

**Poultry Science Association
3rd Latin American Scientific Conference
PROGRAM**



**Bourbon Cataratas do Iguaçu Thermas Eco Resort
Iguaçu Falls, Paraná, Brazil
4-6 October 2022**

Poultry Science Association 2022 Latin American Scientific Conference

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President's Welcome



On behalf of the Poultry Science Association and its Board of Directors, it is my sincere pleasure to welcome you to the 3rd Latin American Scientific Conference at the beautiful Bourbon Cataratas do Iguaçú Thermas Eco Resort in Iguazú Falls, Brazil. The Poultry Science Association is committed to supporting Latin American scientists and strengthening relationships and collaborations for poultry research throughout the world. The Latin American Scientific Conference will focus on the newest scientific discoveries relevant to the poultry industry. We are excited to welcome more than 500 poultry professionals to participate in the meeting, with more than 200 scientific presentations and ten symposia on topics of relevance and interest to the Latin American poultry industry.

I want to thank the Program Chair Alexandre Rosa and Vice Chair Nei Arruda, as well as the organizing committee, section chairs, abstract reviewers, moderators, and student judges for organizing what we believe to be a world-class conference. We are all grateful for the efforts of our staff at PSA, Jon Cole (Director of Business Operations), Sam Shafer (Marketing Manager), Rebecca Ries (Membership and Meetings Manager), and David Busboom (Managing Editor) for coordinating and planning for this important meeting. We all thank the sponsors of this conference. Without their support, this excellent opportunity for scientific exchange would not be possible. I encourage all of you to seek out and express your gratitude to our sponsors for their support of this meeting.

I am excited to see old colleagues and make new friends at the Latin American Scientific Conference. I look forward to seeing all of you soon in beautiful Iguazú Falls, Brazil.

Tom E. Porter
President 2022-2023
Poultry Science Association

Program Chair's Welcome



It is my pleasure to welcome you to the 2022 PSA Latin American Scientific Conference. I am honored to chair the Program Committee of this event. We are excited about the Conference, particularly, as this is the first in-person meeting in 4 years!

We are pleased to welcome you to Foz do Iguaçu, Brazil. This city was chosen for its proximity to the largest poultry production area in Latin America and for the region's natural beauties. Iguazu Falls are considered one of the seven wonders of nature in the world.

We expect an exceptional meeting, with ten symposia on topics of relevance and interest to the Latin American poultry science community as well as welcoming over 200 scientific abstracts. This is a significant number of abstracts considering this is the post-pandemic period, which negatively impacted the poultry and poultry science industries.

The Latin American Scientific Conference is an event that provides an opportunity to discuss relevant topics and innovative research. It is our vision to create an interactive atmosphere through this event to allow students and young researchers to exchange experiences with recognized professionals from around the world. We have included two social events that will allow for networking amongst attendees. The Welcome Reception will be on Tuesday evening and the Award Dinner will take place on Wednesday evening.

Special thanks to Program Vice Chair, Dr. Nei Arruda, who played a very important role on the committee. I would also like to thank the section chairs, abstract reviewers, moderators, and judges, who greatly contributed to the scientific importance of this meeting.

I would like to highlight the selection of this year's exceptional symposia. A special thanks to the symposium chairs, presenters, and their companies, all of which contributed to the excellent symposia being presented at this meeting. A sincere thank you to the sponsors supporting this event. Without your support, this excellent opportunity for scientific exchange would not be possible.

Thank you to the PSA staff, Jon Cole (Director of Business Operations), Sam Shafer (Marketing Manager), Rebecca Ries (Membership and Meetings Manager), and David Busboom (Managing Editor) who have provided their full support to us and helped make this event possible.

Certainly, this meeting will make significant contributions to the poultry industry and poultry science in Latin America.

Welcome to Foz do Iguaçu, Brazil. I hope you have an exceptional meeting!

Alexandre Pires Rosa

Program Chair

2022 PSA Latin American Scientific Conference

2022 Scientific Program Committee

Thank you to Alexandre Pires Rosa, Program Chair, as well as the Organizing Committee, section chairs, and abstract reviewers for their efforts to plan, organize, and finalize the many details of this program. Please take a minute to express your appreciation for their contributions when you see them at the conference.

Organizing Committee

Alexandre Pires Rosa, Program Chair
Nei A. Arruda Barbosa, Program Vice Chair
José Otávio Sorbara, Past Program Chair
Sergio L. Vieira, Past PSA Board Member
Karen Schwean-Lardner, PSA Past President
Tom E. Porter, PSA President

Section Chairs

Liris Kindlein, Animal Well-Being and Behavior
Mariana Lemos de Moraes, Extension & Instruction
Luis Felipe Caron, Immunology, Health & Disease
Melina Bonato, Management & Production
Víctor D. Naranjo, Metabolism and Nutrition, Amino Acids
José Otávio Sorbara, Metabolism and Nutrition, Enzymes
Jose Stringhini & Fernando Perazzo, Metabolism and Nutrition, Feed Additives
Sergio Vieira & Flavio Longo, Metabolism and Nutrition, General Nutrition
Jose Henrique Barbi & Rafael Neme, Metabolism and Nutrition, Vitamins & Minerals
Jose Roberto Sartori, Microbiology & Food Safety
Ramon Malheiros, Physiology & Reproduction
Adriana Nascimento, Processing & Products

PSA Board of Directors

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Student Director: Jo Ann Chew



2023 PSA Annual Meeting
July 10-13, 2023 | Philadelphia, PA
Philadelphia Marriott Downtown



Program

Tuesday, October 4

7:00 AM - 6:00 PM	Registration	Foyer Cataratas do Iguaçú
7:00 AM - 6:00 PM	Presentation Upload Room.....	IPE I
1:30 PM - 2:00 PM	Welcome Ceremony	Cataratas I
2:00 PM - 3:00 PM	Keynote Address	Cataratas I

Student Competition Oral Presentations

3:30 PM - 5:50 PM	Metabolism and Nutrition, General Nutrition.....	Cataratas II
3:30 PM - 4:10 PM	Metabolism and Nutrition, Amino Acids	Marfim I & II
3:30 PM - 3:40 PM	Animal Well-Being and Behavior	Marfim III
3:30 PM - 4:10 PM	Metabolism and Nutrition, Feed Additives.....	Marfim IV & V
3:30 PM - 3:50 PM	Processing and Products.....	Marfim VI
4:20 PM - 5:50 PM	Metabolism and Nutrition, Vitamins and Minerals.....	Marfim I & II
4:20 PM - 4:30 PM	Extension and Instruction.....	Marfim III
5:00 PM - 5:20 PM	Physiology and Reproduction.....	Marfim III

Afternoon Sessions

3:30 PM - 6:00 PM	Symposium	Cataratas I
	Total Approach to Salmonella Control: Perspectives and Opportunities	
3:40 PM - 4:10 PM	Animal Well-Being and Behavior	Marfim III
3:50 PM - 4:40 PM	Processing and Products.....	Marfim VI
4:10 PM - 5:50 PM	Metabolism and Nutrition, Feed Additives I.....	Marfim IV & V
4:30 PM - 4:50 PM	Extension and Instruction.....	Marfim III
5:20 PM - 5:50 PM	Physiology and Reproduction.....	Marfim III
6:00 PM - 7:30 PM	Welcome Reception	Cataratas Foyer

Wednesday, October 5

7:00 AM - 6:00 PM	Registration	Foyer Cataratas do Iguaçú
7:00 AM - 6:00 PM	Presentation Upload Room.....	IPE I

Student Competition Presentations

8:00 AM - 8:50 AM	Student Competition: Microbiology and Food Safety	Marfim III
8:00 AM - 8:30 AM	Student Competition: Immunology, Health and Disease	Marfim IV & V
8:00 AM - 8:10 AM	Student Competition: Management and Production	Marfim VI

Morning Sessions

8:00 AM - 12:00 AM	Symposium Cataratas I One Health and antibiotic-free poultry production: Actual global challenges
8:00 AM - 12:00 AM	Symposium Cataratas II Proteins: From feedstuffs to meat
8:00 AM - 12:00 AM	Symposium Marfim I & II Sustainability in poultry production: How does nutrition affect the animal performance and environment?
8:10 AM - 9:50 AM	Management and Production Marfim VI
8:30 AM - 11:20 AM	Immunology, Health and Disease Marfim IV & V
8:50 AM - 10:50 AM	Microbiology and Food Safety Marfim III
10:30 AM - 12:00 AM	Metabolism and Nutrition, Amino Acids Marfim VI
12:00 PM - 1:00 PM	Student Luncheon Patio da Mata
12:00 PM - 1:00 PM	Professional Luncheon Hotel Restaurant

Afternoon Sessions

1:30 PM - 5:30 PM	Symposium Cataratas I Feeding strategies to improve the gut health and performance of poultry
1:30 PM - 5:30 PM	Symposium Cataratas II The positive balance between agents that impact the optimized functionality of the entire intestinal process
1:30 PM - 5:30 PM	Symposium Marfim I & II Precision intestinal nutrition: A new definition for protease and xylanase
1:30 PM - 4:30 PM	Metabolism and Nutrition, Enzymes Marfim III
1:30 PM - 2:50 PM	Metabolism and Nutrition, Feed Additives II Marfim IV & V
2:50 PM - 5:40 PM	Metabolism and Nutrition, Feed Additives III Marfim IV & V
6:00 PM - 8:00 PM	Dinner & Student Award Presentations Patio da Mata

Thursday, October 6

7:00 AM - 11:00 AM Registration Foyer Cataratas do Iguaçu

Sessions

8:00 AM - 12:00 AM **Symposium**..... Cataratas I
**Soybean and corn: Technical and sustainable
relevance to Latin America and global poultry industry**

8:00 AM - 12:00 AM **Symposium**..... Cataratas II
Current challenges in the poultry industry - healthy & nutrition

8:00 AM - 12:00 AM **Symposium**..... Marfim I & II
End to End Concept

8:00 AM - 11:40 AM Metabolism and Nutrition, General Nutrition Marfim III

8:00 AM - 10:10 AM Metabolism and Nutrition, Feed Additives IV Marfim IV & V

8:00 AM - 11:10 AM Metabolism and Nutrition, Vitamins and Minerals Marfim VI

10:30 AM - 11:50 AM Metabolism and Nutrition, Feed Additives V Marfim IV & V

12:00 PM - 12:30 PM **Closing Ceremony** Cataratas I

Meeting Details

Registration

Foyer Cataratas do Iguaçu

Tuesday, October 4 7:00 AM - 5:30 PM
Wednesday, October 5 7:00 AM - 5:00 PM
Thursday, October 6 7:00 AM - 3:30 PM

Presentation Upload & Preview Room

IPE I

Tuesday, October 4 7:00 AM - 6:00 PM
Wednesday, October 5 7:00 AM - 6:00 PM

Conference Information

Oral Abstract Presentations

Presentations shall not exceed 8 minutes, followed by 2 minutes of discussion for questions and answers. All presentation slides must be in English. Non-competition presentations may be presented in the language of choice (English, Portuguese, or Spanish). No language translation will be provided during abstract presentations.

Student Competition Presentations

Students participating in the Student Award of Excellence Competition will be presenting their abstracts on Tuesday afternoon and Wednesday morning. Presentations shall not exceed 8 minutes, followed by 2 minutes of discussion for questions and answers. The presentation must be in English and the slides must be in English. Questions may be answered in the language of the student's choice. Students presenting in a language other than English will not be eligible for the competition.

Presentation Uploads

All presenters are encouraged to upload their presentations online. If you do not upload it online, you must upload your presentation in the IPE I Room before the relevant onsite upload deadline (shown below). Presentations can be uploaded from USB sticks or drives. The deadline for uploading each presentation is based on the day and time of the session it will be presented. You are encouraged to upload your presentation as early as possible. No presentations will be loaded while the session is in progress, between presentations, or during breaks. Files will not be accepted via e-mail.

Presentation Upload Deadlines

Day/Time of Presentation	Upload Deadline
Tuesday Afternoon (PM)	Tuesday before 12:00 PM
Wednesday Morning (AM)	Tuesday before 6:00 PM
Wednesday Afternoon (PM)	Wednesday before 12:00 PM
Thursday Morning (AM)	Wednesday before 6:00 PM

Preview Room

IPE I Room is available for presenters to preview their presentations. The use of personal computers will only be allowed in the Preview Room. Their use in session rooms will not be permitted.

Language Translation

Portuguese, Spanish, and English translation will be available in Cataratas I, Cataratas II, and Marfim I & II for the Welcome Ceremony, Keynote Address, and the Symposia presentations only. Abstract presentations will not be translated.

Photo Policy

Recording presentations or capturing PowerPoint images via cameras or cell phones is strictly prohibited.

Name Badges

Wear your meeting name badge! It is your admission to sessions, receptions, and meals.

Special Events

Welcome Reception

A welcome reception will be at 6:00 PM on Tuesday evening. This is an excellent opportunity to meet other professional meeting attendees.

Student Luncheon

All students are invited to the Student Luncheon at 12:00 on Wednesday. This event is for students only.

Group Luncheon

All attendees are invited to the luncheon at 12:00 on Wednesday. Attendees are responsible for the cost of the meal.

Award Dinner

Please join us as we share an evening of honoring the student award winners. All meeting participants are welcome to attend this event. The celebration dinner will be held on Wednesday evening beginning at 6:00 PM. A limited number of tickets will be available for purchase at the registration desk. Tickets are required for this event.

Tickets

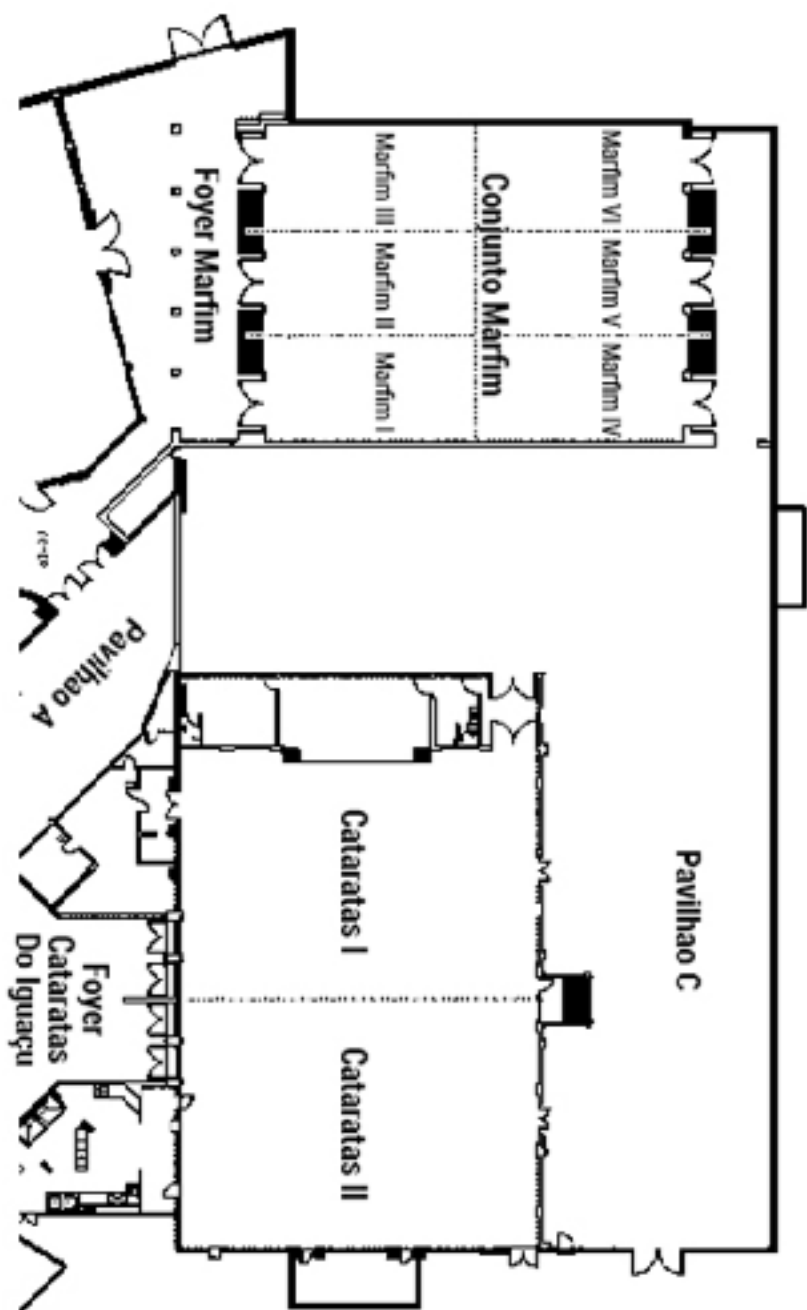
Keep your tickets. Tickets for special events will be collected at the door or table for the appropriate event.

