

The 2020 Spring Annual Meeting of Japan Poultry Science Association

March 28, 2020 at Kyoto University
Kitashirakawa Oiwake-cho, Sakyo-ku, Kyoto 606-8502, JAPAN

Room1

〔 Presentation 7min.
Discussion 3min. 〕

Morning Session

(Genetics, Breeding, Reproduction, Physiology, Anatomy and Histology)

- | | | |
|---------|---|-------------|
| | Resequencing of high and low egg production rate groups in Silky fowl | 9:00-9:10 |
| ○ I - 1 | ○Yuki Nishiyama ¹ , Ayaka Noda ³ , Kajio Anan ² , Takeshi Shimogiri ¹ , Ken-Ichi Yamanaka ^{1,3} and Yasuhiko Wada ^{1,3} (¹ Kagoshima Univ., ² Oita Pref. A.F.F. Res. Guidance Center., ³ Saga Univ.) | |
| ○ I - 2 | Variation of egg shape and free amino acid composition of albumin in five chicken varieties ○Kenji Nishimura ¹ , Saki Shimamoto ² , Daichi Ijiri ² and Tatsuhiko Goto ¹ (¹ Obihiro Univ., ² Kagoshima Univ.) | 9:10-9:20 |
| ○ I - 3 | Phenotypic analyses of tail feather traits in Japanese fancy and utility fowl ○Ryoko Ono ¹ , Kanna Takahashi ¹ , Kenji Nishimura ¹ , Yuri Yamagishi ¹ , Yuka Miyachi ¹ , Harui Usui ¹ , Remi Matsushita ¹ , and Tatsuhiko Goto ¹ (¹ Obihiro Univ.) | 9:20-9:30 |
| ○ I - 4 | Presentation title in English: Association between <i>UCP-3</i> gene polymorphism and thermogenesis in chicks ○Yoshimitsu Ouchi, Takashi Hirota and Takashi Bungo (Hiroshima Univ) | 9:30-9:40 |
| ○ I - 5 | Changes in the expression of anti-microbial peptides in the chicken ovary during ageing ○Makoto Saito, Takahiro Nii, Naoki Isobe, Yukinori Yoshimura (Grad. Schl. Integr. Sci. Life, Hiroshima Univ.) | 9:40-9:50 |
| ○ I - 6 | Effect of vaccination on innate immune function in the proventriculus in broiler chicks. ○Kyota Takamatsu ¹ , Takahiro Nii ^{1,2} , Naoki Isobe ^{1,2} and Yukinori Yoshimura ^{1,2} (¹ Grad. Schl. Integr. Sci. Life, ² RCAS, Hiroshima Univ.) | 9:50-10:00 |
| | Break (10 min.) | 10:00-10:10 |

- I - 7 Central taurine regulates body temperature and food intake in layer chicks 10:10-10:20
 ○Mohamed Z. Elhussiny, Phuong V. Tran, Mitsuhiro Furuse, and Vishwajit S. Chowdhury (Kyushu Univ.)
- I - 8 The mechanism of smooth muscle tissue differentiation in chick gizzard 10:20-10:30
 ○Shota Akimoto, Kosuke Tokunaga, Ryuichi Tatsumi and Mako Nakamura (Kyushu Univ.)
- I - 9 Detection of Fertile Chicken Eggs during Early Incubation using Visible Light Transmission Image Analysis 10:30-10:40
 ○Afzal Rahman¹, Jumpei Ueda¹, Ayuko Kashimori², Tetsuhito Suzuki¹, Yuichi Ogawa¹, Naoshi Kondo¹
 (¹Grad. Sch. of Agric., Kyoto Univ., Japan, ²NABEL Co., Ltd., Japan)
- I -10 Gender Difference in UV-Induced Fluorescence Image of Non-incubated Chicken Eggs 10:40-10:50
 ○Alin Khaliduzzaman^{1,3}, Yuichi Ogawa¹, Ayuko Kashimori², Tetsuhito Suzuki¹, Naoshi Kondo¹
 (¹ Kyoto Univ., ² NABEL Co., Ltd., JAPAN, ³ Sylhet Agricultural Univ., BANGLADESH)
- I -11 Extended proliferation of chicken derived fibroblasts by expression of cell cycle regulators 10:50-11:00
 ○Masafumi Katayama^{1,2}, Tohru Kiyono³, Takahiro Eitsuka⁴, Miho Inoue-Murayama^{2,5}, Manabu Onuma^{1,2}, Tomokazu Fukuda^{2,6,7}
 (¹Center for Environmental Biology and Ecosystem, National Institute for Environmental Studies(NIES), ²Wildlife Genome Collaborative Res. Group, NIES, ³Division of Carcinogenesis and Prevention, National Cancer Center Res. Institute, ⁴Grad. Sch. of Agricultural Science, Tohoku Univ., ⁵Wildlife Res. Center of Kyoto Univ., ⁶Grad. Sch. of Science and Engineering, Iwate Univ., ⁷Soft-Path Engineering Res. Center, Iwate Univ.)
- I -12 Effect of peripheral injection of zymosan on feeding behavior and physiological condition in chicks 11:00-11:10
 ○Tetsuya Tachibana¹, Ai Nakatani¹, Ryosuke Makino¹, Mohammad Sakirul Islam Khan²
 (¹Fac. of Agric., Ehime Univ., ²Sch. of Med., Ehime Univ.)
- I -13 Effects of intestinal inflammation on the endocrinal function of hypothalamus and pituitary in hens. 11:10-11:20
 Takahiro Nii, Naoki Isobe, Yukinori Yoshimura
 (Grad. Sch. of Integrated Science for Life, Hiroshima Univ.)

