



THE UNIVERSITY OF  
**SYDNEY**

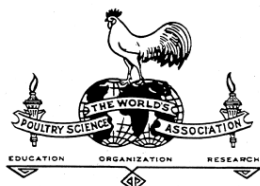
## **2022 AUSTRALIAN POULTRY SCIENCE SYMPOSIUM**

**February 5<sup>th</sup> - 8<sup>th</sup> 2023**

**SHERATON GRAND  
SYDNEY HYDE PARK**

161 Elizabeth St, Sydney

In conjunction with:



## **PROGRAM**

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### **Sunday 5<sup>th</sup> February, 2023**

**17:00 – PRE-REGISTRATIONS from 5:00pm**  
**20:00 @ Foyer Area outside Grand Ballroom 2, Level 2, Sheraton**  
**Grand Sydney Hyde Park**

Beat the crowds and enjoy a sleep-in on Monday morning by registering for the conference early. Pick up your satchel and name badge, then feel free to brood about with the other early birds.

We will launch APSS 2023 as a time to socialise and catch up with friends you may not have seen in a while, while enjoying some drinks and canapes, registration for this is required.

Drinks and Canapes will commence at 5:30pm.

## **Monday 6<sup>th</sup> February, 2023**

7:00 – **REGISTRATIONS**

8:55 **On the bridge in front of Grand Ballroom, Level 2, Sheraton Grand Sydney Hyde Park**

9:00 – **OPENING OF THE SYMPOSIUM**

9:20 **@ Grand Ballroom I, Level 2, Sheraton Grand Sydney Hyde Park**

- **Peter Groves –Director, Poultry Research Foundation – Acknowledgment of Country and Welcome delegates**
- **Lisa Jamieson - President, Poultry Research Foundation  
Thank you to our Sponsors for APSS 2023  
Acknowledgment of Associate Professor Peter Groves contribution to APSS and the PRF on his retirement.**
- **Stephen Walkden-Brown – WPSA Australian Branch  
Recognition of Professor Juliet Roberts service to the Poultry industry**

### **SUSTAINABILITY**

*Session 1 Chair: Professor Mingan Choct*

9:25 – CONUNDRUMS FACING THE POULTRY INDUSTRY: HOW WILL WE  
10:05 ACHIEVE SUSTAINABILITY IN BOTH THE SHORT AND LONG TERM?  
*Rick Kleyn – Spesfeed Consulting Pty Ltd, South Africa*

10:05 – INFLUENCE OF DIETARY CP, DIETARY SID LYS AND AMINO ACID  
10:20 PRODUCTION ORIGIN ON PERFORMANCE AND GLOBAL WARMING  
POTENTIAL OF BROILERS  
*William Lambert – Metex Noovistago, France*

10:20 – AMINO ACID IMBALANCES  
10:35 *Peter Selle – The University of Sydney, Australia*

10:35 – **MORNING TEA**  
11:05

### **EARLY LIFE NUTRITION**

*Session 2 Chair: Professor Wayne Bryden*

11:05 – PHYSIOLOGICAL BASIS OF EARLY LIFE NUTRITION IN CHICKENS  
11:45 *Thomas E. Porter – University of Maryland, USA*

11:45 – ENVIRONMENTALLY VIABLE CHICKEN-MEAT PRODUCTION VIA  
12:00 ENHANCED NUTRITION, GUT INTEGRITY AND HOUSING  
*Eugeni Roura, The University of Queensland, Australia*

12:00 –  $\beta$  -MANNANASE GENERATED PROMISING OUTCOMES IN BROILER  
12:15# CHICKENS OFFERED STANDARD AND LOW ENERGY DENSITY DIETS  
*Shemil Macelline – The University of Sydney, Australia*

