

The 2022 Spring Meeting of Japan Poultry Science Association

March 29, 2022

Online

Room1

Presentation 7min.
Discussion 3min.

Morning Session (9:00~11:40)

○ I - 1~○ I - 11 Best Presentation Award (Genetics, Breeding, Physiology, Reproduction)

I - 12~ I - 13 General Presentation (Physiology)

- I - 1 Heritability estimates of egg production and quality traits in Hinaidori chickens.
○ Nonoka Kawamura¹, Kazuhiro Rikimaru², Shiori Fukuda², Koichi Hagiya¹ and Tatsuhiko Goto¹
(¹Obihiro Univ., ²Akita Pref. Livest. Exp. Stn.)
- I - 2 Multi-Omics analysis of the effect of different housing systems on laying hens
○ Nonoko Nozaki¹, Itufumi Sato¹, Tadahiro Matsubara¹, Eiki Asagi¹, Yuki Higashiura¹, Chihiro Kase², Atushi Nagano³, Shozo Tomonaga⁴, Tatsuhiko Goto⁵, Jun-ichi Shiraishi⁶, Kan Sato⁷ and Tsuyoshi Shmmura¹(¹Tokyo Univ. of Agr. & Tech., ²Azabu Univ., ³Ryukoku Univ., ⁴Kyoto Univ., ⁵Obihiro Univ., ⁶Nippon Vet. Life Sei. Univ., ⁷Tohoku Univ.)
- I - 3 Intracerebroventricular injection of taurine regulates the thermogenic gene expression of breast muscle in chicks under both control thermoneutral temperature and high ambient temperature
○ Mohamed Z. Elhussiny, Haruka Nishimura, Phuong V. Tran, Mitsuhiro Furuse and Vishwajit S. Chowdhury (Kyushu Univ.)
- I - 4 Neuropeptide Y-Y4 receptor mRNA expresses in the spleen, but not in the liver, increased in heat-exposed chicks
○ Haruka Nishimura, Mohamed Z. Elhussiny, Mitsuhiro Furuse and Vishwajit S. Chowdhury (Kyushu Univ.)
- I - 5 Analyses of ovarian and tissue localization of PLA2R receptor and its transport ability of IgY in chicken and quail
○ Ryo Sasaki, Kenji Oshima, Misato Kobayashi, Fumihiko Horio, Atsushi Murai (Grad. Sch. of Bioagr. Sci., Nagoya Univ.)
- I - 6 Evaluation of neonatal immune response and central melanocortin system of Yamanashi native chicken breeds.
○ Kazuki Kimura¹, Yuuna Watanabe², Noriko Kikushima³, Kouichi Matsushima³, Nobuhiro Nakao¹, Yoshiyuki Ohta¹ and Jun-ichi Shiraishi³

(¹Grad. Sch. Appl. Life Sci., Nippon Vet. Life Sci. Univ., ²Fac. Anim. Sci., Nippon Vet. Life Sci. Univ.,
³Yamanashi Pref. Livestock and Dairy Tech. Ctr.)

- I - 7 Effects of Amino Acid Amadori Compounds on Amino Acid Uptake and Protein Synthesis in Chicken Embryo-Derived Skin Fibroblasts
○Miyu Sugita¹, Kazumi Kita² (¹Iwate Univ.)

10:20~10:30

Break (10min.)