Poultry Science Association Information

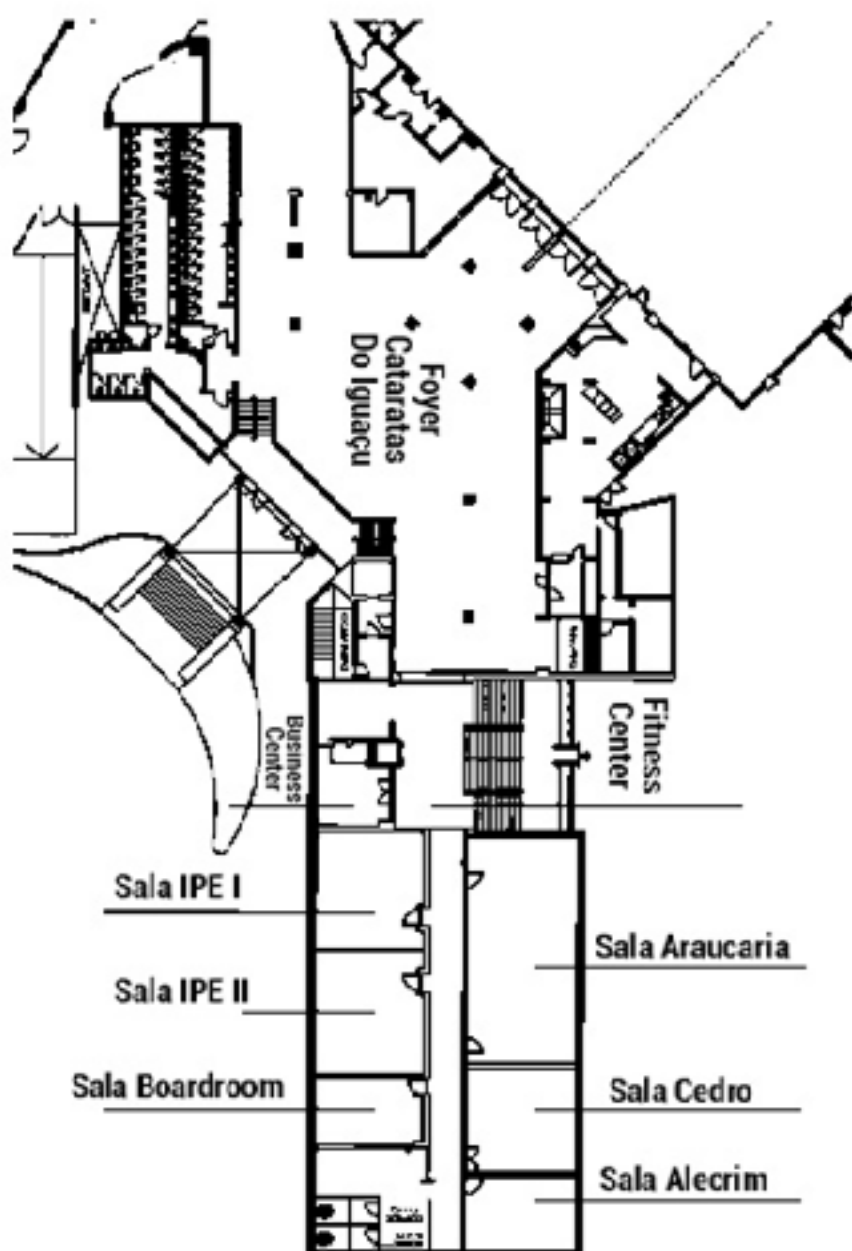
Membership

Membership in the Poultry Science Association (PSA) is not required to attend this meeting. However, PSA membership can be both beneficial and cost effective. PSA members receive discounted publishing charges in both *Poultry Science*[®] and *The Journal of Applied Poultry Research*, and the opportunity to attend the PSA Annual Meeting at discounted registration rates. Go online and join today at www.poultryscience.org/Join-PSA-Membership-Benefits.

Bourbon Cataratas do Iguaçu Thermas Eco Resort



Bourbon Cataratas do Iguaçu Thermas Eco Resort



3rd Latin American Scientific Conference Sponsors

The Poultry Science Association would like to extend its thanks and gratitude to all of the generous sponsors contributing to this event. For a complete and updated list of sponsors, please scan the QR Code below.



2022 Latin American Scientific Conference Program

Tuesday, October 4

SYMPOSIA AND ORAL SESSIONS Welcome Ceremony & Keynote Address Cataratas I

- 1:30 PM **Welcome Ceremony**
Tom E. Porter, University of Maryland
Alexandre Pires Rosa, Federal University of Santa Maria
- 2:00 PM **Keynote Address: Challenges of modern poultry farming**
Fabricio Delgado^{1*}, ¹Nutriquest
- 3:00 PM **Break**

Symposium: Total Approach to Salmonella Control: Perspectives and Opportunities Chair: Tiago Urbano, Vetanco Cataratas I

- 3:30 PM **Welcome and Introduction**
Tiago Urbano^{1*}, ¹Vetanco
- 3:45 PM 206S **The importance of the synergy of solutions for Salmonella control in the poultry chain**
Sherry Layton^{1*}, ¹University of Arkansas
- 4:45 PM 207S **Salmonella: Control in the field for success in the slaughterhouse**
Roberto Moraes Jardim Filho^{1*}, ¹São Salvador Alimentos
- 5:45 PM **Roundtable discussion**

Student Competition: Metabolism and Nutrition, General Nutrition Moderator: Sergio Vieira, Federal University of Rio Grande do Sul Cataratas II

- 3:30 PM 1 **Broiler performance and economic evaluation of feeding programs varying energy and protein in times of inflation**
J. C. Feijo^{1*}, S. L. Vieira¹, D. D. Maria¹, P. L. Santos¹, R. M. Horn¹, B. B. Xavier¹, W. E. Altevogt¹, G. B. Tormes¹, M. P. Della², ¹Zootecnia, Universidade Federal do Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil, ²Vibra Agroindustrial SA, Montenegro, Brazil

- 3:40 PM 2 **Effect of feeding program, starter diet physical form and breeder age on performance and intestinal development of broilers**
J. Oliveira^{1*}, R. F. Jacob², T. T. Sabchuk², J. A. Vieira Filho², C. M. Franco², K. F. Duarte², P. R. Oliveira², S. A. Borges², ¹Zootecnia, Universidade Estadual do Oeste do Paraná, Marechal Cândido Rondon, Paraná, Brazil, ²Nutrição, Vaccinar Nutrição Animal, Pinhais, Paraná, Brazil
- 3:50 PM 3 **Incubation performance and chick quality of quail breeders supplemented with canthaxanthin and 25-hydroxycholecalciferol**
L. P. Bonagurio^{2*}, C. C. Martins¹, C. A. Lozano-Poveda¹, A. E. Murakami², T. C. Santos², ¹Nutritional Products, DSM, Sao Paulo, Sao Paulo, Brazil, ²Animal Science, State University of Maringa, Maringa, Parana, Brazil
- 4:00 PM 4 **Performance of laying hens reared in a free-range system with different feeding programs**
I. D. Dias^{1*}, F. A. Moreno¹, G. Costa Senger², A. C. Britto Doi², M. Conceição dos Santos², F. Dahlke³, E. L. Krabbe⁴, A. Maiorka², ¹Veterinary Science, Federal University of Paraná, Curitiba, Paraná, Brazil, ²Animal Science, Federal University of Paraná, Curitiba, Paraná, Brazil, ³Animal Science, Federal University of Santa Catarina, Florianópolis, Santa Catarina, Brazil, ⁴Embrapa – Suínos e Aves, Concórdia, Santa Catarina, Brazil
- 4:10 PM 5 **Egg production of laying hens reared in a free-range system with different feeding programs**
L. M. dos Santos^{2*}, M. Conceição dos Santos¹, J. C. Natel¹, L. Nagae Kuritza², I. D. Dias², E. L. Krabbe³, C. da Rocha¹, A. Maiorka¹, ¹Zootecnia, Universidade Federal do Paraná, Curitiba, Paraná, Brazil, ²Veterinary Science, Federal University of Paraná, Curitiba, Paraná, Brazil, ³EMBRAPA, Concórdia, Brazil
- 4:20 PM 6 **Determination of nitrogen-corrected apparent metabolizable energy and standardized ileal amino acid digestibility of high protein DDG for broilers**
K. M. Dias^{1*}, C. H. Oliveira¹, R. D. Bernardes¹, A. A. Calderano¹, I. L. Lima², L. F. Albino¹, ¹Animal Science, Federal University of Viçosa, Viçosa, Minas Gerais, Brazil, ²IL Lima Consultoria em Nutrição Animal, Vila Velha, Brazil
- 4:30 PM 7 **Modelling of the environmental temperature effect on the energy expenditure in poultry**
R. R. Lizana^{1*}, R. D. Camargos², R. L. Silva¹, B. B. Leme¹, M. Macari¹, N. K. Sakomura¹, ¹The School of Agricultural and Veterinary Studies, Sao Paulo State University, Jaboticabal, Brazil, ²Zootecnia, UNESP, Jaboticabal, Brazil

4:40 PM	8	<p>Assessment of live performance responsiveness of Cobb 500 male broilers to a varying digestible lysine levels and dietary energy for a 1-18d grower period</p> <p>M. F. Costa^{1*}, K. B. Nelson¹, S. C. Wells¹, M. T. Kidd¹, ¹University of Arkansas, Fayetteville, AR, United States</p>
4:50 PM	9	<p>Energy partitioning and maintenance requirements correction by physical activity in lean-type roosters</p> <p>A. T. Santos Fialho^{1*}, R. R. Lizana¹, B. B. Leme¹, R. D. Camargos¹, R. L. Silva¹, L. V. Freitas¹, M. Macari¹, N. K. Sakomura¹, ¹Animal science , São Paulo State University, Jaboticabal , Brazil</p>
5:00 PM	10	<p>Energy utilization of laying hens fed with different diets varying the chemical composition</p> <p>R. L. Silva^{1*}, R. R. Lizana¹, B. B. Leme¹, A. T. Santos Fialho², L. P. Maria³, B. Marçal¹, B. S. Colucci¹, N. K. Sakomura¹, ¹Animal Science , Unesp, Jaboticabal, São Paulo, Brazil, ²Animal science , São Paulo State University, Jaboticabal , Brazil, ³Ciências Agrárias, Unesp- Jaboticabal, Jaboticabal, Brazil</p>
5:10 PM	11	<p>Use of different mathematical models to determine optimal metabolizable energy levels in broiler diets for optimum feed conversion ratio for growth and final phases</p> <p>F. A. Moreno^{1*}, G. Costa Senger¹, V. I. Vieira¹, A. C. Britto Doi¹, I. D. Dias¹, F. de Oliveira Marx¹, C. da Rocha¹, A. Maiorka¹, ¹Universidade Federal do Paraná, Curitiba, PR, Brazil</p>
5:20 PM	12	<p>Performance and carcass yield of broilers fed different levels of metabolizable energy from 21 to 42 days of age</p> <p>G. C. Senger^{1*}, F. A. Moreno¹, L. S. Bassi¹, L. Nagae Kuritza¹, V. I. Vieira¹, F. de Oliveira Marx¹, S. G. de Oliveira¹, C. da Rocha¹, ¹Universidade Federal do Paraná, Curitiba, PR, Brazil</p>
5:30 PM	13	<p>Determination of physic activity effects and energy expenditure in broilers breeders during the egg production</p> <p>C. K. Cheneri^{1*}, R. R. Lizana¹, R. L. Silva¹, G. F. Teofilo¹, M. Macari¹, N. K. Sakomura¹, ¹Departament of Animal Science, São Paulo State University, Jaboticabal, São Paulo, Brazil, Jaboticabal, SP, Brazil</p>
5:40 PM	14	<p>Impact of dietary inclusion of distillers dried grains on broiler chicken gut health</p> <p>T. L. Kohler^{1*}, R. V. Nunes¹, C. D. Souza¹, C. Kaufmann¹, N. Rohloff Junior¹, B. Amanda Beber¹, E. A. Ianchinski¹, D. Crespão¹, C. R. Duarte², C. Eyng¹, ¹Unioeste, Toledo, PR, Brazil, ²UNEMAT, Tangará da Serra, Brazil</p>

Student Competition: Metabolism and Nutrition, Amino Acids

Moderator: Víctor D. Naranjo, Evonik

Marfim I & II

- | | | |
|---------|----|---|
| 3:30 PM | 15 | <p>The effects of isoleucine: lysine ratios on growth performance of broiler chickens fed low-protein diets from 01 to 21 days old</p> <p>R. D. Bernardes^{1*}, K. M. Dias¹, C. H. Oliveira¹, B. Koo², R. Rodrigueiro³, A. A. Calderano¹, L. F. Albino¹, ¹Animal Science, Federal University of Viçosa, Viçosa, Minas Gerais, Brazil, ²CJ Bio, Jung-gu, Seoul, Korea (the Republic of), ³CJ Brazil, São Paulo, São Paulo, Brazil</p> |
| 3:40 PM | 16 | <p>The effects of arginine: lysine ratios on performance, skin quality and creatine levels of broiler chickens fed low-protein diets from 01 to 21 days old</p> <p>C. H. Oliveira^{1*}, K. M. Dias¹, R. D. Bernardes¹, B. Koo², C. Park², R. Rodrigueiro³, A. A. Calderano¹, L. F. Albino¹, ¹Animal Science, Federal University of Viçosa, Viçosa, Minas Gerais, Brazil, ²CJ Bio, Jung-gu, Seoul, Korea (the Republic of), ³CJ Brazil, São Paulo, São Paulo, Brazil</p> |
| 3:50 PM | 17 | <p>Optimal digestible methionine + cysteine: digestible lysine ratio in diets for broilers submitted to inflammatory challenge</p> <p>S. O. Borges^{1*}, R. Nunes¹, H. Salgado¹, R. Bernardes¹, C. H. Oliveira¹, L. F. Albino¹, A. A. Calderano¹, ¹Animal Science, Federal University of Viçosa, Viçosa, MG, Brazil</p> |
| 4:00 PM | 18 | <p>Determination of the optimum digestible methionine plus cysteine to lysine ratio for male broiler chickens from 28 to 42 days of age</p> <p>G. A. de Aguiar^{1*}, G. Viana², J. C. Muniz¹, L. da Fonseca¹, F. A. Monteiro¹, G. Braga¹, A. Lemme³, J. Dorigam³, V. D. Naranjo³, M. Hannas¹, ¹Universidade Federal de Viçosa, Viçosa, Minas Gerais, Brazil, ²Natural Resources Institute Finland, Jokioinen, Finland, ³Evonik Operations GmbH, Hanau, Germany</p> |

Student Competition: Animal Well-Being and Behavior

Moderator: Liris Kindlien, Federal University of Rio Grande do Sul

Marfim III

- | | | |
|---------|----|---|
| 3:30 PM | 19 | <p>The use of simulating nature in broiler chicken rearing and its effect on some behavioral and physiological traits</p> <p>M. Hassn^{1*}, S. M. Abdulateef¹, ¹Animal Production, University of Anbar, Ramadi, Iraq</p> |
|---------|----|---|

Student Competition: Metabolism and Nutrition, Feed Additives

Moderator: Jose Stringhini, Universidade Federal de Goiás

Marfim IV & V

- | | | |
|---------|----|--|
| 3:30 PM | 20 | Black wattle (<i>Acacia mearnsii</i>) tannins in broilers diet: Impacts on gut health and nutrient digestibility
A. M. Bravo ^{1*} , C. Miranda ¹ , E. Guariento ² , F. Dilelis ¹ , T. Reis ¹ , C. Lima ¹ , ¹ Universidade Federal Rural do Rio de Janeiro (UFRRJ), Rio de Janeiro, Brazil, ² Fundação Centro Universitário da Zona Oeste do Rio de Janeiro, Rio de Janeiro, Brazil |
| 3:40 PM | 21 | Effect of Peanut Skins as a Feed Additive for Turkey Toms
A. A. Gernat ^{1*} , ² , F. Santos ² , ¹ Prestage Department of Poultry Science, North Carolina State University, Raleigh, NC, United States, ² Department of Food, Bioprocessing and Nutrition Sciences, North Carolina State University, Raleigh, NC, United States |
| 3:50 PM | 22 | Growth performance and fecal microbiome of broiler chickens fed diets supplemented with a commercial Direct-Fed Microbial
Y. Dalmoro ^{1*} , O. F. Souza ¹ , J. Agilar ¹ , F. Matté ² , B. Vecchi ³ , J. Hall ⁴ , S. Layton ⁴ , C. Stefanello ¹ , ¹ Animal Sciences, University of Santa Maria, Santa Maria, RS, Brazil, ² Vetanco do Brasil Imp. e Exp. LTDA, Chapecó, Brazil, ³ Vetanco SA, Buenos Aires, Argentina, ⁴ Vetanco USA, Saint Paul, MN, United States |
| 4:00 PM | 23 | Effect of propolis supplementation on growth and intestinal integrity in broiler chickens
C. Daza León ^{1*} , D. Alvarez Mira ¹ , G. C. Ramirez-Nieto ¹ , A. P. Gómez ¹ , L. Betancourt ¹ , ¹ Universidad Nacional de Colombia, Bogotá, Colombia |

Student Competition: Processing and Products

Moderator: Adriana Nascimento, Alltech Inc.