- 12:15 – USE OF A NON-IONIC SURFACTANT TO FACILITATE CARVACROL  
12:30 # DIFFUSION THROUGH EMBRYONIC STRUCTURES AFTER 'IN OVO'  
INJECTION  
*Mila Meijer – The University of Queensland, Australia*
- 12:30 – pH CHANGES IN EGG COMPARTMENTS DURING EMBRYO  
12:45# DEVELOPMENT IN BROILER CHICKENS  
*Ali Asad – The University of Queensland, Australia*
- 12:45 – INVESTIGATION OF THE IMPACT OF A BLEND OF A TRIPLE STRAIN  
13:00 PROBIOTIC ON PERFORMANCES AND GUT-BRAIN AXIS  
*Jean-christophe Bodin – Chr. Hansen Singapore Pte. Ltd, Singapore*

- 13:00 – **LUNCH**  
14:00 **@ Feast Restaurant, Level 1, Sheraton Grand Sydney Hyde Park**

### **MINERAL METABOLISM**

*Session 3 Chair: Associate Professor Sonia Liu – The University of Sydney*

- 14:00 – COULD PHOSPHORUS AND CALCIUM BE THE MISSING LINKS IN  
14:40 UNLOCKING RADICALLY LOW PROTEIN DIETS FOR COMMERCIAL  
BROILER PRODUCTION?  
*Aaron Cowieson – DSM Nutritional Products, Switzerland*
- 14:40 – REQUIREMENT OF DIGESTIBLE CALCIUM AT DIFFERENT DIETARY  
14:55 CONCENTRATIONS OF DIGESTIBLE PHOSPHORUS FOR BROILER  
FINISHERS (DAYS 25-35 POSTHATCH)  
*Laura David – Massey University, New Zealand*
- 14:55 – SUMMARY OF THE STANDARDIZED ILEAL DIGESTIBLE CALCIUM  
15:10 REQUIREMENTS OF BROILERS FROM HATCH TO DAY 42 POST-HATCH  
*Carrie Walk – DSM Nutritional Products, United Kingdom*
- 15:10 – **AFTERNOON TEA**  
15:40

### **NUTRITION / ENZYMES**

*Session 4 Chair: Mrs. Amanda Olthof – AgriFutures, Levied Industries*

- 15:40 – LIMESTONE QUALITY: IMPLICATIONS FOR POULTRY HEALTH AND  
16:10 PERFORMANCE  
*Stuart Wilkinson – Feedworks, Australia*
- 16:10 – EFFICACY OF A NOVEL PHYTASE IN RESPONSE TO LOW AND HIGH  
16:25 PHYTATE DIETS WITH BROILER CHICKENS AT PRE-STARTER OR  
STARTER PHASE  
*Carrie Walk – DSM Nutritional Products, United Kingdom*
- 16:25 – EFFECTS OF COMMERCIAL PROCESSING CONDITIONS OF EXTRUDER  
16:40 SOYBEAN ON GROWTH PERFORMANCE AND AMINO ACIDS  
DIGESTIBILITY OF BROILER CHICKENS  
*Nadia Yacoubi – Evonik Operations GmbH, Germany*

16:40 – AGE AND PHYTASE DOSE EFFECT ON P AND N EXCRETION IN  
16:55 BROILERS FED DIETS WITHOUT INORGANIC PHOSPHATE FROM 10  
DAYS OF AGE  
*Leon Marchal – Danisco Animal Nutrition & Health (IFF), Netherlands*

16:55 – **SLIDESHOW OF POSTERS**  
17:00

17:00 – **POSTER SESSION – @ GRAND BALLROOM 2, Level 2, Sheraton Grand**  
19:00 **Sydney Hyde Park** - Canapes and Drinks included