- I - 8 Effects of oral administration of *Lactobacillus johnsonii* on the oviductal and intestinal mucosal barrier function of the laying hens.
○Taro Shinkoda, Yusaku Tsugami, Naoki Isobe, Yukinori Yoshimura, Takahiro Nii
(Grad. Sch. of Integrated Sci. for Life, Hiroshima Univ.)
- I - 9 Calcium chelation improves the fertilization potential of chicken semen during liquid storage
○Pangda Sopha Sushadi¹, Atsushi Tajima² and Atsushi Asano²
(¹Grad. Sch. of Life and Environmental Sci., Univ. of Tsukuba, ²Fac. of Life and Environmental Sci., Univ. of Tsukuba)
- I -10 Relationship between flock age and primordial germ cell concentrations in early chick embryos.
○Sho Ebara, Atsushi Asano and Atsushi Tajima
(Grad. Sch. of Life and Environmental Sci., Univ. of Tsukuba)
- I -11 Development of a cryomedium containing dimethyl sulfoxide for cryopreservation of chicken primordial germ cells
○Natsuko Hamai¹, Yuki Tansyo², Yukino Ooka², Mayo Hirano², Masaoki Tsudzuki^{1,2,3}, Yoshiaki Nakamura^{1,2,3}
(¹Grad. Sch. of Integrated Sci. for Life, Hiroshima Univ., ²Sch. of Applied Bio. Sci., Hiroshima Univ.,
³JAB, Hiroshima Univ.)
- I -12 Study on somatic differentiation in chick primordial germ cells
○Kennosuke Ichikawa, Yuzuha Motoe, Ryo Ezaki, Mei Matsuzaki, Hiroyuki Horiuchi
(Hiroshima Univ.)
- I-13 Evaluation of infection sensitivity using chicken immortalized cells with human-derived genes
○Masafumi Katayama¹, Tomokazu Fukuda², Tohru Kiyono³, Manabu Onuma¹.
(¹ Biodiversity Division, National Institute for Environmental Studies, ²Grad. Sch. of Sci. and Engineering, Iwate Univ., ³Exploratory Oncology Research and Clinical Trial Center, National Cancer Center.)

11:40~12:00

Break

(20min.)

12:00~13:00	Online Seminar	(60min.)
13:00~13:10	Break	(10min.)
13:10~14:00	Board of Trustees	(50min.)
14:00~14:10	Break	(10min.)
14:10~15:10	General meeting ▪ Award Ceremony	(60min.)
15:10~15:30	Break	(20min.)

Afternoon Session (15:30~17:00)

I - 14~ I - 21 General Presentation

(Genetics, Breeding, Physiology, Reproduction, Processing and Products)

- I-14 Sperm surface protein that controls sperm migration into the sperm storage tubules in Japanese quail
 ○Tomohiro Sasanami¹, Mei Matsuzaki² and Shusei Mizushima³
 (¹ Shizuoka Univ., ²Hiroshima Univ., ³Hokkaido Univ.)
- I -15 Polymyxin B improves the quality of chicken semen during liquid storage
 ○Ei Ei Win Maung¹, Pangda Sopha Sushadi¹, Atsushi Tajima² and Atsushi Asano²
 (¹Grad. Sch. of Life and Environmental Sci., Univ. of Tsukuba, ²Fac. of Life and Environmental Sci., Univ. of Tsukuba)
- I -16 Leptin stimulates ovarian insulin-like growth factor-1 mRNA expression and promotes primordial follicle development in juvenile chicks
 ○Sadequallah Ahmadi^{1,2} and Takeshi Ohkubo^{1,2}
 (¹Utd. Grad. Sch. of Agri. Sci., TUAT, ²Coll. Agri. Ibaraki Univ.)
- I -17 Interaction of glucagon-related peptides or melanocortins in the regulation of food intake in chicks
 ○Ahmed Kewan, Kazuhisa Honda, Takaoki Saneyasu, and Hiroshi Kamisoyama
 (Grad. Sch. Agr. Sci. Kobe Univ.)
- I -18 Effects of aging on microflora and inflammatory reaction in intestine and oviduct of laying hens.
 Takumi Sugiura, Naoki Suzuki, Yusaku Tsugami, Naoki Isobe, Yukinori Yoshimura, ○Takahiro Nii
 Grad. Sch. of Integrated Sci. for Life, Hiroshima Univ.
- I -19 Resiquimod stimulates nitric oxide production by inducible nitric oxide synthase in chicks
 ○Tetsuya Tachibana¹, Maki Takahashi¹, Ryosuke Makino¹ and Sakirul Khan²
 (¹Fac. of Agric., Ehime Univ., ²Fac. of Med., Oita Univ.)