Marfim VI

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| 3:30 PM | 24 | Broilers' growth performance was affected differently by soybean meal particle sizes and feed form
M. Conceição dos Santos ^{1*} , L. Malcorra de Almeida ² , F. de Oliveira Marx ¹ , L. Nagae Kuritza ² , L. S. Bassi ¹ , C. da Rocha ¹ , E. L. Krabbe ³ , S. G. de Oliveira ¹ , ¹ Animal Science, Universidade Federal do Paraná, Curitiba, Paraná, Brazil, ² Veterinary Science, Universidade Federal do Paraná, Curitiba, Paraná, Brazil, ³ Suínos e Aves, EMBRAPA, Concórdia, Santa Catarina, Brazil |
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- 3:40 PM 25 **Metabolizable energy from plant-based alternative ingredients for broiler chicken**
A. S. Oliveira^{1*}, ², E. S. Lima¹, F. A. Santos¹, C. Melo¹,
A. T. Franco¹, G. N. Komatsu³, J. M. Menten³, ¹Animal
Nutrition, Ingredion, Mogi Guaçu, São Paulo, Brazil,
²Animal Science, Unesp, Botucatu, São Paulo, Brazil,
³Animal Science, USP, Piracicaba, São Paulo, Brazil

Animal Well-Being and Behavior

Moderator: Nilva Kazue Sakomura, UNESP-Jaboticabal/SP

Marfim III

- 3:40 PM 26 **Female preferences for unfamiliar males: the consequences of previous pairing with either high or low aggressive males**
G. A. Orso^{1,2}, S. Pellegrini², R. H. Marin^{1*}, ², D. A. Guzman^{1,2}, ¹Instituto de Investigaciones Biológicas y Tecnológicas (IIByT; UNC-CONICET), Córdoba, Argentina, ²Instituto de Ciencia y Tecnología de los Alimentos (ICTA), Facultad de Ciencias Exactas, Físicas y Naturales, Universidad Nacional de Córdoba, Córdoba, Argentina
- 3:50 PM 27 **Insights on the temporal resolution of quail behaviors**
L. Barberis^{2,1}, C. Simian⁴, R. H. Marin^{3*,4}, J. M. Kembro^{3,4},
¹Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Instituto de Física Enrique Gaviola (IFEG), Córdoba, Argentina, ²Universidad Nacional de Córdoba, Facultad de Matemática, Astronomía Física y Computación, Córdoba, Argentina, ³Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Instituto de Investigaciones Biológicas y Tecnológicas (IIByT), Córdoba, Argentina, ⁴Universidad Nacional de Córdoba, Facultad de Ciencias Exactas, Físicas y Naturales, Instituto de Ciencia y Tecnología de los Alimentos (ICTA), Córdoba, Argentina
- 4:00 PM 28 **A preliminary evaluation of novel artificial light conditions during incubation and growout on broiler chicken performance and welfare**
G. M. House^{1*}, C. A. Leyk¹, J. Tieberg¹, A. Stephan¹,
¹Once, Inc., Plymouth, MN, United States

Processing and Products

Moderator: Adriana Nascimento, Alltech Inc.

Marfim VI

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| 3:50 PM | 29 | Photodynamic inactivation of microorganisms in chilled chicken breast coated with curcumin biofilm
L. A. Pinto ^{1*} , ³ , A. F. Frizzo ¹ , R. C. da Silva Júnior ² , B. T. Onishi ³ , L. P. Mello ³ , C. E. Benito ³ , F. E. de Souza ³ , J. I. Fernandes ^{1,3} , ¹ Programa de Pós graduação em Ciência Animal, Universidade Federal do Paraná, Palotina, Paraná, Brazil, ² Chemistry Department, State University of Maringá, Maringá, Brazil, ³ Poultry Experimentation Laboratory, Federal University of Paraná, Palotina, PR, Brazil |
| 4:00 PM | 30 | Effect of storage time on the quality of eggs from three ages of commercial laying hens
E. S. Salvador ^{1*} , S. Bonifacio ¹ , ¹ Universidad Nacional San Luis Gonzaga, Chincha, Peru |
| 4:10 PM | 31 | Comparison of metabolites profile based on 1H-NMR spectroscopy in wooden breast muscles
C. Suguimoto Leite ^{1*} , ² , A. Kuhen Silva ² , R. R. Gomes ¹ , L. Alves Duarte ¹ , V. de Oliveira ¹ , S. Sandy da Silva Cabral ¹ , L. Moraes Lião ³ , J. Stringhini ¹ , ¹ Escola de Veterinária e Zootecnia, Universidade Federal de Goiás, Goiânia, Goiás, Brazil, ² Centro de Pesquisa em Alimentos, Universidade Federal de Goiás, Goiânia, Goiás, Brazil, ³ Instituto de Química, Universidade Federal de Goiás, Goiânia, Goiás, Brazil |
| 4:20 PM | 32 | Causes of broiler carcass condemnation in slaughterhouses in the state of Goiás, Brazil
E. Tome Regis Ramos ³ , C. Suguimoto Leite ^{1*} , C. Silva Minafra e Rezende ² , ¹ , ¹ Escola de Veterinária e Zootecnia, Universidade Federal de Goiás, Goiânia, Goiás, Brazil, ² Centro de Pesquisa em Alimentos, Universidade Federal de Goiás, Goiânia, Goiás, Brazil, ³ Agrodefesa, Goiânia, Goiás, Brazil |
| 4:30 PM | 33 | Dietary replacement of soybean with different levels of <i>Hermetia illucens</i> meal during grower and finisher phases in broilers: effects on live performances and meat quality
F. Soglia ^{1*} , M. zampiga ¹ , M. Petracci ¹ , F. sirri ¹ , ¹ Department of Agricultural and Food Sciences (DISTAL), University of Bologna, Bologna, Italy |

Metabolism and Nutrition, Feed Additives I (Breeders, Laying Hens & Quails)

Moderator: Jose Stringhini, Universidade Federal de Goiás

Marfim IV & V

- 4:10 PM 34 **Effects of a proprietary blend of Quillaja and Yucca on egg and eggshell quality of laying breeder hens**
O. F. Souza^{1*}, S. Bonaspetti², G. L. Godoy¹, G. Muller¹, L. Crumenauer¹, C. Stefanello¹, ¹Animal Sciences, University of Santa Maria, Santa Maria, RS, Brazil, ²Phibro Animal Health Corporation, Campinas, SP, Brazil
- 4:20 PM 35 **Productive performance and internal and external egg quality of Japanese quail (*coturnix coturnix*) fed with inulin on normal and low-calcium diets**
A. Coronado¹, C. Vílchez-Perales¹, O. A. Zea^{1*}, ¹Lima, Universidad Nacional Agraria La Molina, Lima, Lima, Peru
- 4:30 PM 36 **Three different intestinal health additives enhance eggshell quality and yolk color in laying hens from 45 to 65 weeks of age**
M. R. Lima^{1*}, F. G. Perazzo Costa², M. Resende³, N. S. Fagundes³, D. Jacob³, W. Quinteiro³, ¹Animal Sciences, UFRSA, Mossoó, Rio Grande do Norte, Brazil, ²Animal Sciences, UFPB, Areia, Brazil, ³Adisseo, Sao Paulo, Brazil
- 4:40 PM 37 **Effect of feeding different levels of inulin on egg quality and productive parameters in laying hens**
K. Quispe Cangalaya¹, C. Vílchez-Perales^{1*}, O. A. Zea¹, ¹Lima, Universidad Nacional Agraria La Molina, Lima, Lima, Peru
- 4:50 PM 38 **Inclusion of lignocellulose in the diets of laying hens**
B. G. Leite², C. S. Araujo¹, L. F. Araujo^{2*}, C. Granghelli², F. D. Roque², G. M. Longhini², M. S. Lopes¹, I. E. Silva², A. F. Prezoto², ¹Animal Science and Production, School of Veterinary Medicine and Animal Science of University of Sao Paulo, Pirassununga, Sao Paulo, Brazil, ²Department of Animal Science, Faculty of Animal Science and Food Engineering, Pirassununga, Sao Paulo, Brazil
- 5:00 PM 39 **Productive performance of commercial layers supplemented with the probiotic *Bacillus Amyloliquefaciens***
N. F. Oliveira^{1*}, D. Cordeiro¹, I. Fernandes Filho¹, L. Duarte¹, T. Lorenzo¹, F. Toledo¹, L. Castro¹, M. B. Cafe¹, J. Stringhini¹, ¹Zootecnia, Universidade Federal de Goiás, Goiânia, Goiás, Brazil

- 5:10 PM 40 **Promoting the intestinal health of pullets with protected organic acids and essential oils**
M. D. Vieira^{1*}, M. L. Moraes¹, T. B. Stefanello¹, F. Bertolini², G. M. Silva³, J. M. Tavares³, C. Y. Nakamatsu³, E. Santin⁴ ¹Technical Support, Jefe Nutrition Inc, Saint-Hyacinthe, QC, Canada, ²Safeeds, Toledo, Brazil, ³Grupo Mantiqueira, Primavera do Leste, Brazil, ⁴Applied Scientific Curiosity, Jefe Nutrition Inc, Saint-Hyacinthe, QC, Canada
- 5:20 PM 41 **Hematological analysis of laying hens supplemented with prebiotics**
E. O. Figueroa Castillo^{1*}, B. F. da Silva Barbosa¹, M. D. Lima¹, G. A. Lima¹, B. Trevizan¹, V. L. Santos², V. C. Cruz-Polycarpo³, G. D. Polycarpo³, ¹Animal Science and Technology, FCAT - UNESP, Dracena, SP, Brazil, ²YesSinergy of Brasil Agroindustrial LTDA, Campinas, SP, Brazil, ³Animal Production Department, FCAT - UNESP, Dracena, SP, Brazil
- 5:30 PM 42 **Effect of propolis consumption in laying hens on production parameters, egg quality and intestinal integrity genes**
L. Carvajal^{1*}, ²C. Daza León¹, A. P. Gómez¹, L. Betancourt¹, D. Alvarez Mira¹, G. C. Ramirez-Nieto¹, A. Sanchez², J. Vargas², ¹Universidad Nacional de Colombia, Bogotá, Colombia, ²Compañía Campo Colombia SAS, Bogotá, Cundinamarca, Colombia
- 5:40 PM 43 **Effect of dietary supplementation of spray-dried plasma for broiler breeder and their effects on the growth of the progeny**
C. Granghelli^{1*}, L. Rangel², J. Campbell³, J. Polo³, J. Crenshaw³, G. M. Longhini¹, I. E. Silva¹, M. S. Lopes¹, C. S. Araujo¹, L. F. Araujo¹, ¹University of Sao Paulo, Pirassununga, Sao Paulo, Brazil, ²APC LLC, Sao Paulo, Brazil, ³APC LLC, Ankeny, IA, United States

Student Competition: Metabolism and Nutrition, Vitamins and Minerals

Moderator: Jose Henrique Barbi, Adisseo

Marfim I & II

- 4:20 PM 44 **Supplementation of amino acid complexes on performance of broiler breeder hens and their offspring**
D. D. Maria^{1*}, S. L. Vieira¹, J. C. Feijo¹, A. K. Fireman², R. M. Horn¹, P. L. Santos¹, W. E. Altevogt¹, G. B. Tormes¹, Y. J. Olabarriaga¹, ¹Zootecnia, Universidade Federal do Rio Grande do Sul, Viamão, Rio Grande do Sul, Brazil, ²Zinpro corporation, Piracicaba, São Paulo, Brazil

- 4:30 PM 45 **Broiler meat production as affected by dietary supplemental hydroxy-selenomethionine**
W. E. Altevogt^{1*}, S. L. Vieira¹, J. C. Feijo¹, D. D. Maria¹, P. L. Santos¹, V. D. Teixeira², ¹Zootecnia, Universidade Federal do Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil, ²EVONIK Brasil, São Paulo, Brazil
- 4:40 PM 46 **Manganese requirements of broiler breeder hens**
R. M. Horn^{1*}, S. L. Vieira¹, D. D. Maria², P. L. Santos¹, J. C. Feijo², T. L. Noetzold³, Y. J. Olabarriaga¹, W. E. Altevogt², G. B. Tormes¹, ¹Department of Animal Science, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brazil, ²Universidade Federal do Rio Grande do Sul, Rio Grande do Sul, Brazil, ³University of Alberta, Edmonton, AB, Canada
- 4:50 PM 47 **Amino acid-complexed trace minerals on broiler breeder hen performance**
Y. J. Olabarriaga¹, S. L. Vieira¹, T. L. Noetzold¹, B. B. Xavier¹, R. M. Horn¹, P. L. Santos¹, D. D. Maria¹, W. E. Altevogt¹, C. F. Nunes¹, G. B. Tormes¹, ¹Department of Animal Science, Federal University of Rio Grande do Sul, Rio Grande do Sul, Brazil
- 5:00 PM 48 **Effects of 25-Hydroxycholecalciferol on performance, bone quality and gut health of broilers fed with unbalanced reduced calcium and phosphorus diet during Eimeria challenge**
T. Lopes^{1*}, H. Shi², D. White², I. Araujo¹, W. K. Kim², ¹Animal Science, Universidade Federal de Minas Gerais, Belo Horizonte, Minas Gerais, Brazil, ²University of Georgia, Athens, GA, United States
- 5:10 PM 49 **Outcomes from trace minerals requirement studies with broiler breeder hens**
B. B. Xavier^{1*}, S. L. Vieira¹, C. F. Nunes¹, Y. J. Olabarriaga¹, R. D. Menezes¹, ¹Department of Animal Science, Federal University of Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil
- 5:20 PM 50 **Use of enzymatic blend for total or partial replacement of conventional phosphorus sources in commercial laying hens diet**
C. Scheletz^{1*}, J. A. Vieira Filho², K. F. Duarte², R. F. Jacob², T. T. Sabchuk², C. M. Franco², P. R. Oliveira², S. A. Borges², ¹Universidade Federal do Paraná, Curitiba, Brazil, ²Vaccinar Nutrição Animal, Brazil
- 5:30 PM 51 **Effect of hydroxy-selenomethionine on broiler breeders performance**
B. B. Leme^{1*}, T. Pereira de França¹, L. V. Freitas¹, G. F. Teofilo¹, B. R. Nogueira¹, G. Fontinhas Netto², J. Barbi², N. K. Sakomura¹, ¹São Paulo State University, Jaboticabal, Brazil, ²Adisseo, São Paulo, Brazil

5:40 PM

52

Effects of dietary organic selenium supplementation in broilers diets and its effects on growth performance, carcass and parts yields, blood and hormonal parameters, and breast meat quality

G. L. Silva Tesser^{1*}, N. C. Santos¹, N. Rohloff Junior¹, C. Kaufmann¹, T. L. Kohler¹, L. I. Datsch¹, F. P. Campos¹, C. Polesi¹, C. Eying¹, R. V. Nunes¹, ¹Zootecnia, Universidade Estadual do Oeste do Paraná, Marechal Cândido Rondon, Paraná, Brazil

Student Competition: Extension and Instruction
Moderator: Mariana Lemos de Moraes, Jefe Nutrition Inc.

Marfim III

4:20 PM

53

Incentives and limitations to production and marketing of indigenous chickens: A case for small-scale farmers in Eastern, Central and Southern livelihood zones in Zambia

C. M. Kanyama^{4*}, ⁵, T. M. Crowley¹, ³, A. F. Moss⁴, M. Ngosa², ¹School of Medicine, Deakin University, Geelong, VIC, Australia, ²Zambeef Zambia PLC, Zambeef Group of Companies, Lusaka, Zambia, ³Poultry Hub Australia, University of New England, Armidale, NSW, Australia, ⁴School of Environmental and Rural Science, University of New England, Armidale, NSW, Australia, ⁵Department of Livestock Development, National Artificial Insemination Services, Ministry of Fisheries and Livestock, Mazabuka, Southern Province, Zambia

Extension and Instruction

Moderator: Mariana Lemos de Moraes, Jefe Nutrition Inc.