### **BROILER NUTRITION**

- 1 OPTIMAL ENERGY DENSITY AND A BALANCE BETWEEN ESSENTIAL  
AND NON-ESSENTIAL AMINO ACIDS IN REDUCED PROTEIN DIETS  
CAN RESTORE BIRD PERFORMANCE  
*Sosthene Musigwa – University of New England, Australia*
- 2 VERSATILITY OF DIETARY ZINC LEVELS FROM ZINC  
HYDROXYCHLORIDE IS BENEFICIAL IN BROILER CHICKEN  
PRODUCTION  
*In Sun Yu – Trouw Nutrition, Thailand*
- 3 NUTRITIONAL EMULSIFIERS AND THEIR EFFECT ON BROILER  
PERFORMANCE, A BENCHMARK STUDY  
*Martin Sinclair – ORFFA Additives BV, Netherlands*
- 4 PHYTASE SUPPLEMENTATION, IRRESPECTIVE OF DIETARY PHYTATE  
LEVELS, IMPROVES DIGESTIBILITY OF AMINO ACIDS IN FINISHER  
BROILER CHICKENS  
*Mehdi Toghyani – The University of Sydney, Australia*
- 5 THE EFFECT OF CHELATED TRACE MINERALS AND PROTEIN  
SOURCES ON GROWTH PERFORMANCE, BREAST MUSCLE  
VASCULARISATION AND MINERAL EXCRETION IN BROILER  
CHICKENS  
*Matthew Bekker – Novus International, Australia*
- 6 *COMMERCIAL PHYTASES DIFFER IN THEIR ABILITY TO WITHSTAND  
EXTREMELY LOW-, YET PHYSIOLOGICALLY-RELEVANT PH*  
*Usama Aftab – AB Vista Asia Pte. Ltd, Singapore*
- 7 EFFECT OF A MULTI-PROTEASE SUPPLEMENTATION IN SOYBEAN  
MEAL ON APPARENT METABOLIZABLE ENERGY AND AMINO ACID  
DIGESTIBILITY IN BROILERS  
*Xinyu Toh – Kemin Animal Nutrition & Health, Asia Pacific, Singapore*

- 8         $\beta$ -MANNANASE SUPPLEMENTATION ENHANCES FIBER DIGESTION  
AND APPARENT METABOLIZABLE ENERGY OF BROILERS FED HIGH  
CASSAVA DIETS  
*Yuwares Ruangpanit – Kasetsart University, Nakhon Pathom, Thailand*
- 9        COMPARISON OF THREE DIFFERENT PHYTASE PRODUCTS ON  
BROILER PERFORMANCE  
*Bing Guo – Adisseo Asia Pacific Pte Ltd, Singapore*
- 10       HYDROXY SELENOMETHIONINE CAN RESCUE BROILER GROWTH  
PERFORMANCE AND MEAT QUALITY UNDER HEAT STRESS THROUGH  
ENHANCED ANTIOXIDATIVE CAPACITY  
*Bing Guo – Adisseo Asia Pacific Pte Ltd, Singapore*
- 11       EFFECT OF MULTI-ENZYME PREPARATION ON GRWOTH  
PERFORMANCE AND ITS MATRIX VALUE VALIDATION IN BROILER  
*Bing Guo – Adisseo Asia Pacific Pte Ltd, Singapore*
- 12       SUPPLEMENTATION OF CARBOHYDRASES AND BUFFERED FORMIC  
ACID TO BROILER DIETS BASED ON WHEAT OR MAIZE  
*Eunjoo Kim - University of New England, Australia*
- 13       DIETARY SUPPLEMENTATION OF VALERIC AND BUTYRIC IMPROVES  
THE GROWTH PERFORMANCE OF BROILERS  
*Lily Li – Perstorp WaspikBV, Australia*
- 14#      XYLO-OLIGOSACCHARIDES IMPROVES FEED EFFICIENCY IN  
BROILER CHICKENS BY SLOWING DOWN JEJUNUM CELL  
ACTIVITY/TURNOVER  
*Carla Castro – The University of Queensland, Australia*