- I -20 Temperament differences among native Japanese chicken breeds
○Akira Ishikawa^{1,4}, Momoe Terashima¹, Naoki Goto² and Masaoki Tduzuki^{3,4}
(¹Nagoya Univ., ²Hendrix Genetics, ³Hiroshima Univ., ⁴JAB)
- I -21 Food Culture of Japanese quail in Japan, Market Research of Quail Egg Product in Flyer, before
COVID-19 era.
○Akiko Sano (Inst. Anim. Sic.)

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Morning Session (9:00~11:40)

○II - 1~○II - 10 Best Presentation Award

(Nutrition and Feeds, Anatomy and Histology, Environment and Hygiene)

II - 11~ II - 13 General Presentation (Nutrition and Feeds)

- II - 1 Evaluation of quantitative analytical method of amino acid and its metabolite concentrations of plasma in chickens
○Hanwool Do, Shozo Tomonaga (Grad. Sch. Agr. Kyoto Univ.)
- II - 2 Studies on the role of hypothalamic TGF-β/Smad signaling pathway in regulation of food intake in chickens
○Miku Ueda, Kanami Nagata, Kazuhisa Honda, Hiroshi Kamisoyama, Takaoki Saneyasu (Kobe Univ.)
- II - 3 Effects of periodic and regional changing of lighting color on the behavior of broilers
○Shingo Kusuda¹, Koji Nakamura¹, Kazuhisa Honda¹, Chikamitsu Oshima³, Takaoki Saneyasu², and Hiroshi Kamisoyama² (¹Grad. Sch. Agr. Sci. Kobe Univ., ²Ishiifoods Co., LTD.)
- II - 4 Primary Chicken Embryo-Derived Kidney cell culture
○Motomi Toyama¹, Kazumi Kita² (¹Grad. Sch., Iwate Univ., ²Iwate Univ.)
- II - 5 Connexin 43 is localized in gizzard smooth muscle cells during chicken development
○Kosuke Tokunaga¹, Shota Akimoto¹, Machiko Aiba¹, Mutsuki Nakagomi¹, Takahiro Suzuki¹, Ryuichi Tatsumi¹, Mako Nakamura¹ (¹Kyushu Univ.)

10:00~10:10

Break (10min.)

- II - 6 Effects of *ad libitum* Feeding of a Bran-based Diet on Rest Reaction and Reproductive Organs in Japanese Quails
○Saori Tamada¹, Naokazu Minoguchi¹, Masami Sato¹ (¹Aichi Agric. Res. Ctr.)

- II - 7 Effects of brown rice and sake lees on growth performance and meat quality in broiler chickens
○Koki Nishikawa¹, Karin Miyazaki¹, Kazuhisa Honda¹, Takehiro Hirai³, Shuji Hirohata³, Takaoki Saneyasu², and Hiroshi Kamisoyama²
(¹Grad. Sch. Agr. Sci. Kobe Univ., ²Hakutsuru Sake Brewing Co., LTD.)

- II - 8 Comparison of fermented feed and mixed feed in egg production and quality traits in chickens.
○Rina Oguchi, Miyu Hanaki and Tatsuhiko Goto
(Obihiro Univ.)

- II - 9 Anti-inflammatory response of olive-derived polyphenol in LPS-activated chicken splenocytes
○Kanade Otani, Kan Sato (Grad. Sch. Agr. Tohoku Univ.)

- II-10 Activity Monitoring of Chickens by a Doppler Sensor
○Naruya Inagaki¹, Akihiro Nakamura², Shiori Tokita², Hiromitsu Miyakawa², Masami Sato² and Yukihiro Kamiya¹
(¹Aichi Pref. Univ., ²Aichi Agric. Res. Ctr.)