Marfim III

4:30 PM

54

Daily production of egg components of laying hens in a semi-extensive system

J. D. Cordido^{1*}, K. A. Torres-Cordido¹, J. P. Quintero², S. D. Rocha¹, ¹Laboratório de Zootecnia, Centro de Ciências e Tecnologias Agropecuárias, Universidade Estadual do Norte Fluminense Darcy Ribeiro, Campos dos Goytacazes, RJ, Brazil, ²Ecoavi, São João da Barra, RJ, Brazil

4:40 PM

55

Virginia Tech Research Education Programs: Models for Increasing STEM participation in Middle- and Low-Income Countries

E. Smith^{1*} ¹School of Animal and Poultry Sciences, Virginia Tech, Blacksburg, VA, United States

Student Competition: Physiology and Reproduction

Moderator: Ramon Malheiros, North Carolina State University

Marfim III

- 5:00 PM 56 **Influence of light intensity, pre-harvest fasting and storage time on calcium, phosphorus, and alkaline phosphatase activity in serum and plasma of broilers**
C. Polese^{1*}, ², L. Wachholz², C. D. Souza², N. Rohloff Junior², G. L. Silva Tesser², T. Luiza Kohler², C. Kaufmann², C. Eyng², J. D. Starkey¹, C. W. Starkey¹, R. V. Nunes², ¹Department of Poultry Science, Auburn University, Auburn, AL, United States, ²Department of Poultry Science, Western Paraná State University, Marechal Cândido Rondon, Paraná, Brazil
- 5:10 PM 57 **Proposal for a protocol and a Standard Operating Procedure for the evaluation of morphological analyzes in chicken embryonic tissues with application in scientific production and experimentation**
I. M. Vieira^{1*}, M. U. Rocha¹, A. P. ROSA¹, S. T. Costa¹, M. L. Veiga¹, ¹Department of Morphology, Federal University of Santa Maria, Santa Maria, RS, Brazil

Physiology and Reproduction

Moderator: Ramon Malheiros, North Carolina State University

Marfim III

- 5:20 PM 58 **Influence of light intensity, blood fraction, fasting and storage time on liver enzyme activity of broilers**
T. S. Andrade^{1*}, C. Polese¹, N. Rohloff Junior¹, C. D. Souza¹, M. B. de Carvalho¹, M. Cristina Mohr de Souza¹, M. Fernanda Cardoso Pereira¹, M. M. Camara¹, L. I. Datsch¹, B. Amanda Beber¹, M. Roberto Uhlein Júnior¹, H. Sartor¹, G. Toniazzo¹, F. Potenza Campos¹, A. P. Costa¹, T. Luiza Kohler¹, C. W. Starkey², C. Eyng¹, R. V. Nunes¹, ¹Department of Poultry Science, Western Paraná State University – UNIOESTE, Marechal Cândido Rondon, Paraná, Brazil, ²Department of Poultry Science, Auburn University, Auburn, AL, United States
- 5:30 PM 59 **Relation of linoleic and alpha-linolenic acids affect incubation performance and chick quality in quail breeders**
L. L. Silva^{1*}, V. D. Cunha Miranda¹, V. Cardoso¹, B. Rosário Silva¹, M. Frageri Paulino¹, W. Rodrigues¹, T. C. Santos¹, ¹Universidade Estadual de Maringá, Maringá, Brazil

5:40 PM

60

Effect of a Mycotoxin deactivator on the Growth, Reproductive Performance, Immunity, Egg Quality, Oxidation and Intestinal Status of Broiler Breeders and their Offspring Broilers

D. Preveraud^{1*}, S. Bai², B. Song², W. Quinteiro³, Y. Zhang⁴, T. Ma⁴, ¹Mycotoxin Management, Adisseo France SAS, Antony, France, ²Animal Nutrition Institute, Sichuan Agricultural University, Chengdu, China, ³Adisseo Brasil, São Paulo, Brazil, ⁴Adisseo Life Science, Shanghai, China

Welcome Reception
Cataratas Foyer

6:00 PM

Welcome Reception

Tuesday

Wednesday, October 5

SYMPOSIA AND ORAL SESSIONS

Symposium: One Health and antibiotic-free poultry production: Actual global challenges

Chair: Melina Bonato, ICC Brazil

Cataratas I

8:00 AM	208S	One Health: Concept and relevance in food safety, control of zoonoses, antibiotic resistance and impact on public health João Palermo Netto ^{1*} , ¹ University of São Paulo
8:50 AM	209S	Brazilian public policies for the prevention and control of antimicrobial resistance in animal production Diego Menezes de Brito ^{1*} , ¹ DIPE/CGPV, MAPA
9:20 AM	210S	Antibiotic use impact in poultry immune system and food safety Douglas Korver ^{1*} , ¹ University of Alberta
10:00 AM		Break
10:30 AM	211S	Immunonutrition applied to poultry production supporting the AGP reduction Breno Castelo Beirão ^{1*} , ¹ UFPR
11:00 AM	212S	Brazilian poultry industry experience: Immunonutrition as practical application Ricardo Rauber ^{1*} , ¹ Vetnova
11:30 AM	213S	Practical application of feed additives as immunonutrients Melina Bonato ^{1*} , ¹ ICC Brazil
11:50 AM		Roundtable Discussion

Symposium: Proteins: From feedstuffs to meat

Chairs: Marcio Ceccantini, Adisseo; José Barbi, Adisseo;
& Pierre-André Geraert, Adisseo

Cataratas II

8:00 AM	214S	Proteins from raw materials: Variability and quality parameters affecting digestibility and performance Pascal Thierry ^{1*} , ¹ Adisseo
8:40 AM	215S	Formulating AA under revised energy and protein supply Mike Kidd ^{1*} , ¹ University of Arkansas
9:20 AM	216S	Strategies to improve protein digestibility Sergio Vieira ^{1*} , ¹ Universidade Rio Grande Do Sul
10:00 AM		Break

10:30 AM	217S	Undigestible proteins, one of the important factors of gut health Richard Ducatelle ^{1*} , ¹ University of Ghent
11:10 AM	218S	New insights on breast abnormalities in broilers: Possible underlying mechanisms Francesca Soglia ^{1*} , Massimiliano Petracci ^{1*} , ¹ University of Bologna
11:50 AM		Take home messages and conclusion Pierre-André Geraert ^{1*} , Mike Kidd ^{2*} , ¹ Adisseo, ² University of Arkansas

Symposium: Sustainability in poultry production: How does nutrition affect the animal performance and environment?

Chair: Edson Fontinelli, Tectron

Marfim I & II

8:00 AM	219S	Interaction between physiology, digestion and digestibility José Henrique Stringhini ^{1*} , ¹ Universidade Federal de Goiás
8:40 AM	220S	Intestinal health as a scientific methodology and practical tool for modern poultry farming Antonio Gilberto Bertechini ^{1*} , ¹ Universidade Federal de Lavras
9:20 AM	221S	Impact of proteases supplementation on nutrient digestibility in poultry Horacio Santiago Rostagno ^{1*} , ¹ Universidade Federal de Viçosa
10:00 AM		Break
10:30 AM	222S	Anti-nutritional factors in poultry feed ingredients Andréia Massuquetto ^{1*} , ¹ Tectron
11:10 AM	223S	What are the ways to poultry production adaptation to the new demands of society? Lúcio Francelino Araújo ^{1*} , ¹ Universidade de São Paulo
11:50 AM		Roundtable Discussion

Student Competition: Microbiology and Food Safety

Moderator: Fabio Goldflus, GoldFeed

Marfim III

- 8:00 AM 61 **Monitoring of multidrug-resistant Escherichia coli in poultry farms in southern Brazil**
V. D. Cruz^{1*}, R. K. Takayama Kobayashi¹, G. Nakazato¹, F. Matté², C. Prigol², M. F. Menck-Costa¹, H. Schiffer Cury², L. E. Takano², A. Kazuo², B. D. Cruz³, ¹Microbiology, Universidade Estadual de Londrina, Londrina, Paraná, Brazil, ²Vetanco Brasil, Chapecó, Santa Catarina, Brazil, ³UENP, Bandeirantes, Paraná, Brazil
- 8:10 AM 62 **Campylobacter jejuni cecal microbiome profiles of chickens spray-vaccinated with live attenuated Salmonella-vectored C. jejuni immunogenic epitopes**
E. G. Olson^{1*}, P. Rubinelli², A. Bodie¹, G. Tellez-Isaias², S. Ricke¹, ¹Animal and Dairy Sciences, UW-Madison, Madison, WI, United States, ²University of Arkansas, Fayetteville, AR, United States
- 8:20 AM 63 **Effects of Phage Therapy on Salmonella of Feed Withdrawal and Non-Feed Withdrawal Broilers During In Vitro Cecal Incubation**
J. A. Brown^{1*}, D. Dittoe¹, J. Corban¹, S. Raman¹, S. Ricke¹, ¹University of Wisconsin - Madison, Madison, WI, United States
- 8:30 AM 64 **Modulation of broilers intestinal microbiota with Probiotic and Prebiotic supply**
M. F. Menck-Costa^{1*}, A. A. Baptista¹, L. Justino¹, V. D. Cruz¹, M. D. Souza¹, M. S. Sanches¹, T. H. Endo¹, L. P. Medeiros¹, V. M. Kaneko¹, F. Matté², G. Nakazato¹, R. K. Takayama Kobayashi¹, ¹State University of Londrina, Londrina, Paraná, Brazil, ²Vetanco Brasil, Chapecó, Brazil
- 8:40 AM 65 **Antimicrobial resistance in Escherichia coli and Salmonella spp. isolated from poultry samples in Colombia from 2007 up to 2021**
L. N. Oicatá^{1*}, D. Alvarez Mira¹, A. P. Gómez¹, ¹Universidad Nacional de Colombia, Bogotá D.C., Cundinamarca, Colombia

Student Competition: Immunology, Health and Disease

Moderator: Luis Felipe Caron, Universidade Federal do Paraná

Marfim IV & V

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| 8:00 AM | 66 | Dietary aflatoxins and pre-slaughter fasting time affect broiler liver morphology
P. L. Santos ^{1*} , S. L. Vieira ¹ , R. M. Horn ¹ , D. D. Maria ¹ , J. C. Feijo ¹ , Y. J. Olabariaga ² , C. F. Nunes ² , W. E. Altevogt ² , B. B. Xavier ¹ , ¹ Animal Science, UFRGS, Porto Alegre, Rio Grande do Sul, Brazil, ² Zootecnia, Universidade Federal do Rio Grande do Sul, Viamão, Rio Grande do Sul, Brazil |
| 8:10 AM | 67 | Difference in seroconversion of Brazilian commercial broiler flocks induced by three different strains of Infectious Bursal Disease virus
J. E. Dias ^{1*, 2} , R. M. Martello ² , E. D. Culhari ² , I. H. Vellano ² , E. L. Hunka ² , ¹ Health and Sustainable Production of Poultry and Swine, Santa Catarina Federal Institute - IFC, Concordia, SC, Brazil, ² Phibro Animal Health, Campinas, SP, Brazil |
| 8:20 AM | 68 | Modifications on body composition and tissue deposition on broilers challenged by Eimeria maxima
L. V. Freitas ^{1*} , M. Reis ¹ , B. R. Nogueira ¹ , F. H. Morillo ¹ , B. B. Leme ¹ , R. R. Lizana ¹ , R. L. Silva ¹ , N. K. Sakomura ¹ , ¹ Animal Science, São Paulo State University, Jaboticabal, Brazil |

Student Competition: Management and Production

Moderator: Liris Kindlien, Federal University of Rio Grande do Sul

Marfim VI

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| 8:00 AM | 69 | The importance of regrouping laying hens during the growing period in the productive aspects raised in a free-range system
A. C. Britto Doi ^{1*} , I. D. Dias ¹ , M. Conceição dos Santos ¹ , A. J. Coronado ² , P. Arriguicci Bernardes ³ , A. Maiorka ¹ , C. da Rocha ¹ , F. Dahlke ³ , ¹ Federal University of Paraná, Curitiba, Paraná, Brazil, ² Zootecnia, UFSC, Palhoça, SC, Brazil, ³ Zootecnia e Desenvolvimento Rural, Universidade Federal de Santa Catarina, Santa Catarina, Brazil |
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Management and Production

Moderator: Liris Kindlien, Federal University of Rio Grande do Sul

Marfim VI

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| 8:10 AM | 70 | Water efficiency in broiler production – Update on a USDA comprehensive project in sustainability
W. G. Bottje ^{1*} ¹ Poultry Science, University of Arkansas, Fayetteville, AR, United States |
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8:20 AM	71	<p>Review of chemical and physical results of well water for chicken consumption during the years 2018 to 2021, in Lima, Peru</p> <p>A. E. Carrillo^{1*}, ¹Microbiologia, Alfa Biol S.A.C., Lima, Lima, Peru</p>
8:30 AM	72	<p>Carcass and cuts yield of broilers chickens selected for slaughtering randomly or based on average weights</p> <p>N. Rohloff Junior^{1*}, R. V. Nunes¹, C. Eyang¹, G. Perin¹, A. G. Cruz Costa¹, L. Wachholz¹, G. L. Silva Tesser¹, M. S. Pavlak¹, E. H. Cirilo¹, F. P. Campos¹, N. C. Santos¹, D. B. Jablonski¹, ¹Western Paraná State University, Marechal Candido Rondon, Paraná, Brazil</p>
8:40 AM	73	<p>Choice of sample size for carcass yield and cuts of broilers</p> <p>N. Rohloff Junior^{1*}, R. V. Nunes¹, C. Eyang¹, G. Perin¹, C. D. Souza¹, V. D. Savaris¹, C. Polesi¹, G. G. Sangalli¹, K. I. Tenório¹, T. L. Kohler¹, E. C. Santos¹, J. Broch¹, ¹Western Paraná State University, Marechal Cândido Rondon, PR, Brazil</p>
8:50 AM	74	<p>Monitoring of greenhouse gases from broiler litter compost by laser photoacoustic</p> <p>F. G. Linhares¹, M. S. Sthel¹, M. G. da Silva¹, K. A. Torres-Cordido^{1*}, L. Mota¹, C. D. Inácio², ¹Laboratório de Ciências Físicas, Centro de Ciência e Tecnologia, Universidade Estadual do Norte Fluminense Darcy Ribeiro, Campos dos Goytacazes, RJ, Brazil, ²Solos, Embrapa, Rio de Janeiro, RJ, Brazil</p>
9:00 AM	75	<p>Use of virginiamycin during successive flock rotations: Productive and microbiological consequences</p> <p>C. Y. Suarez^{1, 2}, J. S. Bucci¹, G. Royero³, F. Timo³, J. E. Dominguez^{1, 2}, N. A. Casanova¹, J. M. Diaz-Carrasco^{1, 2}, L. Socas^{1, 2}, L. M. Redondo^{1*}, ², M. E. Fernandez-Miyakawa^{1, 2}, ¹Instituto de Patobiologia Veterinaria, Instituto Nacional de Tecnología Agropecuaria, Hurlingham, Buenos Aires, Argentina, ²Conicet, Hurlingham, Buenos Aires, Argentina, ³Frigorífico de Aves Soychu, Gualeguay, Entre Rios, Argentina</p>
9:10 AM	76	<p>Commercial poultry production data collection, organization, and augmentation for machine learning analytics</p> <p>L. Ferrato Melo de Carvalho^{1*}, ², P. Ferket², ¹Alltech do Brasil, Maringá, PR, Brazil, ²Prestage Department of Poultry Science, North Carolina State University, Raleigh, NC, United States</p>

- 9:20 AM 77 **Machine Learning Applications and Methodologies for Poultry Production Data**
L. Ferrato Melo de Carvalho^{1*}, ², P. Ferket², ¹Alltech do Brasil, Descalvado, SP, Brazil, ²Prestage Department of Poultry Science, North Carolina State University, Raleigh, NC, United States
- 9:30 AM 78 **Evaluating the draft US-EPA emissions models for laying hen and broiler facilities**
Y. Xiong², G. Li¹, B. C. Ramirez¹, R. S. Gates^{1*}, ¹, ¹Iowa State University, Ames, IA, United States, ²Animal Science Department, University of Nebraska-Lincoln, Lincoln, NE, United States
- 9:40 AM 79 **Life cycle assessment project for the Brazilian egg industry**
F. F. Maciel^{1*}, R. S. Gates², I. D. Tinôco¹, N. Pelletier³, M. A. Ibarburu-Blanc², ¹Federal University of Viçosa, Viçosa, Minas Gerais, Brazil, ²Iowa State University, Ames, IA, United States, ³University of British Columbia, Okanagan, BC, Canada

Immunology, Health and Disease

Moderator: Luis Felipe Caron, Universidade Federal do Paraná

Marfim IV & V

- 8:30 AM 80 **Induction of lesions in the trachea of broilers vaccinated for infectious bronchitis with serotypes Massachusetts and BR in broilers**
G. L. Linzmeier^{1*}, ¹Boehringer Ingelheim, Cascavel, Brazil
- 8:40 AM 81 **Selection of Bacillus subtilis isolates through in vitro and in vivo models for use as probiotics for poultry**
G. R. Silva¹, V. A. Azevedo², T. F. Reis¹, P. F. Braga¹, Í. M. Costa¹, M. Soares¹, A. Schlemper¹, B. B. Fonseca^{1*}
¹Universidade Federal De Uberlândia, Uberlândia, MG, Brazil, ²Universidade Federal De Minas Gerais, Belo Horizonte, Brazil
- 8:50 AM 82 **Zootecnical performance in broilers fed with two different Nicarbazin-potentiated ionophores up to 28 days in the presence of a field coccidia challenge**
P. T. Rocha^{2*}, L. Gomez¹, K. Bafundo¹, D. Haese³, ¹Global Marketing and Technical Services, Phibro, Teaneck, NJ, United States, ²Poultry Technical Services, Phibro, Campinas, SP, Brazil, ³Technical Department, Centro de Tecnologia Animal, Paraju, ES, Brazil

9:00 AM	83	<p>Application of nanopore sequencing in commercial broiler farms for rapid characterization of gut microbiome and antibiotic resistance genes</p> <p>M. Segura-Wang^{1*}, S. Raurich¹, S. Ilic¹, B. Blokker², B. Grenier¹, ¹DSM Animal Nutrition and Health, Tulln an der Donau, Austria, ²DSM Animal Nutrition and Health, Kaiseraugst, Switzerland</p>
9:10 AM	84	<p>Detection of novel infectious bronchitis viruses in broilers and layers in Mexico and their control by using a synergic live vaccine combination</p> <p>J. R. Cambre^{1*}, A. Estrada¹, N. González¹, S. Carrasco², J. González-Alcalá³, V. López-Gómez⁴, E. Cruz-Mercado⁵, ¹Poultry Business Unit, MSD Salud Animal, Mexico City, Mexico, ²Independent, Tepatitlán, Jalisco, Mexico, ³Agroalimentos San José, Capilla de Guadalupe, Jalisco, Mexico, ⁴Gigantes Agroindustrias, Tepatitlán, Jalisco, Mexico, ⁵Avícola Los Viveros, Tepatitlán, Jalisco, Mexico</p>
9:20 AM	85	<p>Evaluation of three vaccination programs against Clostridium perfringens alpha toxin and its effects on the performance, intestinal lesions and serum antibody titers in broilers</p> <p>D. J. Huaranga², O. A. Zea^{1*}, T. S. Huapaya¹, L. Jimenez¹, D. Molina³, M. Salazar¹, C. Vílchez-Perales¹, ¹Lima, Universidad Nacional Agraria La Molina, Lima, Lima, Peru, ²Nutrición, Integración Avícola Oro, Quito, Pichincha, Ecuador, ³Lima, Universidad Nacional Mayor de San Marcos, Lima, Lima, Peru</p>
9:30 AM	86	<p>Dynamic of the energy utilization of broiler chicks under health challenge</p> <p>R. D. Camargos^{1*}, R. R. Lizana¹, M. Macari¹, L. V. Freitas¹, M. Z. Costa¹, K. C. Bicego¹, N. K. Sakomura¹, ¹School of Agricultural and Veterinarian Sciences, São Paulo State University - UNESP, Jaboticabal, São Paulo, Brazil</p>
9:40 AM	87	<p>Case report: Angioinvasive Pulmonary Aspergillosis in an Adult Captive Green Java Peafowl (Pavo muticus)</p> <p>A. A. Khan^{1*}, A. Anjum¹, ¹Department of Pathobiology, Riphah College of Veterinary Sciences, Lahore, Pakistan</p>
9:50 AM	88	<p>Test of anticoccidial sensitivity in turkeys</p> <p>T. L. Amaral^{1*}, ²L. Bielke¹, K. McGovern¹, P. Yeboah¹, D. Ibiwoye¹, ¹Department of Animal Sciences, The Ohio State University, Wooster, OH, United States, ²Veterinary Medicine, Universidade Federal de Goiás, Goiânia, Goiás, Brazil</p>
10:00 AM		Break