#### **LAYER NUTRITION AND WELFARE**

- 15 #     ORDER OF LIMITING AMINO ACIDS IN WHEAT-SORGHUM BASED  
REDUCED PROTEIN DIETS FOR LAYING HENS  
*Afsana Akter Jahan – University of New England, Australia*
- 16       EVALUATION OF MICROBIAL MURAMIDASE SUPPLEMENTATION ON  
THE PERFORMANCE OF LAYING HENS  
*Fernando Cisneros – DSM Nutritional Products, Canada*
- 17       EFFECTS OF BUTYRATE, BUTYRIC GLYCERIDES IN COMBINATION  
WITH DIFFERENT SELENIUM SOURCES AS STRATEGIES TO IMPROVE  
PERFORMANCE OF THE AGED LAYING HENS  
*Denise Cardoso – Adisseo, France*
- 18       EFFECT OF HIGH BUTTIAUXELLA PHYTASE DOSE SUSTAINS  
PERFORMANCE AND BONE QUALITY OF LAYING HENS FED  
NUTRIENT COMPROMISED DIETS  
*Leon Marchal - Danisco Animal Nutrition & Health (IFF), Netherlands*
- 19       IMPACT OF THE LIGHTING AND FEEDING REGIMEN DURING REARING  
ON HY-LINE BROWN PULLET GROWTH AND START OF LAY  
*Wendy Muir – The University of Sydney, Australia*

20# THE RELATIONSHIP BETWEEN WINTERGARDENS AND SMOTHERING  
*Maxine Rice – The University of Melbourne, Australia*

21 BARRIERS TO ADOPTION OF BEST PRACTICE IN EGG PRODUCTION  
ENTERPRISES  
*Tellisa Kearton – University of New England, Australia*

### **HEALTH AND OTHER RECENT ADVANCES**

22 DIFFERENT DOSES OF COMMERCIAL EIMERIA VACCINES WERE NOT  
EFFECTIVE TO INDUCE A SUCCESSFUL NECROTIC ENTERITIS  
CHALLENGE MODEL IN BROILERS  
*Sarbast Qassim – University of New England, Australia*

23 IN-OVO INJECTION OF OREGANO ESSENTIAL OIL UP TO 10µl SHOWED  
NO IMPACT ON EMBRYO SURVIVABILITY IN BROILER CHICKENS  
*Sharham Niknafs – University of New England, Australia*

24 A BLEND OF PROTECTED ORGANIC ACIDS + ESSENTIAL OILS  
PROMOTES INTESTINAL HEALTH, NUTRIENT DIGESTIBILITY,  
IMMUNE RESPONSE AND GROWTH PERFORMANCE OF BROILER  
CHICKENS UNDERGOING AN INTESTINAL CHALLENGE  
*Von Gervic Mesina – Jefe Nutrition Inc, Canada*

25# NUTRITIONAL STRATEGIES TO MITIGATE COCCIDIOSIS  
*Nasima Akter – University of New England, Australia*

26 SUPPLEMENTATION OF ENZYME AND PROBIOTIC IMPROVED  
GROWTH PERFORMANCE IN BROILERS UNDER NECROTIC ENTERITIS  
CHALLENGE  
*Alip Kumar – University of New England, Australia*

27# A COMPARISON OF MULTI-SPECIES BACILLUS PROBIOTICS ON  
EARLY BROILER PRODUCTION PERFORMANCE, GUT HEALTH, AND  
NUTRIENT DIGESTIBILITY  
*Jacoba Bromfield – Bioproton Pty. Limited, Australia*

28 NEW GENERATION OF WATER-SOLUBLE PROBIOTICS TO ALLEVIATE  
GUT HEALTH CHALLENGE DURING FEED TRANSITION PERIOD IN  
BROILER PRODUCTION  
*Nadia Yacoubi – Evonik Operation GmbH, Germany*

29# IS THE PROBIOTIC EFFICACY OF *BACILLUS AMYLOLIQUEFACIENS*  
STRAIN H57 DOSE DEPENDENT?  
*Tonghe Sun – The University of Queensland, Australia*

30# *IN OVO* INJECTION OF OREGANO ESSENTIAL OIL AT DIFFERENT  
VOLUMES DID NOT AFFECT HATCHABILITY OR POST-HATCHING  
PERFORMANCE IN BROILER CHICKENS  
*John Harvey Santos – The University of Queensland, Australia*

