PARAMETERS IN BROILER FED A CORN-SOY BASED DIET

Everton L. Krabbe, Valdir S. de Avila, L. dos S. Lopes, Dieter Feuerstein, Bruno Wernick, <u>Peter Ader</u> (Brazil & Germany)

P-101 (ID 150) THE EFFECT OF DIETARY FEED STRUCTURE, PHYTASE AND XYLANASE APPLICATION ON BROILER PERFORMANCE

Imke Kühn, Rob Ten Doeschate, Mike Bedford, Krzysztof Kozłowski (Germany, UK & Poland)

P-102 (ID 327) EFFICACY OF PHYTASE SUPPLEMENTATION IN UNCOATED AND COATED FORM IN MALE BROILER CHICKENS

Klaus Männer, Elke von Heimendahl, Stefan L. Kinzinger (Germany)

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P-104 (ID 203) ADDITIONAL EFFECT OF ENDOXYLANASES ON TOP OF SUPERDOSED PHYTASE ON BROILER PERFORMANCE

Ronny Mombaerts, Anne Goderis (Belgium)

P-105 (ID 307) EFFECT OF A CARBOHYDRASES COMPLEX IN FEEDS WITH DIFFERENT METABOLIZABLE ENERGY AND AVAILABLE AMINO ACIDS LEVELS FOR BROILERS REARED UNDER A HOT CLIMATE CONDITION

Roberto Montanhini Neto, Pierre Cozannet, Friedrich Rouffineau, Aurélie Preynat (France)

P-106 (ID 305) EFFECT OF THE ADDITION OF A CARBOHYDRASE COMPLEX ON PERFORMANCE AND CARCASS YIELD OF BROILER CHICKENS FED WHEAT-SOYBEAN-BASED DIETS Roberto Montanhini Neto, Aurélie Preynat (France)

P-107 (ID 97) THE EFFECT OF EXOGENOUS PHYTASE ON RETAINABLE PHOSPHORUS AND EGG QUALITY IN LAYING HENS <u>Anna Musilová</u>, Martina Lichovníková (Czech Republic)

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Alberto Navarro-Villa, Susana Chamorro, Jon de los Mozos, Ana Isabel García-Ruíz (Spain)

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P-113 (ID 69) THE EFFECT OF OPTIPHOS® AND RONOZYME® HIPHOS ON TECHNICAL PERFORMANCE AND AVAILABLE P IN BROILERS

Lode Nollet, Karel Bierman, Natalia Soares (Belgium)

P-114 (ID 68) THE EFFICACY OF OPTIPHOS® AND RONOZYME® HIPHOS ON PERFORMANCE AND TIBIA ASH IN YOUNG BROILERS

Lode Nollet, Karel Bierman (Belgium)

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Florence Oke, Oluwaseyi Oduguwa, Abimbola Oso, Olajide Adeyemi, Adebayo Jegede, Adekoya Osofowara, Adewale Adeoye, Adeboye Fafiolu, V. Pirgozliev (Nigeria & UK)

P-116 (ID 44) PHYTASE AND PROTEASE IMPROVED GROWTH PERFORMANCE BY ENHANCING NUTRIENT UTILISATION OF BROILERS REARED UNDER CHALLENGE CONDITIONS Oluyinka Olukosi, Aaron Cowieson, Fidelis Fru (UK & Switzerland)



P-117 (ID 104) EFFECT OF MULTI-ENZYME SUPPLEMENTATION ON THE UTILIZATION OF MALTED SORGHUM (SORGHUM BICOLOR) SPROUTS BY BROILER CHICKENS Philip Onimisi, Taiye Lasisi, Gideon Bawa (Nigeria)

#### P-118 (ID 22)

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#### P-120 (ID 107)

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#### P-121 (ID 266)

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<u>Phokela Jonathan Segobola</u>, Phokela Jonathan Segobola, Christine Jansen van Rensburg (South Africa)

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<u>Mohammad Hossein Shahir</u>, Reza Rahimi, Hamid Reza Taheri, Afshin Heidarinia, Nima Baradaran (Iran)

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**EXOGENOUS PROTEASE IN MASHED AND PELLETED DIETS FOR BROILERS** 

<u>Cristiane Soares da Silva Araujo</u>, Raphael Fortes de Oliveira, Lucio Francelino Araujo, Pedro Henrique Mota, Natalia Barros Petroli Ultimi, Carlos Alexandre Granguelli (Brazil)

#### P-124 (ID 135)

# ENERGY AND NUTRIENT UTILIZATION RESPONSES OF BROILERS FED DIETS SUPPLEMENTED WITH AN $\ - AMYLASE$

<u>José Otávio Sorbara</u>, Sergio Luiz Vieira, Catarina Stefanello, Gabriela de Oliveira Santiago, Cristina Tonial Simões, Natália Chaves Serafini, Rafael Gustavo Hermes (Brazil)

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Nadia Yacoubi, Luc Saulnier, Estelle Bonnin, Richard Ducatelle, Filip van Immerseel (Belgium & France)

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Ahmed M. Amerah, Cees Kwakernaak, Peter W. Plumstead (UK & the Netherlands)



P-134 (ID 175) EFFECT OF DIETARY SUPPLEMENTATION WITH FERMENTED RICE BRAN ON GROWTH PERFORMANCE, BLOOD PARAMETERS, AND INTESTINAL MICROFLORA IN BROILER CHICKENS

Han-Tae Bang, Hwan-Ku Kang, Ji-Hyuk Kim, Jong Hwangbo, Chan-Ho Kim (South Korea)

#### P-135 (ID 111)

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#### P-136 (ID 103)

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Florence Barbe, Julie Carillon, Audrey Sacy, Florence Rudeaux, Dominique Lacan (France)

#### P-137 (ID 86)

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P-142 (ID 12) IMPROVEMENT OF NUTRITIVE VALUE OF TRITICALE GRAIN Tatiana Egorova, Tatiana Lenkova (Russian Federation)

P-143 (ID 13) **RAPE SEED AND CAKE IN BROILER DIETS** Tatiana Egorova, Tatiana Lenkova (Russian Federation)





#### P-144 (ID 246)

# RESPONSE OF BROILER CHICKS FED ON STEAM- OR COLD-PELLETED DIETS CONTAINING RAW FULL-FAT SOYBEAN MEAL

<u>Mammo M. Erdaw</u>, Paul A. Iji, Rider A. Perez-Maldonado, Momenuzzaman Bhuiyan (Australia & Singapore)

#### P-145 (ID 183)

EFFECT OF EXTRUSION COOKING ON THE NUTRITIONAL VALUE OF FABA BEAN FOR BROILER CHICKENS

Marcin Hejdysz, Sebastian Kaczmarek, Andrzej Rutkowski (Poland)

#### P-146 (ID 174)

EFFECT OF DIETARY SUPPLEMENTATION WITH RICE BRAN OIL ON GROWTH PERFORMANCE, BLOOD PARAMETERS, AND MEAT QUALITY IN BROILER CHICKENS

Kang HwanKu, Kim JiHyuk, Hwangbo Jong, Bang Hantae, Jeon IkSoo, Kim Chanho (South Korea)

#### P-148 (ID 127)

USE OF SEMI-LEAFLESS PEAS (PISUM SATIVUM L) WITH ENZYME ADDITION IN DIETS FOR BROILERS

<u>Erja Koivunen</u>, Petra Tuunainen, Eija Talvio, Eija Valkonen, Tuomo Tupasela, Jarmo Valaja (Finland)

#### P-149 (ID 218)

# NATURAL STABILIZATION OF RICE BRAN AND THE EFFECT ON BROILER PERFORMANCE AND CARCASS YIELD

<u>Everton Luis Krabbe</u>, Aiane Aparecida da Silva Catalan, Edenilse Gopinger, Valdir Silveira de Avila, Diego Surek, Leticia dos Santos Lopes (Brazil)

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# EFFECT OF ONION AND GRAPE SEED EXTRACTS ON MEAT QUALITY AND ANTIOXIDANT STATUS IN BROILER CHICKENS

Krzysztof Lipiński, Zofia Antoszkiewicz, Magdalena Mazur, Zbigniew Makowski (Poland)

#### P-153 (ID 190)

EFFECT OF TYPE OF CEREAL AND OAT HULLS ADDITION ON GASTROINTESTINAL MORPHOLOGY IN BROILERS ORALLY INFECTED WITH CAMPYLOBACTER JEJUNI Carlos Millán, A. Martín, J. Mayot, Jaime Sánchez, <u>Marta I. Gracia</u> (Spain & France)

