

**Combined Workshop 2025 of the WPSA  
Working Group 6 (IFRG) and Working Group 12 (Physiology)  
from October 22-24, 2025 in Berlin, Germany**

**WEDNESDAY, 22 October 2025**

10:00 – 11:00	<b>Participant registration/Badge collection</b>
11:00 – 11:30	<b>Welcome and outline of the program</b>
<b>Session 1: Gut health and microbiome</b>	
	<b>Keynote lecture:</b>
11:30 – 12:15	<b>Strategies stimulating microbiota colonization and gut health in broilers</b> <i>Nadia Everaert, Muhammad Zeeshan Akram, Haoran Zhao, Matthias Corion, KU Leuven, Belgium</i>
12:15 – 13:15	<b>Lunch Buffet</b>
13:15 – 13:35	<b>Sex specific gut microbiota, host response, and intestinal function in broilers: implications for separate rearing strategies</b> <i>Matthias Corion*, Muhammad Zeeshan Akram*, Ester Arévalo Sureda*, Luke Comer*, Jeroen Maertens<sup>†</sup>, Natasja Smeets<sup>†</sup>, Nadia Everaert*, * KU Leuven, Belgium, <sup>†</sup> Kemin Europa NV, Belgium</i>
13:35 – 13:55	<b>Linking microbiota and performance in commercial turkey flocks</b> <i>Jean E. de Oliveira, Luisa A. Gene, Anne Goderis, Henk Enting, Jennifer Roux-Hardy, Marine Maudoux, Michel Richet, Cargill Animal Nutrition and Health, Belgium</i>
13:55 – 14:25	<b>Coffee/tea break</b>
<b>Session 2: Influence of incubation factors on embryonic and post-hatch development</b>	
14:25 – 14:45	<b>Green monochromatic light during incubation shapes hypothalamic function and metabolic traits via epigenetic mechanisms</b> <i>Asaf Marco, Joanna Bartman, Tali Rosenberg, Hadar Parnas, Ronit Yosofov, Natalie Avital-Cohen, Ron Weiss, Gal Harmatz, Israel Rozenboim, The Hebrew University of Jerusalem, Israel</i>
14:45 – 15:05	<b>Hypoxic manipulation during incubation: effects on muscle vascularization, growth, and woody breast incidence in broilers</b> <i>Amit Haron, Melanie Emambu, Gay Levkovich, Dimitry Shinder, Dror Sagi, Shelly Druyan, Agricultural Research Organization, Volcani Center, Israel</i>
15:05 – 15:25	<b>Effects of thermal manipulations of broiler embryos from 7 to 16 days of incubation on embryo heat production, yolk sac consumption and organogenesis</b> <i>Itallo Conrado Sousa Araújo<sup>##</sup>, Ilona van den Anker-Hensen*, Bjorge Laurensen*, Monique Ooms*, Henry van den Brand*, * Wageningen University, the Netherlands, <sup>#</sup> Federal University of Minas Gerais, Brazil</i>
15:25 – 15:45	<b>Effects of three genetic strains and thermal manipulation on hatching parameters, chick quality and organs of broiler chickens raised in tropical climate</b> <i>Mivodjo Michée Stéphane Adande, Kondo Koffi, CERSA, Université de Lomé, Togo</i>

15:45 – 16:00

**Short break**

**Session 3: Optimizing incubation temperature profiles and short poster presentations**

16:00 – 16:20

**Investigation into the effect of incubation temperature on sex ratios of ostrich embryos**

*Zanell Brand, Bernard Snyman, Western Cape Department of Agriculture, South Africa*

16:20 - 16:40

**Differences in temperature incubation between conventional and slower-growing broilers**

*Emmanuel Chesnais, Jenna Coton, Roberto Yamawaki, HUBBARD, France*

**Poster presentations**

16:40 – 16:45

**Temperature stimulation of Lohmann Brown laying hen embryos: influence on hatching performance and growth during the first 10 weeks post-hatching**

*Arlette Harder, Barbara Tzschentke, Institute for Agricultural and Urban Ecological Projects (IASP) at Humboldt-Universität zu Berlin, Germany*

16:45 – 16:50

**Relationship between specific gravity of hatching eggs and chick quality**

*Florian Wehle, Optibrut GmbH, Nordhorn, Germany*

16:50 – 16:55

***Salmonella* Pullorum outbreak investigation using different diagnostic matrices**

*Fiona Schoemaker-van Kaam\*, Annet Heuvelink\*, Remco Dijkman\*, Christiaan ter Veen\*, Sible Westendorp#, Anneke Feberwee\*, \* Royal GD, Deventer, the Netherlands, # DAP Kippendokter, Hoeven, the Netherlands*