31 BENTONITE PLUS YEAST CELL WALL FRACTION IMPROVES THE  
PERFORMANCE AND HEALTH OF BROILERS UNDER MYCOTOXIN-  
CHALLENGED CONDITIONS  
*Lane Pineda – Trouw Nutrition (Thailand) Limited, Thailand*

- 32      MICROBIOME MODULATION BY A PRECISION BIOTIC IN BROILERS  
CHICKENS: A FIELD STUDY VALIDATION  
*Santiago Ramirez – DSM Nutritional Products, Australia*
- 33      EFFECT OF A PROBIOTIC SOLUTION ON INTESTINAL HEALTH OF  
BROILER CHICKENS CHALLENGED WITH SALMONELLA AND  
MYCOTOXINS  
*Bing Guo – Adisseo Asia Pacific Pte Ltd, Singapore*
- 34      TOWARDS SUSTAINABLE POULTRY PRODUCTION WITH MULTI-  
STRAIN PROBIOTICS FOR AMELIORATION OF AVIAN PATHOGENIC E.  
COLI  
*Kathigan Manohar – Kemin Industries South Asia Pvt Ltd, India*
- 35      AN EVALUATION OF A NATURAL OREGANO ESSENTIAL OIL-BASED  
FEED ADDITIVE ON THE WORM BURDEN AND PRODUCTIVITY OF  
BOVANS BROWN LAYING HENS IN A FREE-RANGE PRODUCTION  
SYSTEM  
*Jim Hughes – Anpario Plc, Australia*
- 36      BETA-GLUCAN EFFECTS ON VACCINE RESPONSES AND INNATE  
IMMUNITY IN LAYERS  
*Caitlin Vosloo – Phileo Lesaffre, France*

19:00 –      **WPSA MINGAN CHOCT FAREWELL DINNER**  
22:00      @ TIMES ON THE PARK,  
Level 1 Sheraton Grand Gyde Park Sydney

## **Tuesday 7<sup>th</sup> February, 2023**

7:00 – **REGISTRATIONS**

8:15 **On the bridge in front of Grand Ballroom, Level 2, Sheraton Grand Sydney Hyde Park**