#### P-155 (ID 78)

# THE EFFECT OF WHOLE WHEAT FEEDING ON THE GROWTH PERFORMANCE AND CARCASS VALUE OF BROILER CHICKENS

<u>László Pál</u>, Boglárka Horváth, Fanni Dublecz, Károly Dublecz, Csaba Kázmér Ács, Eszter Galamb, László Bustyaházai, Ferenc Husvéth (Hungary)



P-156 (ID 298) BATCH VARIABILITY OF WHEAT DISTILLERS DRIED GRAINS WITH SOLUBLES (DDGS) ON METABOLISABLE ENERGY AND NUTRIENT DIGESTIBILITY WHEN FED TO BROILERS V Pirgozliev, I Whiting, J Wilson, S P Rose, M W Mirza, A M Amerah (UK)

P-157 (ID 142) EVALUATION OF CRIMPED KERNEL MAIZE SILAGE SUPPLEMENTATION ON BROILER PRODUCTION Samir Ranjitkar, Ricarda M. Engberg, Jette Søholm Petersen (Denmark)

P-158 (ID 126) EFFECT OF HOP CONE SUPPLEMENTATION ON OXIDATIVE STRESS AND OXIDATIVE STABILITY OF FRESH AND STORED MEAT IN BROILERS <u>Vida Rezar</u>, Alenka Levart, Janez Salobir (Slovenia)

P-159 (ID 4) EFFECT OF REPLACING SOY IN BROILER DIETS ON PERFORMANCE, CARCASS YIELD AND COST OF PRODUCTION Marc Ritter, <u>Danielle Albiker</u>, Peter Spring (Switzerland)

P-160 (ID 299) EFFECT OF STORAGE ON FEEDING VALUE OF WHEAT DISTILLERS DRIED GRAINS WITH SOLUBLES (DDGS) FOR BROILER CHICKENS A Sharpe, M W Mirza, I Whiting, S P Rose, <u>V Pirgozliev</u> (UK)

P-161 (ID 257) GLYCEROL-A GREAT POTENTIAL SOURCE OF ENERGY FOR LAYER Pichet Sriboonyong, Yuwares Ruangpanit (Thailand)

P-162 (ID 201) EFFECT OF DIFFERENT NSP PRODUCTS IN TWO DIET TYPES ON GUT PARAMETERS AND BROILER PERFORMANCE Rob ten Doeschate, Karin van de Belt (UK & the Netherlands)

P-163 (ID 228) RAPESEED MEAL: NUTRITIONAL VALUE PROBABLY MORE DETERMINED BY PROCESSING THAN GEOGRAPHIC ORIGIN Ellen Van Eerden, Cees Kwakernaak, Adam Smith (the Netherlands & UK)

#### MINERAL NUTRITION

P-165 (ID 102) MEASUREMENT OF TRUE ILEAL CALCIUM DIGESTIBILITY OF LIMESTONE FOR BROILER CHICKENS

<u>Muhammad Naveed Anwar</u>, Ravi Ravindran, Patrick Morel, Rana Ravindran, Aaron Joell Cowieson (New Zealand & Australia)



#### P-166 (ID 309) DIETARY SELENIUM SUPPLEMENTATION OF BREEDERS INFLUENCES GROWTH AND SELENIUM STATUS OF PROGENY

<u>Mickaël Briens</u>, Florian Couloigner, Friedrich Rouffineau, Pierre-André Geraert, Yves Mercier (France)

#### P-167 (ID 308)

TOWARD AN EASY ASSESSING METHOD TO MEASURE SELENIUM BIOAVAILABILITY IN BIRDS

<u>Mickaël Briens</u>, Florian Couloigner, Maamer Jlali, Friedrich Rouffineau, Pierre-André Geraert, Yves Mercier (France)

#### P-168 (ID 335)

EFFECT OF ZN, CU & MN CHELATED WITH METHIONINE ANALOGUE ON BROILER CARCASS QUALITY

Pierre Buttin, Christophe Alleno, Mercedes Vazquez (Belgium & France)

#### P-169 (ID 338)

EFFECT ON BROILER CHICKEN LAMENESS AND PERFORMANCES OF 2 DOSES OF ZINC, COPPER AND MANGANESE SUPPLIED EITHER WITH AN INORGANIC SOURCE OR WITH CHELATES OF METHIONINE ANALOGUE

Pierre Buttin, Federico Sirri, Juxing Chen, Mercedes Vazquez (Belgium & Italy)

P-170 (ID 336) EFFECT ON LAYER PRODUCTION OF REDUCING ZN, CU & MN WITH AN INORGANIC SOURCE OR WITH CHELATES OF METHIONINE ANALOGUE Pierre Buttin, Christophe Alleno, Mercedes Vazquez (Belgium & France)

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BROILER PERFORMANCE AND PREVALENCE OF FOOTPAD LESIONS IN RESPONSE TO PHYTASE, CALCIUM AND PHOSPHORUS CONCENTRATIONS

Evelyne Delezie, Karel Bierman, Lode Nollet, Saskia Leleu, Luc Maertens (Belgium)

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<u>Miranda Elling-Staats</u>, Kazeem Akinloye, Juul Loeffen, Albert Dijkslag, Rene Kwakkel (the Netherlands)

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Khaled Itani, Birger Svihus, Gorm Sanson (Norway)

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H. R. Kutlu, L. Celik, N. Saber, H. Cinli, F. Külev, M. Kutlu, O. Yücelt (Turkev)

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P-178 (ID 167) A COMPARISON OF AVAILABLE PHOSPHORUS FROM SOYBEAN MEAL AT ILEAL AND FAECAL LEVEL IN BROILERS

Cees Kwakernaak, Marinus van Krimpen (the Netherlands)

P-180 (ID 306)

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P-182 (ID 337) EFFECT OF A REDUCE SUPPLY OF ZN, CU, MN AS CHELATE OF METHIONINE ANALOGUE ON HATCHABILITY IN BROILER BREEDERS AND BONE QUALITY OF PROGENY Silvia Peris, Christophe Alleno, Jacky Michard, Meghara Manangi (Belgium & France)

P-183 (ID 334) EFFECT OF TRACE MINERALS CHELATED WITH METHIONINE ANALOGUE ON THE DEVELOPMENT OF BACTERIAL CHONDRONECROSIS WITH OSTEOMYELITIS IN POULTRY Silvia Peris, Juxing Chen, Robert F. Wideman Jr., Mercedes Vazguez (Belgium & USA)

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Angela Riemensperger, Dawn Scholey, Rachael Bold, Emily Burton (UK)

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#### P-186 (ID 96)

#### ADAPTATION TO LOW PHOSPHORUS DIETS IN BROILERS

<u>Mohammad Hossein Shahir</u>, Mohammad Ali Haghparast, Hamid Reza Taheri, Nima Baradaran (Iran)

#### **P-188 (ID** 119)

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<u>Vasil Stanev</u>, Mark LaVorgna, Taylor Barbosa, Marco Quiroz, John Dickson, Dieter Vancraeynest (France & USA)

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<u>Tassanee Trairatapiwan</u>, Seksom Attamangkune, Yuwares Ruangpanit, Ornprapun Songserm (Thailand)

P-191 (ID 163) INHIBITORY ACTION OF ANALYTICAL GRADE ZINC OXIDE AND OF A NEW POTENTIATED ZINC OXIDE ON THE IN VITRO GROWTH OF ESCHERICHIA COLI AND OF SALMONELLA ENTERICA STRAINS Wilfried Vahjen, Agathe Romeo, <u>Stéphane Durosoy</u>, Jürgen Zentek (Germany & France)

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Piero Agostini, Barbara Auer, Walter Van Hofstraeten, <u>Loek de Lange</u> (the Netherlands & Austria)

#### P-194 (ID 75)

#### THE RELATIVE VALUE OF METHIONINE HYDROXY ANALOGUE (HMTBA) COMPARED TO DL-METHIONINE (DLM) AT DIFFERENT METHIONINE LEVELS IN COMMERCIAL BROILER DIETS FROM 0 TO 38 DAYS OF AGE

Piero Agostini, Pierre Buttin, Mercedes Vazquez-Añon (the Netherlands. Belgium & USA)

#### P-195 (ID 157)

REDUCING DIETARY CRUDE PROTEIN CONTENT IN BROILERS AGED FROM D14 TO D31 OF AGE

Pauline Belloir, Etienne Corrent, Jean Marc Hallouis, Michel Lessire, Sophie Tesseraud (France)