10:30 AM	89	<p>Algal polysaccharides improve gut barrier function M. Garcia¹, F. Giacobbo^{1*}, M. Berri², P. Nyvall-Collen¹, ¹Olmix Group, Brehan, France, ²Animal Health, Inrae, Nouzilly, France</p>
10:40 AM	90	<p>Model generation using machine learning for the detection of Eimeria Maxima in broilers T. Frost^{1*}, C. Phillips², K. Freeman², L. Laprade², A. Cowieson³, ¹DSM Nutritional Products, Parsippany, NJ, United States, ²DSM Biotechnology Group, Lexington, MA, United States, ³DSM Nutritional Products, Kaiseraugst, Switzerland</p>
10:50 AM	91	<p>Deletion of mgtC gene does not affect pathogenicity of Salmonella Gallinarum biovar Gallinarum in a chicken infection model L. B. Rodrigues Alves^{1, 2}, M. Saraiva^{1*}, ², O. C. Freitas Neto^{1, 3}, B. Lima¹, D. F. Monte¹, J. E. Olsen², A. Berchieri Junior¹, ¹Pathology, Theriogenology, and One Health, Unesp, Jaboticabal, São Paulo, Brazil, ²Department of Veterinary and Animal Sciences, Section for Clinical Veterinary Microbiology, University of Copenhagen, Copenhagen, Denmark, ³Medicina Veterinária Preventiva, Universidade Federal de Minas Gerais, Belo Horizonte, Minas Gerais, Brazil</p>
11:00 AM	92	<p>Evaluation of the ISI macroscopic score as a benchmark for broiler performance in commercial farms in Brazil B. L. Belote^{1*}, I. Soares¹, O. Figueiro¹, C. Souza³, F. A. Silva², E. Santin¹, ¹ISI Institute, Londrina, Parana, Brazil, ²Universidade do Oeste Paulista, Presidente Prudente, Brazil, ³CLS Consulting, Capanema, Brazil</p>
11:10 AM	93	<p>Effect of a probiotic solution on intestinal health of broiler chickens challenged with salmonella and mycotoxins D. Preveraud^{1*}, M. Ingberman², B. C. Beirão², W. Quinteiro³, ¹Health by Nutrition, Adisseo France SAS, Antony, France, ²Imunova Análises Biológicas, Curitiba, Brazil, ³Adisseo Brasil, São Paulo, Brazil</p>

Microbiology and Food Safety

Moderator: Fabio Goldflus, GoldFeed

Marfim III

- 8:50 AM 94 **Genome features and Comparative analysis of Salmonella enterica subsp. enterica serovar Schwarzengrund isolated from both human and poultry**
V. P. Benevides^{1, 2}, M. Saraiva^{1*}, ², I. Campos¹, L. B. Rodrigues Alves^{1, 2}, J. E. Olsen², A. Berchieri Junior¹, ¹Pathology, Theriogenology, and One Health, Unesp, Jaboticabal, São Paulo, Brazil, ²Department of Veterinary and Animal Sciences, Section for Clinical Veterinary Microbiology, University of Copenhagen, Copenhagen, Denmark
- 9:00 AM 95 **Quantification of Campylobacter spp in turkey meat refrigerated using real-time PCR, automated technique for most-probable-number (MPN) and traditional plate counting methodology**
C. Fuhr¹, T. Simonetti^{1*}, G. P. Bergmann¹, V. P. Nascimento¹, L. Kindlein¹, ¹UFRGS, Porto Alegre, Brazil
- 9:10 AM 96 **Effect of a diet containing a sanguinarine-based phytobiotic on Salmonella Heidelberg infection in broiler chicks**
V. V. Alves¹, R. A. Silva², L. C. Arantes¹, M. D. Texeira¹, R. B. Lucena², C. J. Oliveira³, O. C. Freitas Neto^{1*}, ¹Universidade Federal de Minas Gerais, Belo Horizonte, Minas Gerais, Brazil, ²Ciências Veterinárias, Universidade Federal da Paraíba, Areia, Paraíba, Brazil, ³Universidade Federal da Paraíba, Areia, Paraíba, Brazil
- 9:10 AM 97 **Bacteriophages as a promising sustainable solution to control Salmonella bacteria in poultry on the example of BAFASAL preparation**
J. Andrysiak^{1*}, E. Wojcik¹, ¹RnD, Proteon Pharmaceuticals, Łódź, Poland
- 9:20 AM 98 **Inactivation of Pseudomonas aeruginosa virulence factors by Activated Calcium Montmorillonite**
D. Wang^{1*}, S. Johnston¹, S. Ching¹, B. Fashina², Y. Deng², ¹Amlan International, Vernon Hills, IL, United States, ²Texas A&M University, College station, TX, United States
- 9:30 AM 99 **Accumulation of fumonisins in broiler tissues with or without feeding algae-clay based technology**
M. A. Rodriguez¹, F. Giacobbo^{1*}, D. Tardieu², M. Matard-Mann¹, P. Guerre², ¹Olmix Group, Brehan, France, ²Pharmacy-Toxicology, Ecole Nationale Vétérinaire de Toulouse, Toulouse, France

- 9:40 AM 100 **Salmonella Typhimurium infection with a knockout of *ttrA* and *pduA* genes interferes with the abundance and diversity of the ceecal broiler microbiota**
M. Saraiva^{1*}, ², M. Pirolò², L. B. Rodrigues Alves^{1, 2}, D. F. Monte¹, V. P. Benevides^{1, 2}, J. E. Olsen², A. Berchieri Junior¹, ¹Pathology, Theriogenology, and One Health, Unesp, Jaboticabal, São Paulo, Brazil, ²Department of Veterinary and Animal Sciences, Section for Clinical Veterinary Microbiology, University of Copenhagen, Copenhagen, Denmark
- 9:50 AM 101 **Persistence of *Lactobacillus* spp. in poultry litter nebulized with FloraMax-B11®**
L. Justino^{1*}, ¹, A. C. Benteo¹, M. D. Souza¹, M. F. Menck-Costa¹, V. M. Kaneko¹, C. E. Cicero¹, S. Trocato de Freitas Júnior¹, A. Oba¹, F. Matté², A. A. Baptista¹, ¹State University of Londrina, Londrina, Paraná, Brazil, ²Vetanco, Chapecó, Santa Catarina, Brazil
- 10:00 AM **Break**
- 10:30 AM 102 **Oral vaccination in broilers as a strategy to control *Salmonella* spp**
M. D. Souza¹, A. Kazuo², C. A. DalleMole^{2*}, L. E. Takano², L. Justino¹, M. F. Menck-Costa¹, V. M. Kaneko¹, S. Layton³, A. A. Baptista¹, ¹Department of Preventive Veterinary Medicine, State University of Londrina, Londrina, Paraná, Brazil, ²Vetanco do Brasil importação e exportação, Chapecó, Santa Catarina, Brazil, ³Vetanco, Saint Paul, MN, United States
- 10:40 AM 103 **Supplementation of a yeast fermentate product on broiler carcass microbiota following evisceration and chilling steps**
L. A. Wythe¹, D. Dittoe¹, A. Schaeffer², S. Ricke^{1*} ¹Animal Science, University of Wisconsin, Madison, WI, United States, ²Harvest Fuels, Walhalla, ND, United States

Metabolism and Nutrition, Amino Acids

Moderator: Víctor D. Naranjo, Evonik

Marfim VI

- 10:30 AM 104 **Methionine and cysteine ideal levels for growing and finishing broiler chickens**
M. Conceição dos Santos^{1*}, L. Nagae Kuritza¹, G. Costa Senger¹, A. C. Britto Doi¹, C. da Rocha¹, L. Moreira dos Santos¹, F. de Oliveira Marx¹, S. G. de Oliveira¹, ¹Universidade Federal do Paraná, Curitiba, Brazil

- 10:40 AM 105 **Evaluation of sulfur amino acid levels in relation to diet digestible lysine on the performance of Ross broilers from 1 to 24 days**
M. B. de Carvalho^{1*}, R. V. Nunes², C. D. Souza², A. S. de Avila², E. A. Ianchinski¹, M. A. Silva³, C. Kaufmann², F. P. Campos², H. Sartor², M. Fernanda Cardoso Pereira², E. L. Storck², ¹Universidade Tecnológica Federal do Paraná, Dois Vizinhos, Paraná, Brazil, ²Universidade Estadual do Oeste do Paraná, Marechal Cândido Rondon, Paraná, Brazil, ³Aviagen, Inc., Huntsville, AL, United States,
- 10:50 AM 106 **Determination of the optimum digestible methionine plus cystine to lysine ratio for male broiler chickens from 14 to 28 days of age**
G. A. de Aguiar^{1*}, G. Viana², J. Barcellos¹, L. da Fonseca¹, P. Careli¹, M. A. do Nascimento¹, A. Lemme³, J. Dorigam³, V. D. Naranjo³, M. Hannas¹, ¹Universidade Federal de Viçosa, Viçosa, Minas Gerais, Brazil, ²Natural Resources Institute Finland, Jokioinen, Finland, ³Evonik Operations GmbH, Hanau, Germany
- 11:00 AM 107 **Large commercial validation of the replacement of DL-methionine hydroxy analogue with DL-methionine at 100:65 ratio in broilers produced under Brazilian conditions**
P. Tomazini Medeiros², V. D. Naranjo^{3*}, P. Castelo², J. Dorigam¹, A. Lemme¹, ¹Evonik Operations GmbH, Hanau, Germany, ²Evonik Brasil Ltda., São Paulo, Brazil, ³Evonik Guatemala S.A., Guatemala, Guatemala
- 11:10 AM 108 **The effects of arginine:lysine ratios on performance, skin quality and creatine levels of broiler chickens fed low-protein diets from 22 to 44 days old**
C. H. Oliveira^{1*}, K. M. Dias¹, R. D. Bernardes¹, J. Tak², C. Park², R. Rodrigues³, A. A. Calderano¹, L. F. Albino¹, ¹Animal Science, Federal University of Viçosa, Viçosa, Minas Gerais, Brazil, ²CJ Bio, Jung-gu, Seoul, Korea (the Republic of), ³CJ Brazil, São Paulo, São Paulo, Brazil
- 11:20 AM 109 **The effects of isoleucine:lysine ratios on growth performance of broiler chickens fed low-protein diets from 22 to 44 days old**
R. D. Bernardes^{1*}, K. M. Dias¹, C. H. Oliveira¹, J. Tak², R. Rodrigues³, A. A. Calderano¹, L. F. Albino¹, ¹Animal Science, Federal University of Viçosa, Viçosa, Minas Gerais, Brazil, ²CJ Bio, Jung-gu, Seoul, Korea (the Republic of), ³CJ Brazil, São Paulo, São Paulo, Brazil

11:30 AM	110	<p>Evaluation of the effect of decreasing crude protein (CP) levels with supplementation of synthetic amino acids (AAs) upon the performance in broilers</p> <p>D. Goncalves Bruno^{1*}, J. Vieira Marques de Souza Pereira Batista¹, S. Caio Cesar Besson¹, A. Medina Dubois¹, P. Antonio Mario¹, ¹Cargill Alimentos LTDA, Campinas, São Paulo, Brazil</p>
11:40 AM	111	<p>Response of laying hens to repletion and depletion in dietary balanced protein</p> <p>I. P. Nobrega^{1*}, M. Reis², L. C. Bittencourt¹, N. K. Sakomura², ¹DSM Animal Nutrition & Health, Mairinque, São Paulo, Brazil, ²São Paulo State University, Jaboticabal, Brazil</p>
11:50 AM	112	<p>Crude protein reduction and balanced amino acid profile keeps egg performance in two different production systems</p> <p>M. Pilecco¹, A. P. Rosa¹, A. B. Serraglio^{1*}, A. Lemme², C. de la Cruz², N. A. Barbosa³, ¹Federal University of Santa Maria, Santa Maria, RS, Brazil, ²Nutrition & Care, Evonik Operations GmbH, Hanau, Hanau, Germany, ³Evonik Brazil, Santa Maria, Rio Grande do Sul, Brazil</p>

Student Luncheon

Professional Luncheon

Symposium: Feeding strategies to improve the gut health and performance of poultry

Chair: Víctor D. Naranjo, Evonik

Cataratas I

1:30 PM	224S	<p>Critical points in the quality control of raw materials and new solutions and its impact on poultry health and performance</p> <p>Everton Krabbe^{1*}, ¹Embrapa</p>
2:00 PM	225S	<p>Influence of feed particle size and feed structure on intestinal health and poultry performance</p> <p>Wilmer Pacheco^{1*}, ¹Auburn University</p>
2:30 PM	226S	<p>Understanding the role of fiber and its components on poultry health and performance</p> <p>Gonzalo Mateos^{1*}, ¹Universidad Complutense de Madrid</p>
3:00 PM	227S	<p>Achieving a precise amino acid nutrition to improve poultry health, welfare and performance</p> <p>Juliano Dorigam^{1*}, ¹Evonik</p>
3:30 PM		Break

4:00 PM	228S	Optimizing feed additives in poultry using microbiome analyses Steven C. Ricke ^{1*} , ¹ University of Wisconsin
4:30 PM	229S	Practical application of feeding strategies to improve the overall health and performance of broilers Eduardo Butolo ^{1*} , ¹ Integral
5:00 PM		Roundtable discussion

Symposium: The positive balance between agents that impact the optimized functionality of the entire intestinal process

Chair: Kelen Zavarize, Novus International, Inc.

Cataratas II

1:30 PM	230S	A new look to the Gut Health concept, approach, and management Hugo Romero ^{1*} , ¹ Novus International, Inc.
1:50 PM	231S	Intestinal Integrity - Reorganizing concepts and their practical applications in broilers Antonio Froilano ^{1*} , ¹ Froilano Consultoria LTDA
2:40 PM	232S	Dynamic of immunology and barriers response – Updates on concepts Luiz Caron ^{1*} , ¹ Universidade Federal do Paraná
3:30 PM		Break
4:00 PM	233S	Gut microbiota response Edgar O. Oviedo-Rondón ^{1*} , ¹ North Carolina State University
4:50 PM	234S	Searching and understanding the microbiota metabolites Anderson Cunha ^{1*} , ¹ Universidade Federal de São Carlos
5:40 PM		Roundtable Discussion

Symposium: Precision intestinal nutrition: A new definition for protease and xylanase

Chair: Elizabeth Santin, Jefo Nutrition

Marfim I & II

1:30 PM		Introduction Mariana Moraes ^{1*} , ¹ Jefo Nutrition
1:50 PM	235S	Variation on ingredient quality: Opportunities for protease and xylanase Roselina Angel ^{1*} , ¹ University of Maryland

2:40 PM	236S	Precision intestinal nutrition and meat quality: A new application for enzymes Elizabeth Santin ^{1*2} , ¹ Jefo Nutrition, ² ISI Institute
3:30 PM		Break
4:00 PM	237S	The use of enzymes as a tool to meet the demands of modern consumers Everton Krabbe ^{1*} , ¹ Embrapa
4:50 PM		Roundtable Discussion

Metabolism and Nutrition, Enzymes

Moderator: José Otávio Sorbara, DSM Nutritional Products
Marfim III

1:30 PM	113	Impact of feeding black pepper (<i>Piper nigrum</i> L) and xylanase on hepatic antioxidants of broiler chickens V. Pirgozliev ^{1*} , K. Kljak ² , I. Whiting ¹ , S. Mansbridge ¹ , S. Rose ¹ , J. Rollinger ³ , A. Atanasov ³ , ⁴ A. Jozwik ⁴ , ¹ Harper Adams University, Newport, Shropshire, United Kingdom, ² Faculty of Agriculture, University of Zagreb, Zagreb, Croatia, ³ Department of Pharmaceutical Sciences, Division of Pharmacognosy, University of Vienna, Vienna, Austria, ⁴ Institute of Genetics and Animal Biotechnology of the Polish Academy of Sciences, Jastrzebiec, Poland
1:40 PM	114	Combination of a novel bacterial phytase with endogenous phosphatases for myo-inositol release evaluated in vitro D. F. Rosso ^{1*} , J. C. de Souza ¹ , M. B. Tovborg ³ , L. C. Bittencourt ² , V. Fascina ² , ¹ Novozymes Latin America, Araucária, Paraná, Brazil, ² DSM Produtos Nutricionais Brasil, São Paulo, Brazil, ³ Novozymes A/S, Kgs. Lyngby, Denmark
1:50 PM	115	Evaluation of a novel sphericase protease expressed in <i>Bacillus Licheniformis</i> on performance and egg quality of laying hens L. D. Teixeira ¹ , V. Fascina ¹ , L. C. Bittencourt ¹ , I. P. Nobrega ^{1*} , ¹ DSM Nutritional Products Brazil, São Paulo, Brazil
2:00 PM	116	Protease supplementation in diets for broilers containing extruded full-fat soybean and its effects on organs weight, antioxidant enzyme activity and jejunal trypsin W. J. Alves ¹ , L. da Fonseca ¹ , J. Barcellos ¹ , N. Rudio Furlani ¹ , J. C. Muniz ¹ , M. Hannas ¹ , T. P. Ribeiro ^{2*} , A. Massuquetto ² , D. P. Monteiro ² , ¹ Animal Nutrition, Universidade Federal de Viçosa, Viçosa, Viçosa, Brazil, ² Animal Nutrition, Tectron, Toledo, Brazil