### **PRECISION FEEDING AND IMAGING**

*Session 5 Chair: Dr. Mini Singh – Australian Eggs*

8:30 – PRECISION FEEDING OF EGG- AND MEAT-TYPE PULLETS

9:10 *Martin Zuidhof – University of Alberta, Canada*

9:10 – MACHINE VISION DETECTION OF RANGE USE OF FREE-RANGE

9:25 BROILER FLOCKS

*Cheryl McCarthy – University of Southern Queensland, Australia*

9:25 – REVEALING THE SECRET LIFE OF HENS ON THE RANGE USING

9:40 CAMERA TRAPS

*Carolyn De Koning – South Australian Research Development Institute, Australia*

9:40 – HYPERSPECTRAL IMAGING IS A PROMISING TECHNOLOGY FOR

9:55 REAL-TIME MONITORING OF FEED AND LITTER QUALITY AND MYCOTOXIN DETECTION

*Iman Tahmasbian – Dept of Agriculture and Fisheries, QLD, Australia*

9:55 – VISION-BASED DYNAMIC DENSITY ESTIMATION OF LAYING HENS

10:10# FOR PILING-UP PREVENTION

*Ming Cheng – University of Technology, Sydney Australia*

10:10 – VISUAL ACCESS TO AN OUTDOOR RANGE DURING REARING BOOSTS

10:25 RANGING BEHAVIOUR OF MEAT CHICKENS

*Peta Taylor - University of Melbourne, Australia*

10:25 – **MORNING TEA**

10:55

### **MODERN NUTRITION CHALLENGES**

*Session 6 Chair: Associate Professor Peter Selle – The University of Sydney*

10:55 – A REVIEW OF LIPID DIGESTION, METABOLISM AND NUTRITIVE

11:25 VALUE IN BROILER DIETS

*Peter Chrystal – Complete Feed Solutions, Australia*

11:25 – RECYCLED FOOD WASTE AS A FEED FOR POULTRY

11:55 *Bob Swick – University of New England, Australia*

12:00 – **LUNCH**

13:00 **@ Feast Restaurant, Level 1, Sheraton Grand Sydney Hyde Park**

12:15 – **WPSA AGM**

13:30 **@ Grand Ballroom 2, Level 2, Sheraton Grand Sydney Hyde Park**



## **EXTENDING LAYER LIFESPAN**

**Session 7 Chair:** *Dr. Doreen Anene – Australian Eggs*

- 13:30 – EXTENDING LAYER HEN LIFESPAN: STUDIES IN THE AUSTRALIAN  
14:00 CONTEXT

**Wendy Muir** - *The University of Sydney, Australia*

- 14:00 – AN EVALUATION OF THE PROTEIN AND ENERGY REQUIREMENTS OF  
14:15 LONG-LIFE LAYING HENS

*Rick Kleyn – Spesfeed Consulting Pty Limited, South Africa*

- 14:15 – PREDICTING EGG PRODUCTION LOSSES USING PEAK ANALYSIS AND  
14:30# A RANDOM FOREST MODEL

*Yusuf Adejola – University of New England, Australia*

- 14:30 – HEAT STRESS AND THE QUALITY OF WHEAT GRAINS

14:45 *Ali Khoddami – The University of Sydney, Australia*

- 14:45 – TESTING FOUR DIFFERENT IDEAL AMINO ACID RATIOS IN ISA BROWN  
15:00 LAYER HENS' DIET DURING THE PEAK AND POST PEAK OF  
PRODUCTION

*Mehdi Toghyani – The University of Sydney, Australia*

- 15:00 – **AFTERNOON TEA**

15:30

## **NUTRITION**

**Session 8 Chair:** *Professor Shubiao Wu - University of New England*

- 15:30 – REACTIVE LYSINE; A BETTER DETERMINANT FOR SOYBEAN MEAL  
15:45 QUALITY

*Soon Bin Neoh – Soon Soon Oilmills Sdn Bhd, Malaysia*

- 15:45 – OPTIMIZING DIETARY NUTRIENT DENSITY FOR IMPROVED  
16:00 ECONOMIC RETURNS

*Usama Aftab - AB Vista Asia Pte. Ltd, Singapore*

- 16:00 – HYBRID FEED - NEW APPROACH IN LAYER HEN FEED AT START OF  
16:15 PRODUCTION.

*Xabier Arbe Ugalde – H & N International, Germany*

- 16:15 – EFFECT OF MULTIENZYME ON LATE-PHASE HENS FED WITH CORN-  
16:30 SOY-BASED DIET

*Royd Mosaso – University of the Philippines, Philippines*

- 16:30 – MATERNAL FEEDING CALL PLAYBACKS REDUCED ANXIETY AND  
16:45 DEPRESSION-LIKE STATES IN MEAT CHICKEN CHICKS

*Peta Taylor – University of Melbourne, Australia*

18:00 – **SYMPOSIUM DINNER - View by Sydney,**  
23:00 **Pier 2 13 Hickson Road, Walsh Bay**



Bus transfers have been arranged to leave Sheraton Grand Sydney Hyde Park @ 6:15pm, please meet in the foyer at 6pm. Return transfers to Sheraton will depart Walsh Bay at the completion of the dinner at 10:30pm