- II -11 Evaluation of cadaverine signals in the regulation of energy metabolism during late-term chicken embryos
○Jun-ichi Shiraishi, Naoko Shimakura, Kazuki Kimura, Junto Katsuyama, Haruka Otsu, Hirono Uesaka, Ai Saiga-Egusa, Yoshiyuki Ohta (Appl. Life Sci., Nippon Vet. Life Sci. Univ.)

- II -12 Effects of metabolizable energy saving by guanidinoacetic acid supplementation in broiler feed
○Daisuke Matsui¹, Judith Ringel² and Izuru Shinzato¹
(¹Sumitomo Chemical Co., Ltd., ²AlzChem Trostberg GmbH)

- II -13 Heat exposure affects renal fibrosis and mitochondrial dysfunction in laying hen
○Fumika Nanto-HARA, Haruhiko Ohtsu, Makoto Yamazaki and Hitoshi Murakami
(Inst. of Livestock and Grassland Sci., NARO)

11:40~12:00 **Break** **(20min.)**

12:00~13:00 **Online Seminar** **(60min.)**

13:00~13:10 **Break** **(10min.)**

13:10~14:00 **Board of Trustees** **(50min.)**

14:00~14:10 **Break** **(10min.)**

14:10~15:10 **General meeting • Award Ceremony (60min.)**

15:10~15:30 **Break** **(20min.)**

Afternoon Session (15:30~17:00)

II - 14~II - 21 General Presentation (Nutrition and Feeds • Processing and Products)

- II -14 Effect of the Use of Vegetable Oil Meal as a Substitute for Fish Meal on Laying Performance in Japanese Quail
○Naokazu Minoguchi¹, Emika Hasegawa¹, Kenji Inoue², Keiya Kamimura², Hiroki Eida³, Takatada Suzuki⁴, Masami Sato¹
(¹Aichi Agric. Res. Ctr., ²Aichi Prefectural Federation of Economic Agricultural Cooperatives Association., ³ZEN-NOH., ⁴JA Higashi Nihon Kumiai Feed Co., Ltd)
- II -15 Effect of the low-protein diet supplemented with synthetic amino acids on performances and nitrogen excretion in broilers during the growing period.
○Haruhiko Ohtsu, Fumika Nanto-HARA, Makoto Yamazaki and Hitoshi Murakami
(Inst. of Livestock and Grassland Sci., NARO)
- II -16 Effect of prefectural corn and sesame meal based diets on growth performance and meat quality of Kanagawadori
○Kumiko Hirai, Kentaro Orihara and Kouichiro Kita
(Kanagawa Pref. Livestock Tech. Ctr.)
- II -17 Effect of *Dunaliella bardawil* powder supplementation on performance and egg carotene contents of laying hens
○Keisuke Nishida¹, Teruo Hiroyasu², Sachiko Kawamoto² and Kanya Tokunaga²
(¹Nishida Poultry Farm, ²Nikken Sohonsa Corporation)
- II -18 Effects of mixed feeding of feed and water on water intake and osmotic regulation-related factors in broiler chickens
○Kazuhisa Honda¹, Tomoya Matsunami¹, Yuji Taniguchi², Sei-ichi Hinomoto², Satoru Kuroki², Takaoki Saneyasu¹, and Hiroshi Kamisoyama¹
(¹Grad. Sch. Agr. Sci. Kobe Univ., ²Nakajima Seisakusho Co., LTD.)
- II -19 *Weizmannia(Bacillus) coagulans* SANK70258 supplementation into the diet improves the growth performance under coccidial infection of broilers.
○Takamitsu Tsukahara¹, Taishi Imaoka², Hikari Shimonishi², Ryouichi Yamada³, Masanori Aida³, Ryounosuke Michibata³, Toshiki Matsuo³, Itaru Taniguchi³
(¹Kyoto Inst. Nutr. Pathol., ²KYODOKEN Inst., ³Mitsubishi Chemical Corp.)
- II -20 Effect of Cooking Temperature on the Sensory Characteristic of *Choshu-Kurokashiwa* and Broiler Breast Meat
○Shohei Murata (Yamaguchi Agri.& For. Gen. Tech. Ctr.)