18:00 – 21:00

**Welcome evening (visit to the brewery of the Technical University Berlin)**

## THURSDAY, 23 October 2025

### Session 4: In-Ovo Sex determination and -identification

#### Keynote lecture:

08:30 – 09:15

#### **GOLDA: A genetic solution to end male chick culling in the egg industry**

Yuval Cinnamon\*, Enbal Ben-Tal Cohen\*, Olga Genin<sup>##</sup>, Michael Pfann<sup>\*†</sup>, Michal Mimon\*, Izel Cohen<sup>\*†</sup>, Tatiana Kushnir\*, Amit Haron\*, Dmitry Shinder<sup>##</sup>, Shanthi Dharanivasan\*, Eva Lamed<sup>#</sup>, Christina Tepe<sup>#</sup>, Shelly Druyan\*, \*Agriculture Research Organization, The Volcani Institute, Israel, <sup>†</sup> The Hebrew University of Jerusalem, Israel, <sup>#</sup> Poultry by Huminn – NRS, Israel

09:15 – 09:35

#### **Evaluation of *in-ovo* sex determination via PCR analysis of allantoic fluid**

Jeroen Snijders, Carla W. van der Pol, HatchTech Research, the Netherlands

09:35 – 09:55

#### **Onset of pain perception in pre-hatch chicks: anatomical and electrophysiological evidence**

Longfei Cheng<sup>##</sup>, Anna Papazoglou<sup>†</sup>, Marco Weiergraeber<sup>†</sup>, Damian Krings<sup>†</sup>, Qin Pu<sup>#</sup>, Inga Tiemann\*, Ruijin Huan<sup>#</sup>, \* Osnabrueck University of Applied Sciences, Germany, <sup>#</sup> University of Bonn, Germany, <sup>†</sup> Federal Institute for Drugs and Medical Devices (BfArM), Germany

09:55 – 10:25

#### **Coffee/tea break**

### Session 5: Perinatal development

10:25 – 10:45

#### **The chicken hatching muscle: a bioenergetic and transcriptomic view**

Jonathan Dayan, Zehava Uni, The Hebrew University of Jerusalem, Israel

10:45 – 11:05

#### **The physiological response of the broiler embryos to different egg storage durations: a transcriptomic study**

Anne Pennings<sup>\*†</sup>, Kristen Diehl<sup>#</sup>, Jan Wijnen<sup>†</sup>, Carla van der Pol<sup>†</sup>, Jeroen Snijders<sup>†</sup>, Henry van den Brand\*, \* Wageningen University & Research, The Netherlands, <sup>†</sup> HatchTech Group, the Netherlands, <sup>#</sup> USDA-ARS, Beltsville, U.S.A.

11:05 – 11:25

#### **Acoustic detection of thermal stress in day-old chicks using conventional recurrent neuronal networks**

Özge Günaydin\*, Mina Mounir\*, Cui Gao\*, Fien Vanlerberghe<sup>#</sup>, Eduardo Romanini<sup>#</sup>, Hilke Willemsen<sup>#</sup>, Tomas Norton\*, \* KU Leuven, Belgium, <sup>#</sup> Petersime NV., Belgium

11:25 – 12:25

#### **Lunch Buffet**

### Session 6: 50 years of IFRG & several incubation topics

#### Keynote lecture:

12:25 – 13:10

#### **Past, present, and future of incubation and fertility research: what have we been talking about at the IFRG over the last 50 years?**