#### P-196 (ID 159)

RESPONSE TO DIETARY CRUDE PROTEIN CONTENT IN BROILERS FROM 21 TO 35 DAYS Pauline Belloir, Bertrand Meda, Etienne Corrent, Philippe Rousseau, <u>Sophie Tesseraud</u>, Michel Lessire (France)

#### P-197 (ID 271)

FACTORIAL MODEL TO ESTIMATE DIGESTIBLE VALINE, ISOLEUCINE AND TRYPTOPHAN REQUIREMENTS OF BROILER BREEDER HENS

Michele Bernardino de Lima, <u>Nilva Kazue Sakomura</u>, Edney Pereira da Silva, Juliano Cesar de Paula Dorigam, João Batista Kochenborger Fernandes, Camila Angelica Gonçalves (Brazil)

#### P-198 (ID 270)

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Michele Bernardino de Lima, <u>Nilva Kazue Sakomura</u>, Juliano Cesar de Paula Dorigam, Edney Pereira da Silva, Jaqueline de Paula Gobi (Brazil)

#### P-199 (ID 84)

# PARTIAL REPLACEMENT OF COMMERCIAL PROTEIN CONCENTRATE BY FEATHER MEAL IN BROILER DIETS

Ali Akbar Bhuiyan, Shijun Li, Anjuman Ara Bhuyan, Nazrul Islam (China & Bangladesh)

#### P-200 (ID 197)

EFFECT OF REPLACING SOYBEAN MEAL WITH DIFFERENT PROTEIN SOURCES DURING STARTER PERIOD ON PERFORMANCE AND FOOT PAD DERMATITIS IN BROILERS

<u>Siniša Bjedov</u>, Carsten Pedersen, Lidija Perić, Mirjana Đukić Stojčić, Niko Milošević (Serbia & Denmark)

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Juliano Cesar de Paula Dorigam, Nilva Kazue Sakomura, Michele Bernardino de Lima, Miryelle Freire Sarcinelli, Rafael Massami Suzuki (Brazil)





P-202 (ID 278) GLYCINE VERSUS DIMETHYLGLYCINE SUPPLEMENTATION IN LOW AND HIGH FAT BROILER DIETS

An Cools, Angelo Lauwaerts, Nick Martyak, Scott Beyer (Belgium & USA)

#### P-203 (ID 208)

MODELLING BROILER PERFORMANCES BASED ON DIETARY ENERGY AND DIGESTIBLE LYSINE

Jon de los Mozos, Alberto Navarro-Villa, Ana Isabel García-Ruíz, Greg Page (Spain & Canada)

#### P-204 (ID 282)

STOCHASTIC MODEL TO PREDICT LYSINE REQUIREMENT AND EGG PRODUCTION OF BROILER BREEDER HENS

Nayara Tavares Ferreira, <u>Nilva Kazue Sakomura</u>, Juliano Cesar de Paula Dorigam, João Batista kochenborger Fernandes, Rob Mervyn Gous (Brazil & South Africa)

#### P-205 (ID 318)

#### PROTEIN NUTRITION OF COMMERCIAL LAYING HENS

Lucio Francelino Araujo, Diogo Valle Gambaro, Cristiane Soares da Silva Araujo, Brunna Garcia Leite (Brazil)

P-206 (ID 26) RESPONSE OF BROILER CHICKENS TO DIETARY VALINE:LYSINE RATIO Marie Fredette, Virginie Rivera, Greg Page, Zhirong Jiang, Michel, <u>Marie-Pierre</u> Létourneau (Canada & USA)

P-207 (ID 224) EFFECT OF DIFFERENT DIETARY ENERGY AND PROTEIN LEVELS ON PERFORMANCE AND CARCASS CHARACTERISTICS OF JAPANESE QUAIL Navid Ghavipanje, Mojtaba Afshin, <u>Nazar Afzali</u> (Iran)

P-208 (ID 171) DETERMINATION OF STANDARDIZED ILEAL DIGESTIBLE LYSINE REQUIREMENT IN GROWING TURKEY POULTS BY DIFFERENT STATISTICAL METHODS <u>Afshin Heidariniya</u>, Mohamadhossein Shahir, Hamid Reza Taheri, Mohamadhossein Nemati (Iran)

P-209 (ID 81) EFFECT OF WHITE LUPINE SEEDS INCLUSION ON BROILER CHICKENS PERFORMANCE, DIGESTIBILITY AND VILLI STRUCTURE Sebastian Kaczmarek, Marcin Hejdysz, Andrzej Rutkowski (Poland)



#### P-210 (ID 185)

#### INTERACTION BETWEEN THREONINE AND GLYCINE AT LOW DIETARY CRUDE PROTEIN AND THE EFFECT ON PRODUCTION PERFORMANCE, MEAT QUALITY AND PLASMA METABOLITES IN BROILER CHICKENS

<u>William Lambert</u>, Marc Rovers, Jan Ensink, Sophie Tesseraud, Etienne Corrent, Loek de Lange, Laura Star (the Netherlands & France)

#### P-211 (ID 188)

# IS META-ANALYSIS AN EFFECTIVE TOOL TO ESTIMATE THE GLYCINE PLUS SERINE REQUIREMENT OF BROILER CHICKENS?

William Lambert, Aude Simongiovanni, Sophie Tesseraud, Etienne Corrent (France)

#### P-212 (ID 186)

THREONINE REQUIREMENT OF BROILER CHICKENS: INTEGRATED PREDICTION BY META-ANALYSIS

William Lambert, Aude Simongiovanni, Sophie Tesseraud, Etienne Corrent (France)

#### P-213 (ID 11)

PROTEIN-CARBOHYDRATE FEED FOR BROILERS Tatiana Lenkova, <u>Tatiana Egorova</u> (Russian Federation)

#### P-214 (ID 25)

IMPACT OF DIFFERENT DIETARY L-ARGININE CONCENTRATIONS ON GROWTH OF PUREBRED LAYING HENS OF FOUR GENOTYPES DIFFERING IN PHYLOGENY AND PERFORMANCE LEVEL

<u>Marc-Alexander Lieboldt</u>, Ingrid Halle, Jana Frahm, Rudolf Preisinger, Lars Schrader, Steffen Weigend, Sven Dänicke (Germany)

#### P-215 (ID 66)

INTERACTION OF GRADED DIETARY L-LYSINE (LYS) AND GENOTYPE (GT) ON PERFORMANCE AND EGG QUALITY OF PUREBRED LAYING HENS DIFFERING IN PHYLOGENY AND PERFORMANCE LEVEL

<u>Marc-Alexander Lieboldt</u>, Ingrid Halle, Steffen Weigend, Rudolf Preisinger, Sven Dänicke (Germany)

#### P-216 (ID 290)

# EFFECT OF DIGESTIBLE ARGININE TO DIGESTIBLE LYSINE (DARG:DLYS) RATIOS ON PERFORMANCE OF MALE ROSS 308 BROILERS

Leonardo Linares, Hilke Willemsen, Sandro Cerrate, Marcelo Silva, Jim McAdam (UK & USA)

#### P-217 (ID 80)

REPLACING SOYBEAN MEAL BY ALTERNATIVE PROTEIN SOURCES: MULTICRITERIA ASSESSMENT OF MEDIUM OR SLOW-GROWING CHICKEN PRODUCTION SYSTEMS Bertrand Méda, Michel Lessire, Léonie Dusart, Isabelle Bouvarel, Cécile Berri (France)



#### P-218 (ID 321) THE USE OF HERBAL METHIONINE AS AN ALTERNATIVE TO DL-METHIONINE IN BROILER CHICKENS

Soudabeh Moradi, Arash Moradi, Zahra Zangane (Iran)

#### **P-222 (ID** 268)

EFFECT OF FEED PROTEIN CONTENT ON THE PERFORMANCE AND UNIFORMITY OF LAYING HENS

Hilda Palma Bendezu, <u>Nilva Kazue Sakomura</u>, Euclides Braga Malheiros, Edney Pereira Da Silva, Camila Gonçalves, Michele Bernardino de Lima (Brazil)

#### P-223 (ID 63)

VARIATIONS IN SOYBEAN MEAL AND EFFICIENCY OF PROTEIN HYDROLYSIS BY PANCREATIC PROTEASE AND MICROBIAL PROTEASE

Katrine Pontoppidan, Gonzalo G. Mateos, Rosalina Angel, Adam Smith (Denmark, Spain, USA & UK)

#### P-224 (ID 106)

# IDENTIFICATION OF PROTEIN FRACTIONS IN DIGESTA OF BROILERS FED WITH FOUR DIFFERENT PROTEIN SOURCES

Emilie Recoules, Houda Sabboh-Jourdan, Agnès Narcy, Michel Lessire, Grégoire Harichaux, Michel Duclos, Sophie Réhault-Godbert (France)