- I -14 Distribution of glucagon-like peptide-1-immunoreactive cells in the small intestine of Bobwhite quail 11:20-11:30
 ○Md Salafuddin¹ • Masahiro Sagawa² • Kento Tamura³ • Kohzy Hiramatsu² • Tamao Ono²
 (¹Shinshu Univ., ²Shinshu Univ., ³Shinshu Univ.)

Lunch Break (130min.) 11:30-13:40

General Meeting • Award Ceremony (90min.) 13:40-15:10

Break (10 min.) 15:10-15:20

Afternoon Session

(Genetics, Breeding, Reproduction, Physiology, Nutrition, Feeds)

- I -15 The relationship between broodiness and egg productivity in a commercial layer breed. 15:20-15:30
 ○Yuichiro Yonetani, Kunitsugu Ozaki, Tomoko Amano
 (Rakuno Gakuen Univ.)
- I -16 Effects of the thyroid hormone pathway on low-energy state in incubating hens. 15:30-15:40
 ○Misa Takeda¹, Syuri Unegi² and Takeshi Ohkubo^{1,2}
 (¹UGSAS, TUAT, ²Coll. Agric., Ibaraki Univ.)
- I -17 Regulatory mechanism of PRL synthesis and release from embryonic chicken anterior pituitary gland. 15:40-15:50
 ○Norio Kansaku¹, Takeshi Ohkubo², David Zadworny³
 (¹Azabu Univ., ²Ibaraki Univ., ³McGill Univ.)
- I -18 Gene expression analysis of factors involved in gene expression of PG synthase in follicular membrane Masayuki Tanabe, Yasuhiro Yamada and ○Noboru Saito 15:50-16:00
 (Lab. Animal Physiology, Okayama Univ.)
- I -19 Expression analysis of DAZL gene in male Japanese quail gonad 16:00-16:10
 ○Shusei Mizushima¹, Akira Tsukada², Tomohiro Sasanami³, Tamao Ono⁴, and Asato Kuroiwa¹
 (¹Sci. Hokkaido Univ., ²BioAgr. Nagoya Univ., ³Agr. Shizuoka Univ., ⁴Agr. Shinshu Univ.)
- I -20 Analysis of transcriptional regulatory region of membrane progesterin receptor in Japanese quail 16:10-16:20

○Tomohiro Sasanami¹, Yasunari Hirakawa², Takeshi Ohkubo³, Mei Matsuzaki³, Shusei Mizushima⁴

(¹Shizuoka Univ., ²Ibaraki Univ., ³Hiroshima Univ., ⁴Hokkaido Univ.)

- | | | |
|-------|--|-------------|
| I -21 | Development of transgenic chicken that enables human glycosylation in chicken egg bioreactor ○Isao Oishi ¹ , Masato Sakai ² (¹ AIST, ² CosmoBio.CO.Ltd.) | 16:20-16:30 |
| I -22 | Influence of three dietary plants protein sources on the plasma concentrations of advanced glycation end products (AGEs) in chickens. ○Sachi Hirakawa ¹ , Ryosuke Makino ² and Kazumi Kita ¹ (¹ Iwate Univ., ² Ehime Univ.) | 16:30-16:40 |
| I -23 | Plasma concentrations of advanced glycation end products (AGEs) in chickens fed diets containing either plant protein or animal protein ○Suzuna Kagamoto ¹ , Ryosuke Makino ² and Kazumi Kita ¹ (¹ Iwate Univ., ² Ehime Univ.) | 16:40-16:50 |
| I -24 | Effect of plant and animal dietary protein sources on the gene expression of fructosamine-3-kinase in various tissues of chickens. ○Chie Takita ¹ , Suzuna Kabamoto ² , and Kazumi Kita ^{1,2} (¹ Dept. of Agr., Grad. Sch. Arts Sci., Iwate Univ., ² Fac. Agr., Iwate Univ.) | 16:50-17:00 |

The candidates for the Presentation Award of young scientists are the following numbers.