Nick French, Wrexham, UK

13:10 – 13:30

#### **Functional properties of a natural incubator – the avian nest (online)**

Charles Deeming, University of Lincoln, UK

13:30 – 13:50

#### **Differences in eggshell conductance within a batch of eggs and the effect on hatchability and chick quality**

Lotte Hebbink, Royal Pas Reform, the Netherlands

13:50 – 14:10	<b>Early transfer of eggs after <i>in-ovo</i> sex identification – a practical study</b> <i>Anke Förster, Josefine Stuff, Jörg Hurlin, Agri Advanced Technologies, Germany</i>
14:10 – 14:40	<b>Coffee/tea break with '50 years of IFRG' treat</b>
<b>Session 7: Students Competition for Nick French Price</b>	
14:40 – 15:00	<b>Impact of 2% CO<sub>2</sub> during storage on hatching eggs quality and embryonic development</b> <i>Pauline Javaloyes, Nelly Bernardet, Frédéric Elleboudt, Hans Adriaensen, Anne Collin, Sophie Réhault-Godbert, INRAE, Université de Tours, France</i>
15:00 – 15:20	<b>Red and green light increase non-visual, extra-retinal photoreceptor mRNA expression in the chick brain at hatch</b> <i>Louisa Kosin, Zuzanna Gardocka, Alex R. Johnston, Simone L. Meddle, The University of Edinburgh, UK</i>
15:20 – 15:40	<b>Male chick detection and culling prevention with a duplex recombinase polymerase amplification in a SIMPLE microfluidic platform</b> <i>Simão Santos*, Dries Vloemans*, Vasso Skouridou#, Ciara K. O'Sullivan#, Jeroen Lammertyn*, Dragana Spasic*, * KU Leuven, Belgium, # INTERFIBIO, Universitat Rovira I Virgili, Avinguda Països Catalans, Spain</i>
15:40 – 16:00	<b>Feed and water consumption and body weight development in layer chickens during the first 3 days post-hatch</b> <i>Zhanyue Wu, Henry van den Brand, B.F.A. Laurensen, M. Ooms, I. van den Anker, T.E.M. Johansson, I.C. de Jong, Roos Molenaar, Wageningen University and Research, the Netherlands</i>
16:00 – 16:20	<b>Effect of early thyroid hormone manipulation on broiler embryo development and metabolism</b> <i>Melanie Emambu*<sup>†</sup>, Amit Haron*, Dima Shinder*, Shelly Druyan*, * Agricultural Research Organization, Volcani Center, Israel, <sup>†</sup> The Hebrew University, Israel</i>
16:20 – 16:40	<b>Early life fecal microbiota transplantation from different donors modulates cecal microbiota, short-chain fatty acid profiles, and fermentation capacity in broiler chickens</b> <i>Haoran Zhao, Muhammad Zeeshan Akram, Luke Comer, Elena Fako, Matthias Corion, Nadia Everaert, KU Leuven, Belgium</i>
16:40 – 17:00	<b>Effective disinfection of hatching eggs with accelerated electrons</b> <i>Josefine Stuff, Christian Große-Brinkhaus, Jörg Hurlin, Agri Advanced Technologies, Germany</i>
17:00 – 17:20	<b>Meeting of the evaluation committee for the Nick French Prize</b>
19:00 – 23:00	<b>Gala dinner – celebration of the 50<sup>th</sup> Anniversary of WG6 IFRG; Winner of the Nick French Award competition, cultural event</b>

## FRIDAY, 24 October 2025

### Session 8: Fertility and Reproduction

09:00 – 09:20	<b>Fertility and hatchability of ostrich eggs following artificial insemination</b> <i>Pfunzo Muvhali<sup>†#</sup>, Maud Bonato<sup>*</sup>, Irek Malecki<sup>#§</sup>, Schalk Cloete<sup>#</sup>, <sup>†</sup> Directorate Animal Sciences, Western Cape, South Africa, <sup>#</sup> University of Stellenbosch, South Africa, <sup>*</sup> University of Venda, South Africa, <sup>§</sup> The University of Western Australia, Australia</i>
09:20 – 09:40	<b>Effect of egg storage time on fertility, hatchability, and chick quality in Shuborno strain</b> <i>Raziul Islam, Kamrun Nahar Monira, Shabiha Sultana, Yousuf Ali, Shakila Faruque, Sazedul Karim Sarker, Bangladesh Livestock Research Institute, Bangladesh</i>
09:40 – 10:00	<b>Semen characteristics and artificial insemination of Cabot's Tragopan (<i>Tragopan caboti</i>)</b> <i>Marcel Bawej, Marta Michalak, Artur Kowalczyk, Wroclaw University of Environmental and Life Sciences, Poland</i>
10:00 – 10:20	<b>Reproductive traits in traditional Italian light turkeys (<i>Meleagris gallopavo</i>) breeds reared for biodiversity conservation: a preliminary study</b> <i>Stefano Paolo Marelli<sup>*</sup>, Luisa Zaniboni<sup>*</sup>, Nicolaia Iaffaldano<sup>§</sup>, Vera Perricone<sup>*</sup>, Silvia Cerolini<sup>*</sup>, <sup>*</sup> University of Milan, Italy, <sup>§</sup> University of Molise, Italy</i>
10:20 – 10:50	<b>Coffee/tea break</b>

### Session 9: Cracking the hatchability crisis?

	<b>Keynote lecture</b>
10:50 – 11:35	<b>Fertility of chickens: Understanding and modelling the 'minefield' for balanced genetic improvement</b> <i>Victor Olori, Aviagen Limited, Scotland, UK</i>
11:35 – 11:55	<b>Fertility concerns in the United States: Is there a failure to incorporate changes to breeder management?</b> <i>Mike Wineland, Hatchery Consult LLC, North Carolina, U.S.A</i>
11:55 – 12:15	<b>Fertility (and hatchability), what about the female?</b> <i>Ron Meijerhof, Poultry Performance Plus, the Netherlands</i>

### Wrap up of Combined Workshop and business meetings

12:15 – 12:30	<b>Wrap up</b>
12:30 – 12:45	<b>Business meeting WG 6 (IFRG) (open for all members and guests)</b>
12:45 – 13:00	<b>Business meeting WG 12 (open for all members and guests)</b>
13:00 – 14:00	<b>Lunch buffet and Goodbye</b>