#### P-225 (ID 124)

INFLUENCE OF DIETARY LEVELS OF WHEAT DISTILLERS' DRIED GRAINS WITH SOLUBLES AND TWO VALUES OF STANDARDISED ILEAL DIGESTIBLE AMINO ACIDS ON BROILER GROWTH PERFORMANCE

Lorraine Salmon, Oliver Caiger Smith, Nell O'Neill, Richard Weightman, Julian Wiseman, <u>Oluyinka Olukosi</u> (UK)

#### P-226 (ID 259)

DETERMINATION OF STANDARDIZED ILEAL DIGESTIBLE LYSINE REQUIREMENT OF MALE TURKEY POULTS USING PHYSIOLOGICAL INDICATORS

<u>Mohammad Hossein Shahir</u>, Afshin Heidariniya, Hamid Reza Taheri, Seyed Abdollah Hoseini (Iran)

#### P-227 (ID 95)

THE EFFECTS OF ARGININE, GLUTAMINE AND THREONINE SUPPLEMENTATION IN THE STARTING PHASE ON SUBSEQUENT PERFORMANCE OF MALE BROILERS Mohammad Hossein Shahir, Jalal Fazli Amiri, Mohammad Hossein Nemati (Iran)

P-228 (ID 131) FABA BEANS AS PROTEIN SOURCE IN DIETS FOR ORGANIC EGG LAYERS Sanna Steenfeldt, Jens Askov Jensen, Marianne Hammershøj (Denmark)



P-229 (ID 177) VARIATION OF AMINO ACID DIGESTIBILITY OF TRITICALE GENOTYPES STUDIED IN CAECECTOMISED LAYING HENS Tobias Zuber, Markus Rodehutscord (Germany)

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P-232 (ID 297) STABILITY OF SECONDARY PLANT COMPOUNDS BASED PRODUCTS IN FEED PROCESSING Rainer Aschenbroich (Germany)

#### P-233 (ID 209)

FURTHER INVESTIGATIONS ON THE ADVERSE EFFECTS OF FEED AND WATER DEPRIVATION OF DAY-OLD CHICKS, WITH EMPHASIS ON THE GASTROINTESTINAL DEVELOPMENT An Bautil, Jens Lesuisse, Nadia Everaert, Johan Buyse (Belgium)

P-234 (ID 134) EFFECT OF YEAST AS A SOURCE OF NUCLEOTIDE SUPPLEMENTED IN BROILER BREEDERS DIETS AND ITS CARRYOVER EFFECT ON PROGENY Melina Bonato, Lúcio Araújo, Ricardo Barbalho, Cristiane Araújo (Brazil)

P-235 (ID 274) EFFECTS OF FEEDING ORIGINAL XPC DURING A CAMPYLOBACTER CHALLENGE IN BROILERS AND TURKEYS Jonathan Broomhead, Doug Smith, Don McIntyre (USA)

P-236 (ID 311) PECULIARITIES OF CHICKENS' GLUCOSE TRANSPORT AND MECHANISMS INVOLVED Edouard Coudert, Estelle Cailleau-Audouin, Christophe Praud, Pascal Froment, <u>Sophie</u> <u>Tesseraud</u>, Sonia Métayer-Coustard (France)

P-237 (ID 206)

FEED DENSITY AND TARGET BODY WEIGHT DURING THE REARING PHASE INFLUENCED BODY COMPOSITION, FEEDING MOTIVATION AND BEHAVIOUR OF BROILER BREEDER PULLETS

Jon de los Mozos, Leo den Hartog, Ana Isabel García-Ruíz, M<sup>a</sup> Jesús Villamide (Spain & the Netherlands)



#### P-238 (ID 207) SPLITFEEDING SYSTEM REDUCES SECOND GRADE EGGS IN THE LATE PRODUCTION PHASE OF LAYING HENS

Jon de los Mozos, Alberto Navarro-Villa, Ana Isabel García-Ruíz (Spain)

#### P-239 (ID 133)

# THE INFLUENCE OF OZONE TREATMENT ON THE DEGRADATION OF DIFFERENT MYCOTOXINS IN CONTAMINATED MAIZE

<u>Karoly Dublecz</u>, Laszlo Pal, Laszlo Wagner, Ferenc Husveth, Fanni Dublecz, Orsolya Hegyi (Hungary)

#### P-242 (ID 192)

EFFECT OF PARTICLE SIZE AND FEED PRESENTATION (MASH VS PELLETS) ON CECAL MORPHOLOGY AND CAMPYLOBACTER JEJUNI COLONIZATION OF BROILERS ORALLY INFECTED

Marta I. Gracia, Francisco J. García-Peña, M. Guyard, Gilles Le Pottier, M. Tenk (Spain, France & Hungary)

#### P-243 (ID 289)

# EFFECT OF PHYSICAL FEED QUALITY AND LOW ENERGY MASH DIET ON THE PERFORMANCE OF BROILER BREEDERS

Eija Helander, Hilke Willemsen, Carolyne Kemp, Otto van Tuijl (UK & the Netherlands)

P-244 (ID 181) EXPANDING TEMPERATURE OF FEED DURING PROCESSING AFFECTED BROILER PERFORMANCE, PELLET QUALITY AND LIPID DIGESTIBILITY Christine Jansen van Rensburg, Dieter Fleischmann (South Africa)

#### P-245 (ID 230)

#### THE EFFECT OF NOVEL CARBOHYDRASES ON PERFORMANCE AND GASTROINTESTINAL MICROECOLOGY OF THE BROILER CHICKENS

<u>Damian Józefiak</u>, Jakub Długosz, Bartosz Kierończyk, Mateusz Rawski, Sylwester Świątkiewicz, Natalia Soares (Poland & Belgium)

P-246 (ID 252) CRUDE MICROFLORA MIX ON THE CONTROL OF NECROTIC ENTERITIS Chake Keergin, Shubiao Wu, Robert Swick, Mingan Choct (Australia)

#### P-247 (ID 210) DOES CAGE EFFECT REDUCTION HAVE AN IMPORTANT ROLE ON INTESTINAL MICROBIOTA?

Alireza Khadem, Marta Ribeiro Alves Lourenço, Geert P. J. Janssens, Luc Maertens, Evelyne Delezie, Ronny Mombaerts, <u>Anne Goderis</u>, Monica Höfte (Belgium) th EUROPEAN SYMPOSIUM ON POULTRY NUTRITION

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P-248 (ID 155) PERFORMANCE AND INCIDENCE OF TIBIAL DISCHONDROPLASIA IN BROILERS SUPPLEMENTED WITH 25-HYDROXY-CHOLECALCIFEROL IN DIET

Michele Laboissiere, Roberto de Moraes Jardim-Filho, Marcos Barcellos Cafe, Maria Auxiliadora Andrade, Elisabeth Gonzales, <u>Jose Henrique Stringhini</u> (Brazil)

P-249 (ID 189) EMULSIFIER INFLUENCING FAT AND GROSS ENERGY DIGESTIBILITY OF BROILERS FED DIETS CONTAINING FAT POWDER

Saskia Leleu, David Hermans, Manu De Laet, Evelyne Delezie, Luc Maertens (Belgium)

P-250 (ID 212) EFFECT OF A REDUCED BALANCED MATERNAL DIETARY PROTEIN LEVEL ON THE

REPRODUCTIVE PERFORMANCE OF BROILER BREEDERS AND THE ZOOTECHNICAL PERFORMANCE OF THEIR PROGENY

Jens Lesuisse, Congcong Li, Seline Schallier, Nadia Everaert, Johan Buyse (Belgium)

P-251 (ID 139)

EFFECT OF FEED FORM AND CHANGE OF FEED FORM ON THE PERFORMANCES OF FASTGROWING BROILERS FED A WHEAT BASED DIET Luc Maertens, Evelyne Delezie, Saskia Leleu (Belgium)

P-253 (ID 132) EIMERIA MAXIMA CAUSES CHANGES IN MRNA EXPRESSION OF GENES ASSOCIATED WITH AMINO ACID AND SUGAR UPTAKE IN THE JEJUNUM OF INFECTED BROILERS Katarzyna Miska, Raymond Fetterer (USA)

P-254 (ID 322)

THE EFFECT OF INCREASING METABOLIZABLE ENERGY, LEVEL AND DURATION OF FEED RESTRICTION ON PERFORMANCE AND BLOOD PARAMETERS IN BROILER CHICKENS Soudabeh Moradi, <u>Zahra Zangane</u>, Alireza Abdolmohammadi (Iran)