I - 1, 2, 3, 4, 5, 6, 7, 8, 9

The 2020 Spring Annual Meeting of Japan Poultry Science Association

March 28, 2020 at Kyoto University
Kitashirakawa Oiwake-cho, Sakyo-ku, Kyoto 606-8502, JAPAN

Room2

(Presentation 7min.
Discussion 3min.)

Morning Session

(Nutrition, Feeds, Environment and Hygiene)

- II - 1 Effects of hulled rice feeding on the quality of meat in meat-type chickens 9:00-9:10
○Motoi Miyashita¹, Mayuko Tanaka¹, Kanta Itsu², Takaoki Saneyasu¹, Kazuhisa Honda¹
and Hiroshi Kamisoyama¹
(¹Grad. Sch. Agr. Sci., Kobe Univ., ²Fac. Agric, Kobe Univ.)
- II - 2 Evaluation of Spirulina in Feed stuff as Replacement of Fish meal for Broiler 9:10-9:20
○Sakyo Takagi · Sayaka Ohno · Souta Kuromoto · Takashi Kuramoto · Akira Kurosawa
(Tokyo Univ. Agri.)
- II - 3 Effects of Pepino melon ingestion for protein metabolism in Japanese quail 9:20-9:30
○Mayu Ogawa, Mana Ishii, Ken Takahata and Akira Kurosawa (TUA)
- II - 4 Effect of feed orange juice lees on laying performance and egg quality of laying hens in the hot season. 9:30-9:40
○Shogo Matsunaga¹ and Satoru Fukagawa¹ (¹Nagasaki pref. Livestok Exp.)
- II - 5 Preventive control of pest rodent, by using the Rat'em Out® in Windowless chicken house 9:40-9:50
○Kosuke Mitsunari¹, Kotomi Kikuchi¹, Taro Tanimoto², Eiji Maruo² and Yoshiaki Matsumoto¹
(¹Kagawa Univ., ²Yutaka Make Co., Ltd.)
- II - 6 Spectral Fluorescence Properties of Rotten Chicken Eggs (“Green Rot”) by *Pseudomonas fluorescens* 9:50-10:00
○Jumpei Ueda¹, Afzal Rahman¹, Ayuko Kashimori², Tetsuhito Suzuki¹, Yuichi Ogawa¹, Naoshi Kondo¹
(¹Grad. Sch. of Agric., Kyoto Univ., Japan. ²NABEL Co., Ltd., Japan)

- II - 7 Effect of blue light on mRNA levels of clock gene *Bmal 1* in Jidori chickens 10:10-10:20
○Koji Nakamura, Takaoki Saneyasu, Kazuhisa Honda and Hiroshi Kamisoyama (Grad. Sch. Agr. Sci., Kobe Univ.)
- II - 8 Effect of heat stress on period growth of Hinai-jidori chickens born in different seasons and safeguards against it 10:20-10:30
○Shiori Fukuda¹, Go Ito¹, Senetsu Sasaki¹, Yuki Hakamata² Motoi Kikusato² and Daiki Aoya¹
(¹Akita Pref. Livestock Exp. Stn., ²Tohoku Univ)
- Break (10 min.) 10:30-10:40
- II - 9 Effects of heat-killed *lactobacillus plantarum* L-137 on growth performance in broiler chickens 10:40-10:50
○Kazuhisa Honda¹, Keiko Miyama², Takaoki Saneyasu¹ and Hiroshi Kamisoyama¹
(¹Grad. Sch. Agr. Sci., Kobe Univ., ²Fac. Agric., Kobe Univ.)
- II -10 Presentation title in English (Ex.; Abstract Submission Form for Spring Meeting of Japan Poultry Science Association) 10:50-11:00
○Akira Kurosawa¹, Shuto Kosaka¹, Osamu Sunaga²
(¹TokyoUniv.Agri., ²Biomim Jpn.)
- II -11 Effect of dietary supplementation with *Bacillus amyloliquefaciens* strain TOA5001 on growth performance and inflammatory response of broiler chickens reared under wet litter or heat-stressed conditions 11:00-11:10
○Motoi Kikusato¹, Kazuo Fukui², Masaaki Toyomizu¹ (¹Grad. Sch. of Agricultural Science, Tohoku Univ.; ²TOA BIOPHARMA CO., LTD.)
- II -12 Effects of feeding of brown rice-based diet on egg production and lipid metabolism of laying hens, and cholesterol content of produced egg. 11:10-11:20
○Hitoshi Murakami¹, Makoto Yamazaki¹, Fumika Hara¹ and Haruhiko Ohtsu²
(¹Inst. of Livestock and Grassland Science, NARO, ²Headquarters, NARO)
- II -13 Effects of brown rice-based diet on growth performance, oxidative status and immune response in broiler chickens under chronic heat stress condition 11:20-11:30
○Fumika Nanto-Hara¹, Makoto Yamazaki¹, Haruhiko Ohtsu², Hitoshi Murakami¹
(¹Inst. of Livestock and Grassland Science, NARO, ²Headquarters, NARO)
- II -14 Effects of different feeding periods of rice-based diet on contents of chemical components in chicken edible meat 11:30-11:40
○Makoto Yamazaki¹, Fumika Hara¹, Koichi Matsushita², Haruhiko Ohtsu³ and Hitoshi Murakami¹
(¹Inst. of Livestock and Grassland Science, NARO, ²Yamanashi Pref. Livestock Dairy Tech. Ctr., ³NARO headquarters)