- 2:10 PM 117 **Protease supplementation in diets for broilers containing extruded full-fat soybean and its effects on performance and intestinal morphometry**
W. J. Alves², P. R. Arnaut², C. Renata Ferreira², L. da Fonseca², J. C. Muniz², M. Hannas², T. P. Ribeiro^{1*}, A. Massuquetto¹, D. P. Monteiro¹, ¹Animal Nutrition, Tectron, Toledo, Brazil, ²Animal Nutrition, Universidade Federal de Viçosa, Viçosa, Minas Gerais, Brazil
- 2:20 PM 118 **In vitro analysis of protein hydrolysis boost by novel sfericase protease when added in combination with endogenous enzymes**
J. C. de Souza^{1*}, D. F. Rosso¹, L. T. Haahr², J. O. Sorbara³, M. U. Faruk³, ¹Novozymes Latin America, Araucária, Paraná, Brazil, ²Novozymes A/S, Kgs. Lyngby, Denmark, ³DSM Nutritional Products, Kaiseraugst, Switzerland
- 2:30 PM 119 **Growth performance and carcass yield of broilers fed a multi-carbohydrase complex associated with high levels of phytase**
G. L. Godoy^{1*}, V. Biselo¹, J. A. Alencar¹, A. Toscan², G. Vasconcellos², N. S. Fagundes², C. Stefanello¹, ¹Animal Sciences, University of Santa Maria, Santa Maria, RS, Brazil, ²Adisseo Latin America, São Paulo, Brazil
- 2:40 PM 120 **A comparison of the efficacy of a novel phytase as compared to other commercially available phytases for broiler**
V. E. Silva^{1*}, A. Favero¹, L. Kindlein², S. Vieira², L. D. Teixeira³, V. Fascina³, ¹Santa Lúvia Experimental Farm, Garibaldi, Brazil, ²Federal University of Rio Grande do Sul, Porto Alegre, Brazil, ³DSM Nutritional Products, Sao Paulo, Brazil
- 2:50 PM 121 **Nutritional challenges for a new protease in corn and soybean meal-based diets for broilers**
J. L. Schneiders¹, E. P. François^{1*}, G. N. Rosseti¹, A. Carvalho², B. R. Nogueira³, A. G. Bertechini², ¹Technincal, Kemin, Jundiaí, São Paulo, Brazil, ²UFPA, LAVRAS, Minas Gerais, Brazil, ³Nutrition, Agri Stats, Chapecó, Santa Catarina, Brazil
- 3:00 PM 122 **Enzymatic associations in diets of broiler chickens on energy utilization and ileal digestibility of nutrients**
G. L. Freitag Tischer^{1*}, B. Colcetta¹, C. Eyng¹, N. Rohloff Junior¹, C. Kaufmann¹, G. Toniazzo¹, T. P. Ribeiro², R. V. Nunes¹, ¹Western Paraná State University, Marechal Cândido Rondon, PR, Brazil, ²Animal Nutrition, Tectron, Toledo, Brazil

3:10 PM	123	<p>β-mannanase as an alternative to increasing the layer hen's productivity</p> <p>C. Lopes Carvalho^{1, 3}, I. Andretta¹, G. Miotto Galli¹, N. de Oliveira Telesca Camargo¹, M. Kipper^{2*}, ¹Animal Science, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brazil, ²Elanco Animal Health, São Paulo, Brazil, ³Ghent University, Merelbeke, Belgium</p>
3:20 PM	124	<p>β-mannanase supplementation as an environmentally friendly feed strategy to mitigate the environmental impacts of broiler feeding programs</p> <p>F. M. W. Hickmann^{1, 3}, I. Andretta^{1*}, M. Létourneau-Montminy³, A. Remus⁴, G. Miotto Galli¹, M. Kipper², ¹Animal Science, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brazil, ²Elanco Animal Health, São Paulo, Brazil, ³Département des Sciences Animales, Université Laval, Quebec, QC, Canada, ⁴Sherbrooke Research and Development Center, Agriculture and Agri-Food Canada, Sherbrooke, QC, Canada</p>
3:30 PM		Break
4:00 PM	125	<p>Protease supplementation in diets with reduced crude protein for broilers</p> <p>L. I. Datsch^{1*}, G. L. Silva Tesser¹, A. S. de Avila¹, E. A. Ianchinski¹, C. Kaufmann¹, L. M. Storck¹, T. P. Ribeiro², D. P. Monteiro², C. Eyng¹, R. V. Nunes¹, ¹Universidade Estadual do Oeste do Paraná, Marechal Cândido Rondon, Paraná, Brazil, ²Tectron, Toledo, Brazil</p>
4:10 PM	126	<p>Inclusion of newly harvested corn (NHC) and enzyme supplementation in the diet of broilers: Impact on cecal gut microbiota diversity, composition and function</p> <p>J. M. Diaz-Carrasco^{1*}, G. Royero², C. Y. Suarez¹, J. S. Bucci¹, L. M. Redondo¹, N. A. Casanova¹, J. E. Dominguez¹, M. E. Fernandez-Miyakawa¹, ¹Instituto de Patobiología, INTA, Hurlingham, Buenos Aires, Argentina, ²Frigorífico de Aves Soychú S.A., Buenos Aires, Argentina</p>
4:20 PM	127	<p>Intestinal permeability of broilers at 40 days of age fed diets with reduced energy levels and inclusion of β-mannanase</p> <p>A. V. Gouveia^{1*}, L. M. Paulo¹, A. G. Dias¹, J. M. Batista¹, M. Kipper², J. H. Stringhini¹, ¹Zootecnia, Universidade Federal de Goiás, Goiânia, Brazil, ²Elanco Saúde Animal, São Paulo, São Paulo, Brazil</p>

Metabolism and Nutrition, Feed Additives II (Probiotics)

Moderator: Jose Stringhini, Universidade Federal de Goiás

Marfim IV & V

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| 1:30 PM | 128 | Effect of bacillus coagulans DSM 32016 on performance and gut health of clostridium perfringens-infected broilers
M. Kamal ² , A. Schlagheck ² , V. C. de Paula ^{1*} , M. H. Awaad ³ , ¹ Biochem do Brasil Nutrição Animal, Sao Paulo, Brazil, ² Biochem Zusatzstoffe Handels- und Produktionsges. mbH, Lohne, Germany, ³ Faculty of Veterinary Medicine, Cairo University, Cairo, Egypt |
| 1:40 PM | 129 | Effect of a multi strain probiotic in broiler diets on microbiome population (a field evaluation)
B. Grenier ² , M. Segura-Wang ² , S. Raurich ² , S. Ilic ² , C. Mathias ¹ , L. Sa ^{1*} , L. C. Bittencourt ¹ , ¹ DSM Nutritional Products, Sao Paulo, Brazil, ² DSM Animal Nutrition and Health, Tulln an der Donau, Austria |
| 1:50 PM | 130 | Effect of probiotics, β-glucan and organic chromium in broiler diets on carcass characteristics and abdominal fat
J. C. Rocha ^{1*} , M. B. Cafe ¹ , N. S. Leandro ¹ , A. B. Souza ¹ , P. D. Dias ¹ , R. R. Santos ¹ , E. P. François ² , ¹ Escola de Veterinária e Zootecnia, Universidade Federal de Goiás, Goiânia, GO, Brazil, ² Poultry Nutrition, Kemin, Valinhos, São Paulo, Brazil |
| 2:00 PM | 131 | Effect of probiotics and β-glucan on performance and intestinal integrity of broilers compared to antibiotic grow promoter additive
J. C. Rocha ^{1*} , N. S. Leandro ¹ , M. B. Café ¹ , A. G. Dias ¹ , H. S. Santos ¹ , L. V. Cirilo ¹ , E. P. François ² , ¹ Escola de Veterinária e Zootecnia, Universidade Federal de Goiás, Goiânia, GO, Brazil, ² Poultry, Kemin, Valinhos, Brazil |
| 2:10 PM | 132 | Probiotics effects on intestinal components of broilers challenged with Clostridium perfringens
B. Pereira Siqueira ^{1*} , J. Stringhini ² , W. Azis Garcia de Araújo ³ , C. Suguimoto Leite ² , E. Garrido ³ , H. da Silva Messias ³ , S. Pereira Siqueira ³ , J. Araújo Castro ³ , P. Diogo de Soza ³ , B. Lacerda Dennuci ³ , ¹ Zootecnia, Universidade Federal de Goiás, Goiania, Brazil, ² Escola de Veterinária e Zootecnia, Universidade Federal de Goiás, Goiânia, Goiás, Brazil, ³ Zootecnia, Instituto Federal do Norte de Minas Gerais, Salinas, Brazil |

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| 2:20 PM | 133 | <p>Effect of the progressive replacement of the growth promoter antibiotic by probiotic on pro-ductive parameters, intestinal and bone morphometry in broilers</p> <p>J. Alvarez¹, C. Vílchez-Perales¹, O. A. Zea^{1*} ¹Lima, Universidad Nacional Agraria La Molina, Lima, Lima, Peru</p> |
| 2:30 PM | 134 | <p>Probiotics effects on carcass components of broilers challenged with <i>Clostridium perfringens</i></p> <p>B. Pereira Siqueira^{1*}, J. Stringhini¹, W. Azis Garcia de Araújo², C. Suguimoto Leite¹, H. da Silva Messias³, S. Pereira Siqueira³, E. Garrido³, P. Diogo de Soza³, J. Araújo Castro³, B. Lacerda Dennuci³, ¹Escola de Veterinária e Zootecnia, Universidade Federal de Goiás, Goiânia, Goiás, Brazil, ²Zootecnia, Instituto Federal Norte de Minas Gerais, Teofiltoni, Minas Gerais, Brazil, ³Zootecnia, Instituto Federal do Norte de Minas Gerais, Salinas, Brazil</p> |
| 2:40 PM | 135 | <p>Effect of antibiotic growth promoter, probiotics, and β-glucan on microbiome diversity of broiler chickens under commercial conditions</p> <p>E. P. Francois^{2*}, J. Correa Rocha¹, M. B. Cafe¹, N. S. Leandro¹, G. Neri², E. P. Francois², ¹EVZ - Escola de Veterinária e Zootecnia, UFG, Goiania, Goias, Brazil, ²Technical, Kemin South America, Sao Paulo, Sao Paulo, Brazil</p> |

Metabolism and Nutrition, Feed Additives III (Phytobiotics and Combinations)

Moderator: Jose Stringhini, Universidade Federal de Goiás

Marfim IV & V

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| 2:50 PM | 136 | <p>Growth performance, nutrient digestibility and intestinal health of broilers fed a proprietary blend from Quillaja and Yucca biomass</p> <p>C. Stefanello¹, G. L. Godoy¹, J. Fernandes¹, M. Cardoso¹, A. Krause³, R. Bonamigo³, S. Bonaspetti², B. Martins^{2*} ¹Animal Sciences, University of Santa Maria, Santa Maria, RS, Brazil, ²Phibro Animal Health Corporation, Campinas, SP, Brazil, ³Clinical Analysis Laboratory (LACVET), Santa Maria, Brazil</p> |
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- 3:00 PM 137 **Combination of microencapsulated propionic acid and phytochemicals improves the productive performance of broilers**
C. Facchi^{1*}, L. T. Miotto¹, B. P. Fernandes¹, D. S. Ribeiro¹, Í. Ferreira¹, J. D. Mello¹, T. G. Petrolli², T. E. Perez Fabregat³, ¹Research and Development, BTA Aditionos, Vargeão, Santa Catarina, Brazil, ²Zootecnia, UNOESC, Xanxerê, Santa Catarina, Brazil, ³Zootecnia, UDESC, Lages, Santa Catarina, Brazil
- 3:10 PM 138 **Microencapsulated blends of botanicals are effective feed supplements to control necrotic enteritis caused by Clostridium perfringens in broiler chickens**
B. Tugnoli^{1*}, A. Piva², ¹, P. Maynard³, E. Grilli², ³, ¹Vetagro S.p.A., Reggio Emilia, Italy, ²DIMEVET, University of Bologna, Ozzano Emilia (BO), Italy, ³Vetagro Inc, Chicago, IL, United States
- 3:20 PM 139 **Impact of Isoquinoline Alkaloids and Essential Oils addition in broiler feed in intestinal histological parameters**
K. P. Silva^{2*}, N. D. Oliveira², E. T. Santos², A. S. Massei¹, D. M. Freitas¹, C. D. Souza¹, ¹Phytobiotics Brasil, Cambé, Paraná, Brazil, ²Pluma Agroavícola, Dois Vizinhos, Paraná, Brazil
- 3:30 PM **Break**
- 4:00 PM 140 **Supplementation of organic acids and essential oils microencapsulated on technological properties and quality of fresh and frozen meat of broiler**
C. Tellini^{1*}, ³, L. Gubert², P. Yamamoto², A. C. Ferreira², L. K. Alvares², A. N. Pinto², B. T. Onishi², J. I. Fernandes¹, ², ¹Animal Science Post-Graduate Program, Federal University of Paraná- Sector Palotina, Palotina, Paraná, Brazil, ²Poultry Experimentation Laboratory, Federal University of Paraná – Sector Palotina, Palotina, Paraná, Brazil, ³Safeeds Animal Nutrition, Cascavel, Paraná, Brazil
- 4:10 PM 141 **Assessment of the redox system of the intestinal mucosa of broilers supplemented with a microencapsulated blend of organic acids and essential oils**
C. Tellini^{1*}, ², E. P. Simões¹, I. P. Pallaoro¹, L. D. Melo¹, L. Gubert¹, L. R. Stefanello¹, L. A. Pinto¹, ¹, J. I. Fernandes¹, ¹, ¹Federal University of Paraná- Sector Palotina, Palotina, Paraná, Brazil, ²Safeeds Animal Nutrition, Cascavel, Paraná, Brazil

- 4:20 PM 142 **Effect of a precision biotic in broiler chickens under a necrotic enteritis challenge**
C. Bortoluzzi^{1*}, F. Fei¹, F. Xu¹, B. Lumpkins², B. Belote³, J. O. Sorbara¹, J. Geremia¹, ¹DSM, College Station, TX, United States, ²Soyhern Poultry Feed and Research, Inc., Athens, GA, United States, ³I See Inside, Inc, Curitiba, Brazil
- 4:30 PM 143 **Evaluation of a blend of organic acids and essential oils microencapsulated on the performance and carcass yield of broilers**
C. Tellini^{2*}, ³, L. P. Glaeser¹, L. D. Melo¹, E. P. Simões¹, L. K. Alvares², ¹, P. Yamamoto¹, J. D. Barbosa¹, J. I. Fernandes², ¹, ¹Poultry Experimentation Laboratory, Federal University of Paraná – Sector Palotina, Palotina, Paraná, Brazil, ²Animal Science Post-Graduate Program, Federal University of Paraná- Sector Palotina, Palotina, Paraná, Brazil, ³Safeeds Animal Nutrition, Cascavel, Paraná, Brazil
- 4:40 PM 144 **Antioxidant effect of microencapsulated blend of organic acids and essential oils on fresh and frozen broiler meat**
C. Tellini^{1*}, ², L. R. Stefanello¹, L. K. Alvares¹, C. B. Pasa¹, A. H. Reuter¹, I. P. Pallaoro¹, C. E. Benito¹, J. I. Fernandes¹, ¹Federal University of Paraná- Sector Palotina, Palotina, Paraná, Brazil, ²Safeeds Animal Nutrition, Cascavel, Paraná, Brazil,
- 4:50 PM 145 **Intestinal quality of broilers challenged by Eimeria and Clostridium perfringers and fed with phytotherapics to replace the growth promoting antibiotic**
G. Toniazzo^{1*}, G. N. Comin¹, N. Rohloff Junior¹, C. D. Souza¹, T. L. Kohler¹, L. I. Datsch¹, F. P. Campos¹, M. Roberto Uhlein Júnior¹, C. Eyng¹, R. V. Nunes¹, E. Campestrini², A. Marca², ¹Universidade Estadual do Oeste do Paraná, Marechal Cândido Rondon, PR, Brazil, ²COPACOL, Cooperativa Agroindustrial Consolata, Marechal Candido Rondon, Brazil
- 5:00 PM 146 **Use of essential oils to replace performance enhancers for broilers challenged with Eimeria and Clostridium perfringers**
G. N. Comin^{1*}, C. Eyng¹, N. Rohloff Junior¹, G. Toniazzo¹, C. D. Souza¹, A. G. Cruz Costa¹, T. S. Andrade¹, M. B. de Carvalho¹, M. M. Tesch Câmara¹, H. Sartor¹, R. V. Nunes¹, E. Campestrini², A. Marca², ¹Western Paraná State University – UNIOESTE, Marechal Cândido Rondon, Paraná, Brazil, ²Cooperativa Agroindustrial Consolata – COPACOL, PR, Brazil, Toledo, Brazil

- 5:10 PM 147 **Intestinal health index and performance of broilers challenged by Eimeria spp. using functional oil blends in two physical forms with or without ionophore**
P. D. Moraes^{1*}, ², P. G. Pires², C. V. Poltronieri^{1, 2}, H. L. Silva¹, ¹Universidade Federal de Santa Catarina, Florianópolis, Santa Catarina, Brazil, ²Advanced Poultry Gut Science, Porto Alegre, Brazil
- 5:20 PM 148 **Influence of dietary bocaiuva oil on growth performance and meat quality of broiler chickens**
M. M. Camara^{1*}, G. Perin¹, C. E yng¹, N. Rohloff Junior¹, K. I. Tenório¹, C. D. Souza¹, F. P. Campos¹, R. V. Nunes¹, T. L. Kohler¹, ¹UNIOESTE, Marechal Cândido Rondon, Brazil
- 5:30 PM 149 **Supplementation of condensed tannin in diets for broiler chickens**
F. Dalolio^{1*}, A. Malmmann¹, B. Poletti¹, S. Vieira², A. Fávero³, D. Taschetto³, ¹Tanac S/A, Montenegro, Rio Grande do Sul, Brazil, ²Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil, ³Granja Santa Lúvia, Farroupilha, Brazil

Award Dinner

(Tickets required to attend.)