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DETERMINATION OF THE IN VITRO SENSITIVITY OF CHICKEN AND PORCINE PERIPHERAL BLOOD MONONUCLEAR CELLS TO DEOXYNIVALENOL AND DEEPOXY-DEOXYNIVALENOL Barbara Novak, Elisabeth Mayer, Sabine Hessenberger, Gerd Schatzmayr (Austria)

P-256 (ID 281)

SIMULATION AND EXPERIMENTAL VALIDATION TO PREDICT FEED INTAKE IN PRE-LAYING PHASE

Hilda Palma Bendezu, <u>Nilva Kazue Sakomura</u>, Euclides Braga Malheiros, Juliano Paula Dorigam (Brazil)

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#### P-257 (ID 129) EFFECT OF A NOVEL CARBOHYDRATE FRACTION ON INTESTINAL MORPHOLOGY OF BROILER CHICKENS

Lidija Perić, Mirko Ivković, Dragan Žikić, Peter Spring (Serbia & Switzerland)

#### P-258 (ID 145)

THE DEVELOPMENT OF LACTOBACILLI IN THE BROILER GASTROINTESTINAL TRACT Samir Ranjitkar, Ricarda M. Engberg, Blair Lawley, Gerald Tannock (Denmark & New Zealand)

P-259 (ID 37) FEED PRACTICES IN AUSTRALIAN FREE-RANGE EGG PRODUCTION Isabelle Ruhnke, Carolyn DeKoning, Kelly Drake, Mingan Choct, Mini Singh (Australia)

#### P-260 (ID 245)

HISTOMORPHOMETRIC MEASURES OF INTESTINAL SEGMENTS OF EMBRYOS AND BROILER CHICKS HATCHED FROM DIFFERENT EGG WEIGHTS AND FED INCREASED DIGESTIBLE LYSINE LEVELS IN PRE-STARTER DIETS

Januaria Silva Santos, Eduardo Miranda De Oliveira, Andre Luiz Machado Carneiro, Maria Auxiliadora Andrade, Marcos Barcellos Cafe, <u>Jose Henrique Stringhini</u> (Brazil)

#### P-261 (ID 88)

EFFECTS OF SLAUGHTER WEIGHT AND SEX ON CARCASS YIELD, FAT AND FATTY ACID COMPOSITION OF MEAT IN BROILERS

Arda Sozcu, Umran Sahan (Turkey)

P-262 (ID 82) ELEVATED HATCHER TEMPERATURE AFFECTS ONE DAY OLD CHICK QUALITY AND GROWTH PERFORMANCE DURING EARLY POST-HATCH PERIOD Arda Sozcu, Aydin Ipek (Turkey)

P-263 (ID 240) SURVEY ON THE COCCIDIOSIS PREVENTION STRATEGIES AND PRACTICES IN THE AMERICAS

Vasil Stanev, Roberto Carlos Vargas, Marco Quiroz, Dieter Vancraeynest (France)

P-264 (ID 149) EFFECT OF DIFFERENT DIETARY LEVELS OF ENERGY AND PROTEIN ON PERFORMANCE OF JAPANESE QUAIL DURING GROWER PHASE Hamid Reza Taheri, Mohammad Abbasi (Iran)

P-265 (ID 140) GROWTH PERFORMANCE AND IMMUNE RESPONSE OF BROILER CHICKENS FED DIETS SUPPLEMENTED WITH PROBIOTIC AND PREBIOTIC, INDIVIDUALLY OR INCOMBINATION Hamid Reza Taheri, Mozhgan Kokabi Moghadam, Mohammad Kakebaveh, Taher Harakinezhad (Iran) th EUROPEAN SYMPOSIUM ON POULTRY NUTRITION



P-266 (ID 6) STARCH AND PROTEIN INTESTINAL UPTAKES IN TANDEM INFLUENCE WEIGHT GAIN OF **BROILER CHICKENS** 

Ha Truong, Rachael Bold, Sonia Liu, Peter Selle (Australia & UK)

P-267 (ID 158) THE EFFECT OF GENOTYPE, HOUSING SYSTEM AND CALCIUM ON OVIPOSITION TIME AND EGG SHELL QUALITY

Eva Tůmová, Vladimíra Charvátová, Michaela Englmaierová (Czech Republic)

P-268 (ID 118) THE EFFECT OF EARLY FEED RESTRICTION, GENOTYPE AND SEX ON PERFORMANCE AND CARCASS COMPOSITION OF BROILER CHICKENS Linda Uhlířová, Eva Tůmová (Czech Republic)

P-269 (ID 223) EFFECT OF FEED AND WATER ACCESS ON HATCHLING BODY WEIGHT CHANGES BETWEEN HATCH AND PULL

Carla van der Pol, Conny Maatjens, Gerald Aalbers, Inge van Roovert-Reijrink (the Netherlands)

P-270 (ID 153) EFFECTS OF DIFFERENT FEEDING STRATEGIES DURING REAR AND LAY ON EGG WEIGHT.

AGE OF SEXUAL MATURITY AND PEAK PRODUCTION IN BROILER BREEDER FEMALES Rick van Emous, René Kwakkel, Marinus van Krimpen (the Netherlands)

P-272 (ID 323) THE EFFECT OF INCREASING METABOLIZABLE ENERGY, LEVEL AND DURATION OF FEED **RESTRICTION ON PERFORMANCE AND INTESTINAL MORPHOLOGY IN BROILER CHICKENS** 

Zahra Zangane, Soudabeh Moradi, Alireza Abdolmohammadi (Iran)

FINAL PROGRAMME

# **POSTER SESSION HAPPY HOURS**



25 August, 2015, 18:00-19:00

**POSTER AREA** 



26 August, 2015, 14:00 - 15:00

A small refreshment will be served during the Poster Session Happy Hours. All participants are kindly invited.







### SATELLITE SYMPOSIA

#### MONDAY, 24 AUGUST, 2015



ADISSEO	MEETING HALL V
Title:	The 9 <sup>th</sup> Advancia International Seminar
	Amino acids, redox balance and anti-oxidant mechanisms
Time: Chairmen:	08:15–13:00 Prof Mingan Choct and Prof Peter Surai
Programme: 08:15	Welcome and Introduction
08.15	Dr Pierre-André Geraert
08:30-10:00	Immunity Redex balance and Anti Ovidant mechanisms
08.30-10.00	Immunity, Redox balance and Anti-Oxidant mechanisms Redox biology, amino acids and feed efficiency: what
	proteogenomic studies can reveal
	Prof Walter Bottje
	Selenoproteins: from anti-oxidant to immune potential
	Dr Mickaël Briens
10:00-10:30	Coffee Break with my PNE
10:30-11:45	Update on recent researches
	Methionine and immunity Prof Sammy Aggrey
	Impact of methionine deficiency on protein metabolism
	Dr Sophie Tesseraud
	Meat quality: impact of anti-oxidants
	Dr Mario Estevez
11:45-12:45	Round Table and Take home messages
	Prof Mingan Choct and Prof Peter Surai
	Formulating with low protein: diets

#### FINAL PROGRAMME





DSMMEETING HALL IVTitle:Gut health in poultry: Lessons from human & animal physiologyTime:15:30–17:30Chairman:Dr. Fidelis Fru, R&D Director, Animal Nutrition & Health, DSM

Programme:

**New research into the human gut and its relevance to gut health in poultry** *Dr. Jan Sikkema*, Director Center for Development and Innovation, University Medical Center Groningen, The Netherlands

Nutrigenomics & nutrigenetics in poultry: definition, examples and perspectives *Dr. Michel Duclos*, Director of INRA Avian research unit, Nouzilly, France

**Developing a gut health solution requires a new holistic direction** *Dr. Fidelis Fru*, R&D Director, Animal Nutrition & Health, DSM

Interactive discussion

th EUROPEAN SYMPOSIUM ON POULTRY NUTRITION

X|X|X|

TUESDAY, 25 AUGUST, 2015



WINNING FORMULAS

#### PERSTORP

Title<sup>.</sup>

FORUM HALL

The science and practice of butyric acid in poultry nutrition today 13.00 - 13.45Time<sup>.</sup> Speaker: Dr. Geert Wielsma DVM, Product manager at Perstorp

#### Brief introduction of the presentation:

For over three decades, butyric acid has been studied as a feed additive in many different species. The mode of action is complex and diverse. New technologies to deliver butyric acid in the small intestine of animals have opened the door to new applications of the molecule. The positive effects on gut wall integrity, microbiota and the immune system make butyric acid an excellent tool to modulate gut health. With an increasing pressure to reduce the use of antibiotics in animal feed and at the same time the need to improve technical performance on farm level, solutions that improve gut health are much needed.