**THANK YOU TO ALL OUR APSS 2023 SPONSORS**



## Wednesday 8<sup>th</sup> February, 2023

8:00 – **REGISTRATIONS**

9:00 @ **Grand Ballroom 2, Level 2, Sheraton Grand Sydney Hyde Park**

### **HEALTH Part 1**

*Session 9 Chair: Associate Professor Peter Groves – University of Sydney*

@ **Grand Ballroom I, Level 2, Sheraton Grand Sydney Hyde Park**

9:00 – BIOLOGICAL CONTROL OF SALMONELLA IN THE POULTRY INDUSTRY -  
9:15 A EUROPEAN PERSPECTIVE

*Robert Atterbury – University of Nottingham, United Kingdom*

9:15 – SEEDER BIRD RESEARCH IN YOUNG LAYERS - EFFECTIVELY  
9:30# CHALLENGING WITH SALMONELLA TYPHIMURIUM

*Christine Clark – The University of Sydney, Australia*

9:30 – NEWCASTLE AND INFLUENZA A DISEASE BURDEN IN COMMERCIAL  
9:45 AND BACKYARD POULTRY FARMS IN NEPAL

*Dibesh Karmacharya – Biovac Nepal Pvt Ltd, Nepal*

9:45 – DISPARITY IN THE GUT WALL PENETRATION BY ESCHERICHIA COLI  
10:00 DURING CO-INFECTION WITH HISTOMONAS MELEAGRIDIS IN  
CHICKENS AND TURKEYS

*Surya Paudel – University of Veterinary Medicine, Vienna Austria*

10:00 – ALIGNING IN VIVO PATHOGENICITY OF ESCHERICHIA COLI IN  
10:15 EMBRYOS AND CHICKENS WITH GENOME CHARACTERISTICS

*Surya Paudel – University of Veterinary Medicine, Vienna Austria*

10:15 – DISPLACEMENT OF A20 AND SERVA INFECTIOUS LARYNGOTRACHEITIS  
10:30 VACCINES FOLLOWING CHALLENGE WITH VIRULENT VIRUS

*Stephen Walkden-Brown – University of New England, Australia*

10:30 – INFLUENCE OF PHYTOGENIC SUPPLEMENT ON LAYER PRODUCTION  
10:45 DURING THE PEAK OF HEAT STRESS

*Dragana Stanley – Central Queensland University, Australia*

10:45 – **MORNING TEA**

11:15

### **HEALTH Part 2**

*Session 10 Chair: Professor Stephen Walkden-Brown – University of New England*

11:15 – GUT HEALTH OF BROILERS IN RESPONSE TO DIFFERENT SOURCES AND  
11:30 LEVELS OF COPPER

*Anna Nguyen – University of New England, Australia*

11:30 – BACILLUS AMYLOLIQUEFACIENS CECT 5940 ALLOWED MAINTAINING  
11:45 PERFORMANCE AND ACCELERATED MICROBIOTA MATURATION OF  
BROILERS FED ALTERNATIVE INGREDIENTS

*Nadia Yacoubi – Evonik Operations GmbH, Germany*

11:45 – POTENTIAL OF ENZYMES TO IMPROVE PERFORMANCE, HEALTH AND  
12:00 WELFARE OF BROILERS UNDER A MILD COCCIDIAL VACCINE  
CHALLENGE

*Alip Kumar - University of New England, Australia*

12:00 – EFFICACY OF A PHYTOGENIC FEED ADDITIVE IN BROILERS  
12:15 CHALLENGED WITH SUBCLINICAL NECROTIC ENTERITIS

*Shubiao Wu – University of New England, Australia*

12:15 – FROM IN VITRO TO IN VIVO: DEVELOPING A NEW PROBIOTIC WITH  
12:30 MULTI-PATHOGEN ACTIVITY

*Natasja Smeets – Kemin Europa NV, Belgium*

12:30 – **STUDENT AWARDS**

12:45 Professor Tamsyn Crowley – Director, PoultryHub Australia, will present the  
*Mingan Choct* Award for the most outstanding Postgraduate presentation along with  
their first funding announcement.

Dr Sonia Liu – Poultry Research Foundation, will present the award for best  
Postgraduate Poster presentation sponsored by Poultry Research Foundation,  
University of Sydney – Complimentary Student Registration for APSS 2024.

12:45 – **CLOSE OF APSS 2023** - WPSA Australia Branch Vice President Eugeni  
13:00 Roura on behalf of Juliet Roberts.

**13:00– LUNCH**

**14:00 @ Feast Restaurant, Level 1, Sheraton Grand Sydney Hyde Park**

# Student Presentations