6:00 PM

Dinner & Award Presentations

Thursday, October 6

SYMPOSIA AND ORAL SESSIONS

Symposium: Soybean and corn: Technical and sustainable relevance to Latin America and global poultry industry

Chair: José Otávio B. Sorbara, DSM Nutritional Products

Cataratas I

8:00 AM	238S	The environmental footprints of grain production in different regions of the world and is any of them more sustainable than others? Carlos Saviani ^{1*} , ¹ DSM Nutritional Products
8:30 AM	239S	Optimizing the nutritional value of soybean meal for poultry Aaron Cowieson ^{1*2} , ¹ DSM Nutritional Products, ² Purdue University
9:00 AM	240S	Variation of starch digestibility between animals Sebastian Kaczmarek ^{1*} , ¹ University of Poznan
9:30 AM	241S	Starch digestibility and intestinal dynamics during four growth phases in broiler chickens Layi Adeola ^{1*} , ¹ Purdue University
10:00 AM		Break
10:30 AM	242S	Corn utilization differences from area of production and processing treatments Sergio Vieira ^{1*} , ¹ Universidade Federal do Rio Grande Do Sul
11:00 AM	243S	Predicting FCR based on corn quality and NSP content? Carrie Walk ^{1*} , ¹ DSM Nutritional Products
11:30 AM	244S	Amino acid digestibility in corn and SBM – Where to put armour plates? Reza Abdollahi ^{1*} , ¹ Massey University
12:00 PM		Closing José Otávio Sorbara ^{1*} , ¹ DSM Nutritional Products

Symposium: Current challenges in the poultry industry - healthy & nutrition

Chairs: Adriana Nascimento, Alltech Inc. & Fernando Vargas, MSD)

Cataratas II

8:00 AM		Introduction Adriana Nascimento ^{1*} , ¹ Alltech Inc.
8:05 AM	245S	Health challenges for the poultry production in Latin America - An update Aristóteles Malo Vergara ^{1*} , ¹ Independent Consultant

8:40 AM	246S	Impact and solutions for necrotic enteritis in ABF/NAE broiler production Matthew Jones ^{1*} , ¹ Southern Poultry Research Group
9:15 AM	247S	Experience with coccidiosis vaccination in ABF/NAE broilers Francisco Rios ^{1*} , ¹ MSD AH Mexico
9:45 AM		Questions & Answers
10:00 AM		Break
10:35 AM	248S	Early nutrition and immune in broilers Luis Felipe Caron ^{1*} , ¹ UFPR
11:10 AM	249S	Challenges and opportunities to advance broiler nutrition Peter Ferket ^{1*} , ¹ North Carolina State University
11:40 AM		Questions & Answers

Symposium: End to End Concept
Chair: José Walter Mello, BTA Aditivos
Marfim I & II

8:00 AM		Introduction Francisco Bastiani ^{1*} , ¹ BTA Aditivos
8:20 AM	250S	Inspection systems through self-controls and main convictions in slaughterhouses Liris Kindlein ^{1*} , ¹ UFRGS
9:10 AM	251S	Reproductive parameters of hens and roosters: how can we improve? Tiago Goulart Petrolli ^{1*} , ¹ UNOESC
10:00 AM		Break
10:30 AM	252S	Strategies with alternative products that maintain batch health. it's possible? Caroline Facchi ^{1*} , ¹ BTA Aditivos
11:10 AM		Roundtable Discussion
11:20 AM	253S	PPLA and liquid dosing: A technical approach to concept and use Fernando Vieira ¹ , Ítalo Ferreira ^{2*} , ¹ APPLY, ² BTA Aditivos

Metabolism and Nutrition, General Nutrition

Moderator: Flavio Longo, Eastman

Marfim III

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| 8:00 AM | 150 | The effect of different storage times, validation and development of prediction equations of hen egg quality
D. J. Huaranga ^{1*} , C. Vílchez-Perales ² , T. S. Huapaya ² , O. A. Zea ² , J. Inca ² , R. Céspedes ² , ¹ Nutrición, Integración Avícola Oro, Quito, Pichincha, Ecuador, ² Nutrición, Universidad Nacional Agraria La Molina, Lima, Lima, Peru |
| 8:10 AM | 151 | Assessments of productive performance of laying breeder hens fed a proprietary blend of Quillaja and Yucca
O. F. Souza ¹ , S. Bonaspetti ^{2*} , R. Mello ³ , K. N. Castro ¹ , J. A. Alencar ¹ , G. Bernardi ¹ , C. Stefanello ¹ , ¹ Animal Sciences, University of Santa Maria, Santa Maria, RS, Brazil, ² Phibro Animal Health Corporation, Campinas, SP, Brazil, ³ Tecnologia e Ciência dos Alimentos, University of Santa Maria, Santa Maria, RS, Brazil |
| 8:20 AM | 152 | Influence of light intensity, blood fraction, fasting and storage time on energy pathway metabolites in broilers
T. S. Andrade ^{1*} , C. Polese ¹ , M. B. de Carvalho ¹ , N. Rohloff Junior ¹ , M. Cristina Mohr de Souza ¹ , M. Fernanda Cardoso Pereira ¹ , M. M. Camara ¹ , L. I. Datsch ¹ , B. Amanda Beber ¹ , M. Roberto Uhlein Júnior ¹ , G. Toniazzo ¹ , F. Potenza Campos ¹ , C. D. Souza ¹ , A. P. Costa ¹ , T. Luiza Kohler ¹ , H. Sartor ¹ , L. Wachholz ¹ , J. D. Starkey ² , C. Eying ¹ , R. V. Nunes ¹ , ¹ Western Paraná State University – UNIOESTE, Marechal Cândido Rondon, PR, Brazil, Marechal Cândido Rondon, Paraná, Brazil, ² Auburn University, Auburn, AL, United States |
| 8:30 AM | 153 | Ileal digesta viscosity of broilers fed corn-based diets of varying particle sizes supplemented with graded levels of multienzyme
D. U. Kareem ^{1*} , ² L. T. Egbeyale ² , A. T. Amos ² , O. P. Idowu ² , A. I. Akinlade ² , N. K. Sakomura ¹ , O. M. Idowu ² , L. P. Bonagurio ¹ , ¹ São Paulo State University (UNESP), Jaboticabal, São Paulo, Brazil, ² Federal University of Agriculture Abeokuta, Abeokuta, Ogun, Nigeria |
| 8:40 AM | 154 | The use of water holding capacity to estimate maximum feed intake for laying hens
L. P. Maria ^{1*} , M. Reis ¹ , B. Marçal ¹ , R. L. Silva ¹ , B. B. Leme ¹ , N. K. Sakomura ¹ , ¹ Ciências Agrárias- Ciência Animal, Unesp- Jaboticabal, Jaboticabal, São Paulo, Brazil |

- 8:50 AM 155 **Evaluation of a mycotoxin enzymatic inactivator based on *Saccharomyces cerevisiae* lysate as a feed additive for broilers previously contaminated by deoxynivalenol and fumonisin**
M. M. Boiago^{1*}, J. Strapazon¹, P. Oliveira¹, F. Matte², L. M. Stefani¹, E. M. Glória³, ¹Animal Science, UDESC, Chapecó, Santa Catarina, Brazil, ²Poultry Technical Consultant, Vetanco of Brazil Ltda, Chapecó, Santa Catarina, Brazil, ³Department of Agribusiness, Food and Nutrition, University of São Paulo, Pirassununga, São Paulo, Brazil
- 9:00 AM 156 **Feed cost analysis of 1.4 kg broiler griller chickens fed diets with different metabolizable energy and digestible lysine**
C. F. Nunes^{1*}, B. B. Xavier¹, S. L. Vieira¹, Y. J. Olabarriaga¹, ¹Federal University of Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil
- 9:10 AM 157 **Use of Poultry Compost as a Feed Ingredient in Layer birds**
H. Anwar^{1*}, A. Mahmud², I. Mustafa^{3,1}, ¹Government College University Faisalabad, Pakistan, Faisalabad, Pakistan, ²University of Veterinary and Animal Science, Lahore, Pakistan., Lahore, Punjab, Pakistan, ³The University of Lahore, Lahore, Punjab, Pakistan
- 9:20 AM 158 **Energy partitioning in broiler breeders under net energy system**
G. F. Teofilo^{1*}, F. H. Morillo¹, D. U. Kareem^{1, 2}, L. V. Freitas¹, R. D. Camargos¹, C. K. Cheneri¹, M. Z. Costa¹, B. B. Leme¹, N. K. Sakomura¹, ¹Department of Animal Science, São Paulo State University, Jaboticabal, São Paulo, Brazil, Jaboticabal, Brazil, ²Department of Animal Nutrition, Federal University of Agriculture Abeokuta, Nigeria, Abeokuta, Nigeria
- 9:30 AM 159 **Relationships among intestinal morphometry, tibia morphometry and live body weight in 21-day-old broilers**
O. A. Zea¹, D. J. Huaranga², C. Uculmana Morales³, C. Vilchez-Perales^{1*} ¹Lima, Universidad Nacional Agraria La Molina, Lima, Lima, Peru, ²Nutrición, Integración Avícola Oro, Quito, Pichincha, Ecuador, ³OLMIX GROUP, Lima, Peru

- 9:40 AM 160 **Corn distillers dried grains on nutrient digestibility and intestinal health of broilers**
D. Horn^{2*}, A. N. Pinto¹, L. D. Melo¹, F. E. de Souza¹, E. P. Simões¹, B. D. Lara¹, P. Yamamoto¹, J. I. Fernandes², ¹Poultry Experimentation Laboratory, Federal University of Paraná – Sector Palotina, Palotina, Paraná, Brazil, ²Animal Science Post-Graduate Program, Federal University of Paraná- Sector Palotina, Palotina, Paraná, Brazil
- 9:50 AM 161 **Corn distillers dried grains on the productive performance and carcass yield of chicken broilers**
D. Horn¹, F. E. de Souza^{1*}, B. T. Onishi¹, C. B. Pasa¹, L. D. Melo¹, L. P. Glaeser¹, A. N. Pinto¹, J. I. Fernandes¹, ¹Federal University of Paraná- Sector Palotina, Palotina, Paraná, Brazil
- 10:00 AM **Break**
- 10:30 AM 162 **Effect of energy levels in broiler diets on caecal microbiota at 28 days of age**
C. Kaufmann^{1*}, C. E yng¹, E. A. Ianchinski², N. Rohloff Junior¹, B. Colcetta¹, F. Potenza Campos¹, M. Fernanda Cardoso Pereira¹, T. Bruxel³, R. V. Nunes¹, ¹Universidade Estadual do Oeste do Paraná, Marechal Cândido Rondon, Paraná, Brazil, ²Universidade Tecnológica Federal do Paraná, Dois Vizinhos, Brazil, ³Cargill Alimentos SA, Marechal Cândido Rondon, Brazil
- 10:40 AM 163 **Egg quality of laying hens reared in a free-range system with different feeding programs**
F. A. Moreno^{1*}, I. D. Dias¹, G. D. Pilon¹, L. Nagae Kuritza¹, M. Conceição dos Santos¹, E. L. Krabbe², A. Maiorka¹, C. da Rocha¹, ¹Zootecnia, Universidade Federal do Paraná, Curitiba, Paraná, Brazil, ²Suínos e Aves, Embrapa, Concórdia, Santa Catarina, Brazil
- 10:50 AM 164 **Modeling the body weight growth of turkeys**
M. Reis^{1*}, ²N. K. Sakomura², P. Ferket¹, ¹Animal Science, NC State University, Raleigh, NC, United States, ²Animal Science, UNESP, Jaboticabal, Sao Paulo, Brazil
- 11:00 AM 165 **Dietary energy effect on broiler performance and digestive enzyme activities**
L. M. Storck^{1*}, C. Kaufmann¹, C. E yng¹, C. R. Duarte², M. B. de Carvalho³, T. Luiza Kohler¹, C. D. Souza¹, T. Bruxel⁴, R. V. Nunes¹, ¹Universidade Estadual do Oeste do Paraná, Marechal Cândido Rondon, PR, Brazil, ²Universidade Estadual do Mato Grosso, Tangará da Serra, Brazil, ³UTFPR, Marechal Cândido Rondon, Paraná, Brazil, ⁴Cargill Alimentos SA, Toledo, Brazil

11:10 AM	166	<p>Measurement of gut permeability by fluorescein isothiocyanate-dextran during storage</p> <p>T. L. Kohler^{1*}, C. Eyng¹, R. V. Nunes¹, B. Colcetta¹, L. M. Storck¹, E. L. Storck¹, D. Piotrowski¹, L. H. Casimiro¹, C. D. Souza¹, ¹Unioeste, Toledo, PR, Brazil</p>
11:20 AM	167	<p>Effect of energy levels in broiler diets on cecal short-chain fatty acids production</p> <p>E. L. Storck^{1*}, C. Kaufmann¹, C. Eyng¹, G. L. Silva Tesser¹, C. Polese¹, E. H. Cirilo¹, A. G. Cruz Costa¹, T. Bruxel², R. V. Nunes¹, ¹Universidade Estadual do Oeste do Paraná, Marechal Cândido Rondon, Brazil, ²Cargill Alimentos SA, Toledo, Brazil</p>
11:30 AM	168	<p>Influence of a new source of fiber on the performance of broiler chickens</p> <p>A. Carvalho^{1*}, B. R. Nogueira¹, A. Bertechini¹, F. S. Dalolio¹, ¹UFLA, Lavras, Brazil</p>

Metabolism and Nutrition, Feed Additives IV (General Nutrition and Feed Additives)

Moderator: Fernando Perazzo, Universidade Federal da Paraíba
Marfim IV & V

8:00 AM	169	<p>Liquid acidifiers via drinking water for broilers: Performance, total mesophyll count and serum biochemistry</p> <p>H. Pagnussatt¹, G. Zaccaron¹, A. Dal Santo¹, F. Leite¹, F. Danieli Antoniazzi Valentini¹, M. Perotto Marin¹, A. Miranda Prestes¹, L. Kolling Girardini¹, F. de Castro Tavernari², T. G. Petrolli^{1*} ¹Animal Sciences, West Santa Catarina University, Xaxim, SC, Brazil, ²Embrapa, Concórdia, Brazil</p>
8:10 AM	170	<p>Validation of the use of guanidinoacetic acid (AGA) as an energy source for broilers</p> <p>F. Danieli Antoniazzi Valentini¹, F. Leite¹, H. Pagnussatt², A. Dal Santo¹, G. Zaccaron¹, M. Perotto Marin¹, G. Rossato¹, R. de Andrade César³, M. Schmidt³, A. A. Calderano², T. G. Petrolli^{4*} ¹Unoesc, Xanxerê, Brazil, ²UFV, Viçosa, Brazil, ³Nutriquest, Campinas, Brazil, ⁴Animal Sciences, West Santa Catarina University, Xaxim, SC, Brazil</p>
8:20 AM	171	<p>Effect of feed energy reduction with use of emulsifier additive on the performance and ileal digestibility of the nutrients and energy in broilers</p> <p>R. Neme^{1*}, E. Fukayama¹, S. Bunzen², F. Toledano², ¹Research and Development, BITA, Ribeirão Preto, São Paulo, Brazil, ²Research and Development, Feedis, Salto, São Paulo, Brazil</p>