Perstorp is one of the few basic producers of butyric acid in the world. With the development of new solutions to influence gut health in poultry, Perstorp tries to help solve the questions of today's industry needs. In this presentation you will be updated with the latest insights in the use of gut health improving solutions, with special attention to the use of butyric acid.

#### THURSDAY, 27 AUGUST, 2015

# SOLUTIONS SERVICE SUSTAINABILITY

NOVUS INTERNATIONAL

FORUM HALL Title<sup>.</sup> Environmental constraints in poultry related to Zn, Cu and Mn Time: 12:30-13:15 Laura Star, PhD, Schothorst Feed Research, Researcher Poultry Speaker: Nutrition

Register online at www.novusint.com/ESPN2015, at the Novus stand or before the symposium at the Forum Hall entrance.

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### SYMPOSIUM VENUE

Prague Congress Centre (PCC), 5. května 65, 140 21 Prague 4, Czech Republic, Phone: +420 261 171 111, website: www.kcp.cz

Public transport: Metro Line C (red), Vyšehrad station Symposium Entrance: Entrance number 5 Tours Meeting Point: Entrance number 10 Forum Hall Plenary Room Area -Catering **ViFi and Relax Zone** Meeting Hall V : QHANIZ oster Area Photo Exhibition Meeting Hall IV 1eeting Hall III ESPN ÷ 5.1 :11 Catering Area as Roon B Discussion Grou r

th EUROPEAN SYMPOSIUM ON POULTRY NUTRITION

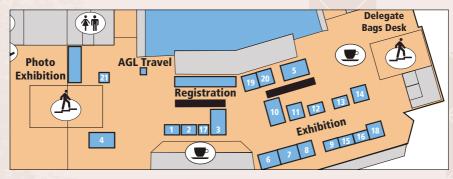
## EXHIBITION PLAN & LIST OF EXHIBITORS

20

#### LIST OF EXHIBITORS:

- 1 Alltech
- 2 Aviagen
- 3 BIOMIN GmbH
- 4 Perstorp
- 5 DSM
- 6 Adisseo
- 7 Huvepharma
- 8 DuPont Industrial Biosciences
- 9 Nuscience
- 10 Novus International
- 11 Zoetis International Services SAS

- 12 EW Nutrition
- 13 Impextraco
- 14 Delacon Biotechnik GmbH
- 15 Phytobiotics Futterzusatzstoffe GmbH
- 16 AB Vista
- 17 Context Publications
- 18 Sadepan Chimica Srl.
- 19 Elanco Animal Health
- 20 Evonik Industries AG
- 21 WPSA



#### **EXHIBITION HOURS:**

Monday, 24 August, 2015	18:00 – 21:00
Tuesday, 25 August, 2015	09:00 – 17:00
Wednesday, 26 August, 2015	09:00 – 17:00
Thursday, 27 August, 2015	09:00 – 15:00

# 

### **COMPANY PROFILES**

#### AB VISTA

AB Vista is a specialist producer of feed ingredients, and a division of AB Agri, the agricultural arm of Associated British Foods (ABF) Ltd.

#### ADISSEO

Adisseo is one of the world's leading experts in feed additives. The group relies on its 7 research and technology centers and its production sites based in Europe and China to design, produce and market nutritional solutions for sustainable animal feed. With 1,800 employees, it serves more than 2,600 customers in over 100 different countries through its global distribution network. In 2014, Adisseo achieved a turnover of over 1 billion euros. Adisseo is one of the main subsidiaries of China National BlueStar, leader in the Chinese chemical industry with nearly 25,000 employees and a turnover of 50.2 billion RMB (6.1 billion euros).

#### ALLTECH

Alltech's solutions for poultry provide our customers with a competitive advantage through nutritional technologies tailored to address challenges impacting modern poultry production and profitability.

#### AVIAGEN

Aviagen Broiler Breeders supplies day-old grandparent and parent stock chicks to customers in 130 countries worldwide under the Arbor Acres®, Indian River®, and Ross® brand names.

#### BASF

At BASF, we create chemistry – and have been doing so for 150 years. Feed producers, farmers, animals and consumers – all can benefit from our research and development committed to feeding the world's growing population. Our enzymes, glycinates, vitamins, carotenoids, organic acids, clays, and omega-6's help farmers raise vital animals.

#### **BIOMIN GmbH**

At BIOMIN we harness the power of science to support animal health and performance. By applying state-of-the-art and proprietary technology we deliver natural, sustainable and profitable solutions to the livestock industry. For over 30 years we have pioneered innovative solutions for mycotoxin risk management and gut performance.

Our in-house R&D program at the BIOMIN Research Center is staffed by 80 scientific researchers and supported by eight Centers for Applied Animal Nutrition and a research



network of 200 academic and research institutions globally. Our clients in the poultry, swine, cattle and aquaculture sectors are located in more than 100 countries worldwide.

#### DELACON BIOTECHNIK GmbH

#### **Delacon – performing nature**

Founded and grown as an Austrian family business, Delacon has been the pioneer and global leader in phytogenic feed additives for more than 25 years. The company researches, develops and produces purely natural feed additives composed of herbs, spices and essential oils for ruminants, swine and poultry and coined the term 'phytogenics'. The vision of company founder Helmut Dedl to replace antibiotic growth promoters by phytogenic feed additives and thus to ensure sustainable, profitable life production and food safety, still applies to the current CEO Markus Dedl as a guideline of corporate strategy.

#### DSM

#### DSM's world of Animal Nutrition & Health

DSM is one of the world's leading suppliers of vitamins, carotenoids, eubiotics and feed enzymes to the global feed, food, pharmaceutical and personal care industries.

DSM has a strong tradition as a pioneer in the discovery of new products, formulations and attractive applications for all industry segments and, supported by carefully targeted R&D, the company is able to respond actively to the current and future trends in the market place. DSM has the broadest range of ingredients in the industry.

In the feed industry, all of our products are specifically developed and formulated in terms of stability, bio-availability, handling properties, traceability and safety, to meet the requirements of modern-day animal feed production.

DSM creates effective nutritional solutions for poultry, swine, ruminants, aquaculture, helping farmers to meet increasing demands for welfare, environment, health, pigmentation, feed cost savings and sustainability.

#### DUPONT INDUSTRIAL BIOSCIENCES

Danisco Animal Nutrition helps animal producers maximize the return on their feed investment, improve liveability and tackle commercial sustainability challenges through deliver of optimized feed enzyme, betaine and probiotic feed solutions.

For more information, please visit: www.animalnutrition.dupont.com

#### ELANCO ANIMAL HEALTH

Hemicell is highly specific enzyme for poultry and swine diets. Its unique mode of action helps reduce energy loss caused by Feed Induced Immune Response (FIIR) to soluble  $\beta$ -mannans found in soybean meal and any other vegetable feed ingredients. With fewer  $\beta$ -mannans in feed, FIIR is reduced, allowing the animals to direct more energy to growth and performance.



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#### **EVONIK NUTRITION & CARE GmbH**

Evonik Nutrition & Care GmbH produces and markets all four essential amino acids used in advanced animal nutrition: MetAMINO®, Biolys®, ThreAMINO® and TrypAMINO®. Mepron®, a rumen-stable DL-methionine for high-performance dairy cows, and CreAMINO®, a creatine source for broilers complement the product portfolio.

#### **EW NUTRITION**

EW Nutrition is a dynamic company, globally active with a strong science based portfolio of functional, innovative feed&food additives.

#### HUVEPHARMA

Huvepharma® is a European based, globally operating company, developing, producing and marketing animal health products and feed additives. Main focus of Huvepharma® is to improve the profitability and sustainability of the swine, poultry and cattle sector. This is shown by a continuous release and development of new effective products and convenient formulations and providing technical service, to support the animal production chain in producing efficiently healthy animal products. Huvepharma's enzyme range with OptiPhos® and Hostazym® X as well recognized brands, are part of this and famous for their effectiveness all around the world.

#### IMPEXTRACO

Impextraco® develops & produces feed ingredients that protect animal health and enhance productivity while respecting animal welfare & sustainability.

#### LOHMANN ANIMAL NUTRITION GmbH

Lohmann Animal Nutrition: for healthy animals through long-term expertise in feed formulation and the development of clever nutrition concepts.