| | |
|---|-------------|
| Lunch Break (130min.) | 11:30-13:40 |
| General Meeting • Award Ceremony (90min.) | 13:40-15:10 |
| Break (10 min.) | 15:10-15:20 |

Afternoon Session

(Nutrition, Feeds, Genetics, Breeding, Processing and Products)

- | | | |
|--------|--|-------------|
| II -15 | Effects of astaxanthin feeding with different isomerization rate on astaxanthin content in egg yolk and egg quality of laying hens ○Yoshiaki Hayashi ¹ , Masaki Honda ² and Yuki Kawashima ³ (¹ Fac. Agric. Meijo Univ., ² Fac. Sci. Tech. Meijo Univ., ³ JXTG Nippon Oil & Energy Corp.) | 15:20-15:30 |
| II -16 | Effects of Pause Day Levels on Egg Yolk Viscosity and Yolk Fat in the Layer Type Nagoya Breed Chickens ○Naokazu Minoguchi ¹ , Yu Nishida ² , Yumi Kobayashi ² , Noriko Ogawa ² , Masami Sato ¹ (¹ Aichi Agricultural Res. Center., ² Chubu Univ..) | 15:30-15:40 |
| II -17 | Breed and feed effects on taste and amino acid contents in yolk and albumen ○Tatsuhiko Goto ¹ , Saki Shimamoto ² and Daichi Ijiri ² (¹ Obihiro Univ., ² Kagoshima Univ.) | 15:40-15:50 |
| II -18 | Effect of Prefectural Corn and Sesame Meal Based Diets on Growth Performance in the Kanagawadori ○Kumiko Hirai, Kentaro Orihara and Kouji Hikichi (Kanagawa Pref. Livestock Tech. Ctr.) | 15:50-16:00 |
| II -19 | Influence of dietary hull-less barley 'Haruhimeboshi' bran on growth performance and antioxidant status of broiler ○Ryosuke Makino, Takato Kawauchi and Tetsuya Tachibana (Ehime Univ.) | 16:00-16:10 |
| II -20 | Effects of trehalose supplementation on broiler chicks (third report): Field validation using antibiotics-free feed. ○Kazuhisa Mukai ¹ , Koichi Matsushita ² , Yuwares Ruangpanit ³ , Motoi Kikusato ⁴ (¹ Hayashibara Co., Ltd., ² Yamanashi Pref. Livestock Dairy Tec. Cen., ³ Kasetsart Univ., ⁴ Grad. Sch. of Agricultural Sci., Tohoku Univ.) | 16:10-16:20 |

- II-21 Comparison between gluconeogenesis and muscle protein turnover in newly hatched broiler chicks 16:20-16:30
○Yoshiyuki Ohta, and Jun-ichi Shiraishi
(Nippon Vet. Life Sci. Univ.)
- II-22 Nutritional restriction during starter feeding promotes wooden breast in broilers. 16:30-16:40
○Tomohito Iwasaki¹, Itsuki Ohya², Yasuhiro Hasegawa², Marina Hosotani², Takafumi Watanabe² and Takeshi Kawasaki³
(¹Dept. Food Sci., Rakuno Gakuen Univ., ²Sch. Vet. Med., Rakuno Gakuen Univ., ³Kawavet LLC.)
- II-23 Production of *Campylobacter*-free flocks with whole grain paddy rice feeding at a commercial broiler farm. 16:40-16:50
○Mari Nishii, Masaharu Yasutomi
(Kyoto Pref. Livestock Exp. Stn.)

The candidates for the Presentation Award of young scientists are the following numbers.

II - 1, 2, 3, 4, 5, 6, 7, 8,