- 8:30 AM 172 **In vitro binding capacity of a mycotoxin adsorbent towards alpha-toxin and NetB produced by Clostridium Perfringens**
J. van Soest^{1*}, B. Bruneel², A. van der Aa², T. Gryp³, L. Vande Ginste³, ¹Central Technical Management, Orffa Additives, Breda, Netherlands, ²Orffa Additives BV, Breda, Netherlands, ³Poulpharm, Izegem, Belgium
- 8:40 AM 173 **Yeast cell wall improves immune modulation response in aflatoxin challenge broilers**
M. A. Bonato^{1*}, B. C. Beirão², M. Ingberman³, F. A. Souza¹, ¹R&D, ICC Brazil, São Paulo, São Paulo, Brazil, ²Department of Basic Pathology, Universidade Federal do Paraná, Curitiba, Paraná, Brazil, ³Imunova Análises Clínicas, Curitiba, Paraná, Brazil
- 8:50 AM 174 **Effect of two mycotoxin adsorbents on performance, hepatic and renal parameters broilers fed with natural contamination**
D. J. Huaranga^{1*}, R. Riboty Lara², ¹Nutrición, Integración Avícola Oro, Quito, Pichincha, Ecuador, ²Nutrición, Universidad Nacional Agraria La Molina, Lima, Peru
- 9:00 AM 175 **Effects of two sources of hydroxycholecalciferol (25-OH-D3) on performance, bone characteristics and bioavailability in broilers**
A. G. Bertechini^{2*}, A. Carvalho², J. van Soest¹, A. van der Aa³, ¹Central Technical Management, Orffa Additives, Breda, Netherlands, ²Department of Animal Science, Federal University of Lavras, Lavras, Brazil, ³Orffa Additives BV, Breda, Netherlands
- 9:10 AM 176 **The use of different selenium sources and tocopherol dosages as a strategy to enhance the performance of broilers raised in a tropical zone**
M. R. Lima^{1*}, F. G. Perazzo Costa², D. Jacob³, G. Fontinhas Netto³, N. S. Fagundes³, ¹Animal Sciences Departament, The Federal University of the Semi-Arid Region | UFERSA, Mossoró, Rio Grande do Norte, Brazil, ²Animal Sciences Departament, Federal University of Paraíba, Areia, Paraíba, Brazil, ³Adisseo, Sao Paulo, Brazil
- 9:20 AM 177 **Effects of organic acids supplementation in broilers diets**
L. I. Datsch^{2*}, G. L. Silva Tesser², N. Rohloff Junior², E. L. Storck², C. Polese², T. L. Kohler², B. Colcetta², T. P. Ribeiro¹, D. P. Monteiro¹, C. Eyng², R. V. Nunes², ¹Tectron, Toledo, Pa, Brazil, ²Universidade Estadual do Oeste do Paraná, Marechal Cândido Rondon, Paraná, Brazil

9:30 AM	178	<p>Effect of guanidinoacetic acid (GAA) supplementation on growth performance of male broilers from 1 to 35 days old</p> <p>R. R. Gomes^{1*}, L. Alves Duarte¹, F. Alves Duarte¹, I. Carneiro de Oliveira Falcão¹, C. Suguimoto Leite¹, M. Jesus Silva Patriarca¹, T. L. Amaral¹, A. Santana do Carmo¹, P. Tomazini Medeiros², J. Stringhini¹, ¹Universidade Federal de Goiás, Goiânia, Brazil, ²Evonik, São Paulo, Brazil</p>
9:40 AM	179	<p>Performance, redox potential and carcass yield and cuts of challenged broilers fed alternative antibiotic products</p> <p>G. Toniazzi^{1*}, N. Rohloff Junior¹, C. D. Souza¹, G. L. Freitag Tischer¹, B. Griss¹, B. Bebber¹, C. Kaufmann¹, M. Cristina Mohr de Souza¹, R. V. Nunes¹, E. Campestrini², A. Marca², ¹Western Paraná State University - UNIOESTE, Marechal Cândido Rondon, PR, Brazil, Toledo, Brazil, ²COPACOL, Cooperativa Agroindustrial Consolata, Marechal Candido Rondon, Brazil</p>
9:50 AM	180	<p>Effect of arginine, glycine levels and supplementation of guanidinoacetic acid in centesimal composition and incidence of pectoral myopathies</p> <p>C. D. Souza^{1*}, N. Rohloff Junior¹, C. E yng¹, L. Wachholz¹, V. D. Savaris¹, E. C. Santos¹, T. L. Kohler¹, C. D. Souza¹, E. H. Cirilo¹, F. P. Campos¹, K. I. Tenório¹, R. V. Nunes¹, ¹Western Paraná State University - Unioeste, Marechal Candido Rondon, Brazil</p>
10:00 AM	181	<p>Metabolomic profile of the pectoralis major muscle in broilers supplemented with chondroitin sulfate and manganese</p> <p>J. A. Muñoz^{1*}, T. S. Martins¹, P. M. Garbossa¹, L. F. Mueller¹, M. D. Poleti¹, D. R. Cardoso¹, P. M. Dalle-Piagge¹, C. S. Araujo¹, A. S. Pereira¹, ¹University of Sao Paulo, Pirassununga, São Paulo, Brazil</p>

Metabolism and Nutrition, Vitamins and Minerals
Moderators: Melina Bonato, ICC Brazil
& Rafael Neme, Busca Inteligente Em Tecnologia Animal
Marfim VI

8:00 AM	182	<p>Determination of the standardized ileal digestible calcium requirement of fast-growing broilers from day 15 to 31 post-hatch</p> <p>C. L. Walk^{1*}, P. Jenn², A. Tschambser², A. Cowieson¹, R. Aureli², ¹DSM Nutritional Products, Kaiseraugst, Switzerland, ²DSM Nutritional Products, Research Center for Animal Nutrition and Health, Village-Neuf, France</p>
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8:10 AM	183	<p>Golden mussel meal with different particle size and their effect on performance and gene ex-pression in broiler</p> <p>A. G. Cruz Costa^{1*}, C. Kaufmann¹, N. Rohloff Junior¹, D. B. Jablonski¹, G. L. Silva Tesser¹, C. Polese¹, F. Potenza Campos¹, T. L. Kohler¹, J. Broch¹, T. S. Andrade¹, A. S. Dalmaso¹, F. Tanamati¹, R. Bombardelli¹, C. Eyng¹, R. V. Nunes¹, ¹Western Paraná State University, Paraná, Brazil,</p>
8:20 AM	184	<p>Effect of different metabolites of vitamin D dietary supplementation on growth performance, mTOR gene expression and 25OHD3 serum status of broilers</p> <p>C. C. Martins¹, F. S. Dalolio¹, I. P. Nobrega¹, L. C. Bittencourt^{1*}, C. A. Lozano-Poveda², ¹DSM Nutritional Products, São Paulo, Brazil, ²DSM Nutritional Products, Tocancipa, Colombia</p>
8:30 AM	185	<p>Effect of 25OHD3 supplementation on bone characteristics and vitamin D3 status of broilers reared in different barn types</p> <p>C. A. Lozano-Poveda^{1*}, P. A. Hernandez⁵, J. Carvajal⁵, L. S. Bassi³, M. D. Reis⁴, C. C. Martins², A. Maiorka³, ¹DSM Nutritional Products, Bogota, Colombia, ²DSM Nutritional Products, Sao Paulo, Brazil, ³Federal University of Paraná, Curitiba, Brazil, ⁴Paulista State University, Jaboticabal, Brazil, ⁵Italcol, Bogota, Colombia</p>
8:40 AM	186	<p>Effect of 25-OH-D3 supplementation and different dietary levels of available phosphorus on growth performance, bone characteristics, ileal digestibility, and vitamin D status of broilers</p> <p>L. S. Bassi¹, F. A. Moreno¹, M. Conceição dos Santos¹, C. A. Lozano-Poveda^{2*}, C. C. Martins³, A. Maiorka¹, ¹Federal University of Paraná, Curitiba, Paraná, Brazil, ²DSM Nutritional Products, Bogotá, Colombia, ³DSM Nutritional Products, São Paulo, Brazil</p>
8:50 AM	187	<p>Evaluation of different feed vitamin levels on growth performance and meat quality of broilers</p> <p>M. I. Gracia¹, C. Millán¹, G. Cano¹, F. Nell², J. Hernandez^{2*}, A. A. Passos³, ¹Imasde Agroalimentaria, Madrid, Spain, ²DSM Nutritional Products, Kaiseraugst, Switzerland, ³DSM Nutritional Products, Sao Paulo, Brazil</p>

9:00 AM	188	<p>Supplementation of 25-OH-D3 and different levels of calcium and phosphorus in broiler diets on growth performance, bone characteristics, ileal digestibility, and mineral and vitamin D status</p> <p>L. S. Bassi¹, I. D. Dias¹, G. Costa Senger¹, C. A. Lozano-Poveda^{2*}, C. C. Martins³, A. Maiorka¹, ¹Federal University of Paraná, Curitiba, Brazil, ²DSM Nutritional Products, Bogotá, Colombia, ³DSM Nutritional Products, São Paulo, Brazil</p>
9:10 AM	189	<p>Inorganic selenium content and speciation in selenium yeasts</p> <p>M. Hachemi¹, D. Cardoso¹, G. Fontinhas Netto^{2*}, W. Quinteiro², M. Briens¹, ¹Adisseo, Antony, France, ²Adisseo, São Paulo, Brazil</p>
9:20 AM	190	<p>Using Plant-based 1,25(OH)2D3-glycosides to Reduce the Incidence of Lameness in Broiler Chickens</p> <p>A. Alrubaye^{*1}, D. Rhodes¹, K. Buehler², K. Pedrosa^{2*}, M. Dewez³, J. Gonzalez³ ¹University of Arkansas, Fayetteville, AR, United States, ²Herbonis Animal Health, Augst, Switzerland, ³Nuproxa Switzerland, Etoi, Switzerland</p>
9:30 AM	191	<p>Amino acid complexed minerals, partially replacing inorganic sources in layer diets from starter phase, improve bone quality and mineral deposition in adult phases</p> <p>H. B. Oliveira¹, C. B. Rabello¹, M. J. Santos^{1*}, M. R. Barros¹, M. M. Ludke¹, W. R. Medeiros-Ventura¹, A. G. Faria¹, C. G. Pereira¹, R. V. Silva Junior¹, F. S. Costa¹, A. K. Fireman², ¹Federal Rural University of Pernambuco, Olinda, Brazil, ²Zinpro Corporation, Campinas/SP, Brazil</p>
9:40 AM	192	<p>Effect of partial replacement of inorganic trace mineral sources with amino acid complexed minerals in laying hen diets from starter phase until 50 weeks of age on the serum biochemical profile and mineral deposition in liver and egg yolk</p> <p>H. B. Oliveira¹, C. B. Rabello¹, M. J. Santos^{1*}, M. R. Barros¹, M. M. Ludke¹, W. R. Medeiros-Ventura¹, A. G. Faria¹, C. G. Pereira¹, R. V. Silva Junior¹, A. F. Silva¹, A. K. Fireman², ¹Universidade Federal Rural de Pernambuco, Recife, PE, Brazil, ²Zinpro Corporation, Campinas SP, Brazil</p>

- 9:50 AM 193 **Effect of continuous use of 1,25 dihydroxycholecalciferol-glycosides in broiler breeders on the weight of their progeny**
B. Bebbler^{1*}, N. Rohloff Junior¹, T. S. Andrade¹, C. D. Souza¹, T. L. Kohler¹, B. Griss¹, H. Sartor¹, R. P. Schoffen¹, R. V. Nunes¹, M. Schmidt², K. Buehler³,
¹Western Paraná State University, Marechal Cândido Rondon, Paraná, Brazil, ²NutriQuest, São Paulo, SP, Brazil, ³Herbonis Zurich, Switzerland, Herbonis, Zurich, Switzerland
- 10:00 AM **Break**
- 10:30 AM 194 **Effect of supplementing broiler breeders and their progeny with 1,25 dihydroxycholecalciferol glycosides on broiler performance**
B. Bebbler^{1*}, N. Rohloff Junior¹, T. S. Andrade¹, M. B. de Carvalho², C. Kaufmann¹, E. A. Ianchinski¹, L. I. Datsch¹, M. Fernanda Cardoso Pereira¹, R. V. Nunes³, J. Paloschi³, J. Gonzalez³, ¹Western Paraná State University, Marechal Cândido Rondon, PR, Brazil, Toledo, Brazil, ²Animal Science, UTFPR/Unioeste, Marechal Candido Rondon, Paraná, Brazil, ³Nuproxa Switzerland Ltd, Etoy, Switzerland
- 10:40 AM 195 **Effect of dietary calcium and phosphorus recommendation and limestone solubility on performance, bone mineralization, litter quality and paw quality**
C. R. Angel^{2*}, K. M. Venter^{1, 3}, T. Soko¹, P. W. Plumstead^{1, 3}, ¹Chemuniquè PTY Ltd, Lanseria, Gauteng, South Africa, ²University of Maryland, College Park, MD, United States, ³Neuro Livestock Research, Lanseria, Gauteng, South Africa
- 10:50 AM 196 **Effect of amino acids-mineral complexed supplementation with or without the inclusion of phytase on performance, egg quality and blood profile of laying hens**
W. R. Medeiros-Ventura¹, C. B. Rabello^{1*}, ¹, M. J. Santos¹, M. R. Barros¹, H. B. Oliveira¹, M. M. Ludke¹, H. E. Manso¹, A. G. Ribeiro¹, D. A. Silva¹, A. K. Fireman²,
¹Universidade Federal Rural de Pernambuco, Recife, Pernambuco, Brazil, ²Zinpro Corporation, Campinas SP, Brazil
- 11:00 AM 197 **Minerals complexed to lysine and glutamic acid, with or without the inclusion of phytase on performance, egg quality, and blood profile of laying hens**
W. R. Medeiros-Ventura¹, C. B. Rabello^{1*}, M. J. Santos¹, M. M. Ludke¹, M. R. Barros¹, R. V. Silva Junior¹, H. B. Oliveira¹, H. E. Manso¹, A. K. Fireman¹, ¹Federal Rural University of Pernambuco, Olinda, Brazil

Metabolism and Nutrition, Feed Additives V (Ingredients and Nutrition and Health)

Moderator: Fernando Perazzo, Universidade Federal da Paraiba

Marfim IV & V

- 10:30 AM 198 **Effect of a blend of food additives on the intestinal health an enteric challenge model**
F. Imperatori^{2*}, A. C. Ferreira¹, J. D. Barbosa¹, E. P. Simões¹, L. R. Stefanello¹, L. Gubert¹, B. D. Lara¹, J. I. Fernandes¹, ¹Federal University of Paraná – Sector Palotina, Palotina, Paraná, Brazil, ²Programa de Pós graduação em Zootecnia, Universidade Estadual do Oeste do Paraná, Marechal Cândido Rondon, Paraná, Brazil
- 10:40 AM 199 **Assessment of a blend of additives on the performance and carcass yield of broilers submitted to an enteric challenge model**
F. Imperatori^{1*}, C. E. Benito², B. D. Lara², A. Kerchener², L. D. Melo², L. K. Alvares², ²P. Yamamoto², J. I. Fernandes², ¹Universidade Estadual do Oeste do Paraná, Marechal Cândido Rondon, Paraná, Brazil, ²Federal University of Paraná – Sector Palotina, Palotina, Paraná, Brazil
- 10:50 AM 200 **Effects of the adenosine-5-monophosphate (AMP) and guanosine-5-monophosphate (GMP) nucleotides as an energy source in a diet with reduced energy in broilers during the growth phase**
A. K. Hirata^{1*}, T. C. Santos¹, P. A. Ezidio¹, A. B. Castelani¹, K. C. Nunes¹, A. E. Murakami¹, ¹Zootecnia, Universidade Estadual de Maringá, Maringá, Paraná, Brazil
- 11:00 AM 201 **Inosine-5-monophosphate (IMP) in a diet of broilers in the initial phase challenged with Eimeria spp**
A. K. Hirata^{1*}, P. C. Pozza¹, M. I. Sakamoto¹, P. A. Ezidio¹, A. B. Silva¹, A. E. Murakami¹, ¹Universidade Estadual de Maringá, Maringá, Paraná, Brazil
- 11:10 AM 202 **Blend of short and medium-chain fatty acids on growth performance of broilers challenged with Clostridium perfringens**
L. Kindlein¹, S. L. Vieira¹, A. Favero², V. E. Silva^{1*}, R. Wolfenden³, P. Aristimunha⁴, F. A. Longo⁴, ¹UFRGS, Porto Alegre, Brazil, ²Santa Lúvia Farm, Farroupilha, RS, Brazil, ³Eastman USA, Kingsport, TN, United States, ⁴Eastman Brasil, São Paulo, Brazil

- 11:20 AM 203 **Understanding the effect of different treatments on broiler chicken microbiota exposed to the Eimeria challenge for an improved management of intestinal inflammations using the ISI tool**
M. Q. Nascimento^{1*}, M. Nascimento², A. N. Figueiredo¹, A. S. Oliveira², L. L. Oetting¹, I. C. Paz², ¹Aleris Animal Nutrition, Jundiaí, Sao Paulo, Brazil, ²Universidade Estadual de Sao Paulo Julio de Mesquita Filho, Botucatu, Brazil
- 11:30 AM 204 **Yeast-based probiotic improves intestinal microbiota and serotonin production of broiler chickens exposed to Eimeria challenge**
M. Q. Nascimento^{1*}, M. Nascimento², A. S. Oliveira², A. N. Figueiredo¹, J. Fiuza², L. C. Garcia², I. C. Paz², ¹Aleris Animal Nutrition, Jundiaí, Sao Paulo, Brazil, ²Universidade Estadual Paulista Julio de Mesquita Filho, Botucatu, Sao Paulo, Brazil
- 11:40 AM 205 **Anticoccidial sensitivity test for Eimeria Maxima in a broiler company in southeast brazil**
J. R. Vogt^{1*}, E. Muniz¹, D. N. Junior¹, G. Salles¹, A. L. Neto¹, G. Esteves², R. N. Reis³, ¹Zoetis, Campinas, São Paulo, Brazil, ²CAPEV, Amparo, São Paulo, Brazil, ³UDESC, Lages, Brazil

Closing Ceremony

Cataratas I

- 12:00 PM **Closing Ceremony Address: Science facing old and new challenges**
Everton Krabbe^{1*}, ¹Embrapa (Poultry And Swine Center)