#### NOVUS INTERNATIONAL

Novus International, Inc. is headquartered in St. Charles, Missouri, U.S.A. and serves over 3,000 customers in nearly 100 countries around the world. As a global leader in developing animal health and nutrition solutions, Novus provides a wide range of products including amino acids, organic trace minerals (OTMs), feed enzymes, eubiotic solutions, pigments and feed quality ingredients. These products deliver a demonstrable and sustainable value to animal protein producers, allowing for more efficient and cost-effective production.

Novus is proud to partner with the 20th European Symposium on Poultry Nutrition. Learn more at www.novusint.com/ESPN2015



#### NUSCIENCE

Nuscience Group is a global player in premixes, concentrates, mineral feed, nutritional concepts and feed additives in the animal nutrition industry.

#### PERSTORP

Perstorp is a leading provider of gut health and preservation solutions for the poultry industry. Perstorp produces organic acids and its derivatives to create value adding feed additives that serve today's industry needs. The global challenge to increase animal health and welfare and reduce the use of antibiotics at the same time requires new methods for feeding animals. With products such as ProPhorceTM SR, we aim to increase animal performance and optimize gut health in broilers and layers. Our global service team is happy to help you with any questions. Visit www.perstorp.com for more information.

#### PHYTOBIOTICS FUTTERZUSATZSTOFFE GmbH

Phytobiotics offers Sangrovit®, a phytogenic, natural performance enhancer, which improves feed conversion ratio, mortality rate and helps to maintain a healthy gut.

#### ZOETIS INTERNATIONAL SERVICES SAS

Building on more than 60 years of experience in animal health, Zoetis strives to support those who raise and care for farm animals by providing a range of products and services that offer tangible solutions to the many challenges veterinarians and livestock producers face every day.

For more information, visit www.zoetis.com.

### **INSTRUCTIONS FOR SPEAKERS**

#### HOW TO SUBMIT YOUR PRESENTATION AT THE SYMPOSIUM

- Please come to the Speakers' Ready Room (Meeting room 2.2) at least 1 ½ hour before the beginning of your session. In case your speech has been scheduled for morning session please come to the Speakers' Ready Room (Meeting room 2.2) one day before the day of your presentation.
- **Speakers' Ready Room** (Meeting room 2.2) location will be marked in the final programme brochure.

#### **Opening hours of the Speakers' Ready Room (Meeting room 2.2)**

Monday, 24 August, 2015	15:00–21:00
Tuesday, 25 August, 2015	07:30–17:30
Wednesday, 26 August, 2015	07:30–17:00
Thursday, 27 August, 2015	07:30–11:30

#### **OTHER INFORMATION**

- During your lecture you will be using Remote Control for controlling your presentation.
- Your own notebook is allowed to use for presentation only after discussion with technician on-site.
- All presentations will be deleted from all the PC used during the Symposium.

#### We strongly ask all the speakers to keep the time of their presentations.



# REGISTRATION

Registration Desk is situated on the 2<sup>nd</sup> floor.

#### **REGISTRATION HOURS:**

Monday, 24 August, 2015	15:00 – 21:00
Tuesday, 25 August, 2015	07:30 – 19:00
Wednesday, 26 August, 2015	08:00 – 17:30
Thursday, 27 August, 2015	08:00 – 18:00

# WHAT IS COVERED BY THE FEE?

#### DELEGATE

Attending all Symposium Scientific Sessions Participation in Opening Ceremony, Welcome Cocktail and Closing Ceremony Admission to the Exhibition Area Symposium bag, Symposium documents, Abstracts, Final Programme and other Symposium materials Coffee breaks, Lunches Free public transport ticket valid during symposium dates (24–27 August 2015) for all means of public transport in Prague

#### ACCOMPANYING PERSON

Participation in Opening Ceremony, Welcome Cocktail and Closing Ceremony Admission to the Exhibition Area Coffee breaks, Lunches Free public transport ticket valid during symposium dates (24–27 August 2015) for all means of public transport in Prague Prague City Tour (D1-1) on 26 August, 2015 organised by AGL travel

FINAL PROGRAMME



#### **BADGE CATEGORIES**

DELEGATE

ORGANISER

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Admission to: Symposium Scientific Sessions / Poster Area / Exhibition Area Opening Ceremony / Welcome Cocktail / Closing Ceremony

VIP

EXHIBITOR

ACCOMPANYING PERSON

Admission to: Exhibition Area / Opening Ceremony / Welcome Cocktail Closing Ceremony

#### BADGES

The badges are provided along with other symposium items upon registration. Please wear them at all times during the symposium. Please note that badge is an identification assuring your entrance to Symposium premises.



## SOCIAL PROGRAMME

#### **OPENING CEREMONY & GET TOGETHER PARTY**



Date: Monday, 24 August, 2015 Time: 18:00–19:00 Opening Ceremony 19:00–21:00 Get Together Party Venue: Prague Congress Centre, Forum Hall; Exhibition Area

Please join us for this social gathering! The Programme will start with a speech from Congress President followed by very special musician and light art performance.



#### FINAL PROGRAMME



#### GALA RECEPTION



SOLUTIONS SERVICE SUSTAINABILITY"

Date:Tuesday, 25 August, 2015Time:20:00 - 23:00Venue:National House of Vinohrady, Namesti Miru 9, 120 53 Prague 2

The Gala Reception will be held in the National House of Vinohrady. You are cordially invited to taste Czech and international cuisine and enjoy live entertainment with the possibility to get back to 30<sup>°</sup> and try to dance Charleston with professionals.







**OPTIONAL CULTURE & TOURS** 

AGL Travel, a travel agency operating on the European tourism market for more than 10 years, will be organizing some very interesting pre- and post tours to selected locations in the Czech Republic, and one-day and half-day trips and excursions from Prague for you under the **20<sup>th</sup> European Symposium on Poultry Nutrition in 2015.** 



Tours Desk is situated in the Registration Area.

X|X|

	9:30 14:00	9:00 14:00	9:30	18:00	8:30	9:00	9:00	9:00 12:00	8:30	9:30	8:30		
	D1-1	D1-2	D1-3	D1-4	D2	D3n	D4	D5	D6	D7	D8		
Mon, Aug-24	х-	х-	х	х				х-					
Tue, Aug-25	хх		х	х	х	х	х	- x		х		-	-
Wed, Aug-26	хх		х	х			х	х -	х	x	х	Soci	al E.
Thu, Aug-27			х	х	х	х	х	- x		х			
Fri, Aug-28		хх	х	х	х		х	х-			х		
Sat, Aug-29		хх	х	х	х	х	х	- x			х	A2	<b>B2</b> <sup>3</sup>
Sun, Aug-30		хх	х	х	х		х	- x				AZ	
Mon, Aug-31		хх	х	х				х -					
Duration (hrs)	3	3	6,5	3	10	5	6	6	6	2,5	10		
Lunch	-	-	-	-	+	-	-	-	-	-	+		
Price (per person)	18	25	42	45	62	30	32 <sup>2</sup>	34	46 <sup>3</sup>	39	55	354	243
Price (student <sup>1</sup> )	16	23	38	45	55	28	30	32	44	37	48	354	243

#### EXCURSIONS, TRIPS AND TOURS DURING AND AFTER THE CONFERENCE

<sup>1</sup>Student ID card is necessary, age limit up to 26 (incl.), <sup>2</sup>without lunch, otherwise  $+6 \in$  lunch voucher, <sup>3</sup>the tour will be organized in case the amount of applicants is above 10

# All conference trips and excursions have a meeting point at a VIP entrance to the Prague Congress Center (Entrance no. 10), the location of ESPN 2015. The pickup time is in the table. The drop off is at the "Republiky" square.

The pre/post-conference tours "D" have departure and drop off at the "Republiky" square, departure time is half an hour later. The tours "A" and "B" have departure and

#### FINAL PROGRAMME



drop off at the hotel.

The participants are kindly requested to inform us, if they prefer to drop off at the hotel ( $\notin$ 5 extra).

D1-1 – Prague City Tour for ESPN participants	D4 – Karlštejn Castle
▶ Bus + on foot, English guide	▶ Bus, English guide, admission fee
D1-2 – Prague Grand City Tour	D5 – Kutná Hora + Ossuary + the Valachian courtyards
▶ Bus + on foot, English guide	Bus, English guide, all admission fees
D1-3 – PRAGUE UNLIMITED – all inclusive	D6 — Czech Sternberg castle
→ Bus + on foot + boat, lunch	▶ Bus, admission fee, guide
D1-4 – Prague by Night (3 hrs) – pickup time	D7 — Vltava river Fun rafting
▶ Bus, boat, aperitif, dinner and music	▶ Raft, guide
D2 – Český Krumlov	D8 – Karlovy Vary + Moser Glass Factory
▶ Bus, English guide, lunch, admission fee	▶ Bus, English guide, lunch, admission fee
D3n – Glass Factory Nižbor ▶ Bus, English guide, admission fee	

(Remark: Vouchers for excursions will be handed over on the AGL travel stand on Monday, Aug-24 in the Prague Congress Center latest.)

th EUROPEAN SYMPOSIUM ON POULTRY NUTRITION

#### MULTI-DAY PRE AND POST-CONFERENCE TOURS

#### • A2 - South Moravia - region of wine and chateaus (4 days/3 nights)

Telč, Třebíč, Lednice-Valtice complex (excursion to wine celery, folklore evening with refreshments, wine tasting – 5 sorts of wine), Moravian Karst (Caves), Brno (Starobrno Brewery), Český Šternberk castle

#### 28. - 31.8.2015 (morning departure)

Price included: bus, guide, accommodation, half board, all entrances, all local transfers

#### • B2 - The West Bohemian SPA Triangle (3 days/2 nights)

Loket castle, Karlovy Vary-SPA – including Moser Glassworks & Becherovka liquor manufacturing, Cheb, Františkovy Lázně-SPA, Mariánské Lázně-SPA

#### 28. - 30.8.2015 (morning departure)

Price included: bus, guide, accommodation, half board, all entrances

#### **CULTURAL & SPORT EVENTS**

 "Císařská louka" (social evening at the Emperor Meadow) – an island located near Prague city center on Vltava river (with a golf driving range, beach volley courts, archery, river boats and more). It offers a splendid view of Vyšehrad – St. Peter and Paul's Cathedral and the historical fortification. In case of significant number of applicants we plan to organize an informal social evening on Wed Aug-26, with meals and drinks, DJ music, and surprise. Please, express your interest just now at espn2015@agltravel. cz. Check more information on our web site or on the AGL travel stand next to the registration desk.

• Enjoy **Classic Segway / Bike Tour** through the highlights of Prague. We will ride around the city on our 2,5 hour tour with magnificent viewpoints, stories and legends about Prague. If you had enough of the city, history and buildings we will take you on a very comfortable ride along the river and Prague parks. We always ride in the small groups from 1 to 6 people. For more information please contact espn2015@agltravel.cz.

• Selection of a theater, opera, or concert venues (Black Theater, Symphony orchestra, etc.) will be available on the AGL travel stand next to the registration desk.

#### CONTACTS:

AGL travel (AGROLEX s.r.o.) Jungmannova 6, Prague 1, Czech Republic www.agltravel.com (EN, RU), www.agltravel.cz (CZ) espn2015@agltravel.cz hotline: +420 702 285 967 / +420 222 231 010



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## PHOTO EXHIBITION

#### MAGIC LIFE UNDER EGGSHELL

We invite you for small photos exposition of chick embryo development. The photos were performed by Mr. Jiří Hladík one of the best Czech specialists for poultry incubation. Photo Exhibition is placed on the 2<sup>nd</sup> floor next to the Registration Area.

### **GENERAL INFORMATION**

#### **ABSTRACTS & FULL PAPERS**

USB Flash Disc including Plenary lectures abstracts & full papers of Short oral presentations and Posters will be distributed upon registration.

#### CITY TRANSPORT

We are proud to inform you that we have arranged for you with Prague Convention Burreau FREE public transport ticket valid during Symposium dates (24–27 August 2015) for all means of public transport in Prague. You will receive it upon registration on site. Travelling by Prague city transport is possible with a valid ticket only. Passengers have to obtain their tickets before boarding the vehicle or entering the Metro system. The ticket is valid only if marked in the validation appliance.

#### CLIMATE AND CLOTHING

The Czech Republic is located on the borderline between two great climatic regimes, the oceanic and the continental, and the weather consequently tends to be fairly variable in different regions. The weather is usually mild and sunny in August. There might be an occasional rain, and it is therefore advisable to bring a jacket, a sweater and an umbrella.

You can find the current weather at www.weather.com.

#### CURRENCY / CREDIT CARDS / BANKING

The official currency of the Czech Republic is the Czech Crown = Česká koruna (CZK = Kč). International credit cards are accepted for payment in most hotels, restaurants and shops. Exchange offices and ATM machines are easily available throughout the city and at the Prague International Airport. Payment in cash in EUR is also available in some restaurants and shops, please ask for details on-site. You can find the official exchange rates on the website Czech National Bank.



#### ELECTRICITY

The Czech Republic uses a 220V/50Hz system, sockets have the European standard and plugs are three-prong grounded.

#### FIRST AID

Please contact any staff member if you need assistance.

#### HEALTH CARE

Vaccinations are not required to enter the Czech Republic. An individual travel and health insurance is recommended.

#### IMPORTANT PHONE NUMBERS

- 112 General Emergency
- 150 Fire
- 155 Ambulance
- 158 Police

#### INFORMATION DESK

The Information Desk is located on the 2<sup>nd</sup> floor within the Registration Desk.

#### INSURANCE

The organizers can accept no liability for personal injuries or for loss or damage to property belonging to the Symposium participants, either during or as a result of the event. Participants are advised to take out proper travel and health insurance before departing from their home country.

#### MEETING POINT FOR TOURS

The Meeting Point for all tours is located on the ground floor, near the Entrance No. 10.





#### **MOBILE PHONES**

Please, respect the speakers and presenters by ensuring your mobile phone is switched off at all time during the sessions.

#### OFFICIAL CARRIER

We are delighted to inform you that Czech Airlines become the official carrier for the 20<sup>th</sup> European Symposium on Poultry Nutrition. As official carrier, CSA offers a 10% discount in Economy Class and a 15% discount in Business Class for attendees and accompanying persons too.



#### PROCEEDINGS

Printed ESPN 2015 Proceedings Book with ISBN including Plenary lectures abstracts of Short oral presentations and Posters will be distributed upon registration.

#### REFRESHMENT

Coffee and water will be at your disposal during the whole day. Coffee breaks refreshments and Lunches will be served during the breaks indicated in the programme at the designated areas.

#### SAFETY



Please, do not leave any valuables or personal belongings unguarded in the meeting rooms or venue premises. The organizers will not be resonsible for any loss and damage of personal belongings or other valuables left unattended in the meeting rooms/ venues.

#### SHOPPING

Most shops in Prague are open from 9 a.m. to 6 p.m., Monday till Saturday. Shops in the city centre are usually open from 9 a.m. to 8 p.m., Monday till Sunday.

#### SMOKING

ESPN 2015 is non smoking event. Smoking is allowed only in designated areas outside the Symposium venue.

#### SYMPOSIUM LANGUAGE

English is the official language of the Symposium. All Symposium materials and presentations must be in English.





#### TIME ZONE

The Czech Republic is on Central European Time – Greenwich. Mean Time (GMT) + 1 hour. From April to October is summer time, i.e. GMT + 2 hours.

#### TIPPING

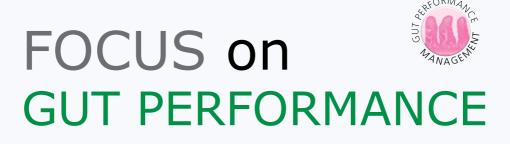
Service is usually included in the bill in bars and restaurants but tips are welcome. If you consider the service good enough to warrant a tip, we suggest about ten percent.

# WI-FI WIFI

Free Wi-Fi is available within the Symposium venue premises (name of the network: ESPN2015) and the Wi-Fi and Relax Zone (name of the network: ZINPRO).







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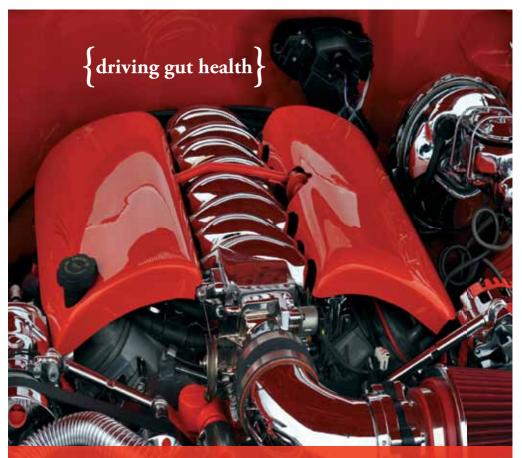
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The organizers would like to express their acknowledgement to the following partners:

