

# 第 36 回鳥類内分泌研究会

大会事務局

笹浪知宏 静岡大学農学部 応用生物化学科 分子細胞生物学研究室

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日時 : 2011 年 11 月 21 日(月)~22 日(火)

会場 : 箱根パークス吉野

〒250-0312

神奈川県足柄下郡箱根町湯本茶屋 139-5

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## 交通案内

箱根登山線（小田急線）箱根湯本駅より徒歩 12 分

また、箱根湯本駅のロータリーからは、便利なシャトルバスが出ております。  
シャトルバスの場合、当館まで乗車 5 分です。

行き先は A コース「滝通り行き」大人お 1 人様片道 100 円です。

午前 8 時 30 分より 11 時までは 15 分~20 分間隔で運行しております。

午前 10 時 45 分より午後 6 時 45 分までは毎時 15 分・45 分発となります。



## 第 36 回鳥類内分泌研究会プログラム

2011 年 11 月 21 日～11 月 22 日  
箱根パークス吉野、足柄下郡箱根町

11 月 21 日 (月)

受付

13:00-13:20

開会の挨拶

13:20-13:30

一般講演

\*若手研究奨励賞応募演題

セッション I (脳機能に関するセッション)  
座長：河上眞一 (広島大)、吉村崇 (名古屋大)  
(I-1～I-2) (I-3～I-5)

13:30-13:45

- \* I-1 マイクロアレイを用いたニワトリ胚下垂体における遺伝子発現解析  
○檜垣佑理子、坂井貴文  
(埼玉大学理工学研究科細胞制御学研究室)

13:45-14:00

- \* I-2 雄鶏が朝を告げる仕組み  
○ 新村 毅<sup>1</sup>、吉村 崇<sup>1, 2</sup>  
(<sup>1</sup>名大院・生命農、名大・<sup>2</sup>鳥類バイオサイエンス研究センター)

14:00-14:15

- \* I-3 ニワトリヒナ血漿遊離アミノ酸濃度に及ぼすメラノタン中枢投与の影響  
○高脇美南<sup>1</sup>、中斉えり子<sup>1</sup>、谷澤 宏<sup>1</sup>、白石純一<sup>2</sup>、  
河上眞一<sup>1, 3</sup>、豊後貴嗣<sup>1, 3</sup>  
(<sup>1</sup>広島大学大学院 生物圏科学研究科、<sup>2</sup>北里大学 一般教育部、  
<sup>3</sup>広島大学 JAB-PRC)

14:15-14:30

- \* I-4 脳由来神経栄養因子中枢投与がニワトリヒナの摂食および直腸温に及ぼす影響  
○ 谷澤宏<sup>1</sup>、川井田恵子<sup>2</sup>、林由里子<sup>2</sup>、高脇美南<sup>1</sup>、中斉えり子<sup>1</sup>、  
河上眞一<sup>1, 3</sup>、豊後貴嗣<sup>1, 3</sup>  
(<sup>1</sup>広島大学大学院 生物圏科学研究科、<sup>2</sup>広島大学 生物生産学部  
<sup>3</sup>広島大学 JAB-PRC)

14:30-14:45

- \* I-5 敷き料の有無がニワトリヒナ中枢モノアミン濃度に及ぼす影響  
○中斉えり子<sup>1</sup>、高脇美南<sup>1</sup>、谷澤 宏<sup>1</sup>、河上眞一<sup>1, 2</sup>、豊後貴嗣<sup>1, 2</sup>  
(<sup>1</sup>広島大学大学院 生物圏科学研究科、<sup>2</sup>広島大学 JAB-PRC)

14:45-15:00

コーヒーブレイク

セッション II (繁殖に関するセッション)

座長：吉村幸則 (広島大)

(II-1~II-3)

15:00-15:15

- \* II-1 ウズラの季節性精巣退縮機構の解明  
○渥美優介<sup>1,2</sup>、池上啓介<sup>1</sup>、小野ひろ子<sup>1</sup>、村山至<sup>1</sup>、中根右介<sup>1</sup>、太田航<sup>1</sup>、  
新井菜津美<sup>3</sup>、手賀明倫<sup>3</sup>、飯郷雅之<sup>3</sup>、吉田松生<sup>4</sup>、吉村崇<sup>1,2</sup>  
(<sup>1</sup>名大院生命農・<sup>2</sup>名大院生命農 ABRC・<sup>3</sup>宇都宮大農・<sup>4</sup>基生研)

15:15-15:30

- \* II-2 ウズラ精子貯蔵管における貯精の分子機構  
○松崎芽衣<sup>1</sup>、柴小菊<sup>2</sup>、稲葉一男<sup>2</sup>、水島秀成<sup>1</sup>、吉松勝彦<sup>1</sup>、笹浪知宏<sup>1</sup>  
(<sup>1</sup>静岡大・農、<sup>2</sup>筑波大・下田臨海)

15:30-15:45

- \* II-3 ウズラの受精における cryptic female choice に関する研究  
○伊東知未、水島秀成、笹浪知宏  
(静岡大・農)

セッション III (発生・免疫に関するセッション)

座長：塚田光 (名古屋大)

(III-1~III-4)

15:45-16:00

- \* III-1 Polish 系ニワトリにおける “Cerebral hernia” 形成機構の解明  
○吉村圭司<sup>1</sup>、木下圭司<sup>2</sup>、水谷誠<sup>2</sup>、松田洋一<sup>2</sup>、齋藤昇<sup>1,2</sup>  
(<sup>1</sup>名古屋大院・生命農、<sup>2</sup>名古屋大院・生命農・鳥類バイオサイエンス研究  
センター)

16:00-16:15

- \* III-2 卵細胞質内精子注入法を用いて得られたウズラ胚の発生能と GFP 遺伝子発現  
効率に及ぼす精子処理法の効果  
○佐藤暁<sup>1</sup>、笹浪知宏<sup>1</sup>、神作宜男<sup>2</sup>、小野珠乙<sup>3</sup>、島田清司<sup>4</sup>、水島秀成<sup>1</sup>  
(<sup>1</sup>静岡大・農、<sup>2</sup>麻布大・獣、<sup>3</sup>信州大・農、<sup>4</sup>ソウル大・WCU Biomodulation)

16:15-16:30

- III-3 ウズラ初期胚における細胞周期関連遺伝子の発現解析  
○水島秀成<sup>1</sup>、笹浪知宏<sup>1</sup>、神作宜男<sup>2</sup>、小野珠乙<sup>3</sup>、島田清司<sup>4</sup>  
(<sup>1</sup>静岡大・農、<sup>2</sup>麻布大・獣、<sup>3</sup>信州大・農、<sup>4</sup>ソウル大・WCU Biomodulation)

16:30-16:45

- III-4 ニワトリ雄生殖器の自然免疫機能  
張 明<sup>1,2</sup>、渡辺陽子<sup>1</sup>、磯部直樹<sup>1</sup>、○吉村幸則<sup>1</sup>  
(<sup>1</sup>広島大院生物圏、<sup>1,2</sup> 四川農業大学)

16:45-17:00

コーヒーブレイク

特別講演

座長：笹浪知宏（静岡大学）、筒井和義（早稲田大）  
（特別講演 1） （特別講演 2）

17:00-17:40

特別講演 1

種特異的な精子内卵活性化因子の機能 Fish, Birds and Mammals  
伊藤潤哉  
（麻布大学獣医学部）

17:40-18:20

特別講演 2

Individual variation in corticosterone stress responses in birds  
John Cockrem  
（Institute of Veterinary, Animal and Biomedical Sciences, Massey  
University, Palmerston North, New Zealand）

18:20-19:00

荷物移動・休憩

19:00-21:00

懇親会

21:00-

懇話会

11月22日（火）

7:00-8:45

朝食

一般講演

セッション IV（行動と脳機能に関するセッション）  
座長：新村 毅（名古屋大）、檜山 源（MacGill 大）  
（IV-1～IV-2） （IV-3～IV-4）

8:45-9:00

\* IV-1 生殖腺刺激ホルモン放出抑制ホルモン(GnIH) 遺伝子の RNA 干渉は鳴鳥を覚醒させる  
○産賀崇由<sup>1</sup>、水野貴信<sup>1</sup>、福田裕治郎<sup>1</sup>、George E. Bentley<sup>2</sup>、John C. Wingfield<sup>3</sup>、筒井和義<sup>1</sup>  
（<sup>1</sup>早稲田大・教育総合科学・統合脳科学、<sup>2</sup>University of California at Berkeley, Department of Integrative Biology, <sup>3</sup>University of California at Davis, Department of Neurobiology, Physiology and Behavior）

9:00-9:15

\* IV-2 鳴禽類の摂食・エネルギー代謝を調節する 26RFa ペプチドの同定  
○戸張靖子<sup>1,2</sup>、飯島典生<sup>2</sup>、恒川賢太<sup>1</sup>、大杉知裕<sup>1</sup>、原口省吾<sup>1</sup>、産賀崇由<sup>1</sup>、浮穴和義<sup>3</sup>、岡ノ谷一夫<sup>4</sup>、小澤一史<sup>2</sup>、筒井和義<sup>1</sup>  
（<sup>1</sup>早稲田大・教育総合科学・統合脳科学、<sup>2</sup>日本医科大・院・生体制御形態科学、<sup>3</sup>広島大・院・総合科学・脳科学、<sup>4</sup>理研 BSI・生物言語）

9:15-9:30

IV-3 歌鳥の歌神経系におけるグルコルチコイドおよびミネラルコルチコイド受容体の発現

○鈴木研太<sup>1,2,3</sup>、松永英治<sup>2</sup>、小林哲也<sup>3</sup>、岡ノ谷一夫<sup>1,2,4</sup>

(<sup>1</sup>JST-ERATO 岡ノ谷情動情報、<sup>2</sup>理研 BSI、<sup>3</sup>埼玉大 理工、

<sup>4</sup>東大 総合文化)

9:30-9:45

IV-4 Hypothalamic Gonadotropin-Inhibitory Hormone Precursor mRNA is Increased during Depressed Food Intake in Heat-Exposed Chicks

○Vishwajit S. Chowdhury<sup>a</sup>, Shozo Tomonaga<sup>a</sup>, Shotaro Nishimura<sup>a</sup>, Shoji Tabata<sup>a</sup>, Kazuyoshi Tsutsui<sup>b</sup>, Mitsuhiro Furuse<sup>a</sup>

(<sup>a</sup>Department of Bioresource Sciences, Faculty of Agriculture, Kyushu University, Fukuoka 812-8581, Japan, <sup>b</sup>Department of Biology, Waseda University, and Center for Medical Life Science of Waseda University, Tokyo 162-8480, Japan)

セッション IV (ホルモン、繁殖に関するセッション)

座長：小川博(東京農大)

(V-1~V-3)

9:45-10:00

V-1 ウズラの精子プロテアソームによる ZP1 タンパクの分解

服部泰典<sup>1</sup>、徳元俊伸<sup>2</sup>、水島秀成<sup>1</sup>、吉松勝彦<sup>1</sup>、○笹浪知宏<sup>1</sup>

(<sup>1</sup>静岡大・農、<sup>2</sup>静岡大・理)

10:00-10:15

V-2 Molecular Cloning of Prolactin Regulatory Element Binding Protein (PREB) in Chicken and Turkey

○Hiyama G<sup>1</sup>, Kansaku N<sup>2</sup> and Zadworny D<sup>1</sup>

(<sup>1</sup>Department of Animal Science, McGill University, QC, Canada,

<sup>2</sup>Laboratory of Animal Genetics and Breeding, Azabu University, Sagami, Japan)

10:15-10:30

V-3 ニワトリ精巣における成長ホルモン作用の解明

桑原力、村山至、小野ひろ子、吉村崇、佐橋学、菱沼愛、○塚田光

(名古屋大学大学院生命農学)

10:30-

若手研究奨励賞の発表と授賞式

閉会の挨拶

11:00-13:00

ISEA2012 岐阜組織委員会・世話人会

**36<sup>th</sup> Annual Meeting of Japanese Avian Endocrinology  
November 21-22, 2011, Hakone-Yumoto**

**November 21**

**Opening of the meeting (13: 20-)**

**SESSION I (13:30-14:45)**

- I-1      Microarray profiling of gene expression in the anterior pituitary gland of chicken embryo  
          ○Yuriko Higaki and Takafumi Sakai  
          (Graduate School of Science and Engineering, Saitama University)
- I-2      Why chickens crow in the morning?  
          ○Tsuyoshi Shimmuraa<sup>1</sup> and Takashi Yoshimura<sup>1,2</sup>  
          (<sup>1</sup>Graduate School of Bioagricultural Sciences, Nagoya University, <sup>2</sup>Avian Bioscience Research Center, Nagoya University)
- I-3      Effects of central injection of MTII on plasma amino acid concentrations in chicks  
          ○Minami Takawaki <sup>1</sup>, Eriko Nakasai <sup>1</sup>, Hiroshi Tanizawa <sup>1</sup>, Jun-ichi Shiraishi <sup>2</sup>,  
          Shin-Ichi Kawakami <sup>1,3</sup>, Takashi Bungo <sup>1,3</sup>  
          (<sup>1</sup> Graduate school of Biosphere Science, Hiroshima University, <sup>2</sup>Kitazato University, <sup>3</sup>Japanese Avian Bioresource Project Research Center, Hiroshima University)
- I-4      Effects of central administration of BDNF on feeding and rectal temperature in chicks  
          ○Hiroshi Tanizawa <sup>1</sup>, Keiko Kawaidas <sup>1</sup>, Yuriko Hayashi <sup>1</sup>, Minami Takawaki <sup>1</sup>,  
          Eriko Nakasai <sup>1</sup>, Shin-Ichi Kawakami <sup>1,3</sup>, Takashi Bungo <sup>1,3</sup> (<sup>1</sup> Graduate school of Biosphere Science, Hiroshima University, <sup>2</sup>Faculty of Applied Biology Science, Hiroshima University, <sup>3</sup>Japanese Avian Bioresource Project Research Center, Hiroshima University)
- I-5      Influence of the presence of bedding on brain biogenic amine concentrations in chicks  
          ○Eriko Nakasai <sup>1</sup>, Minami Takawaki <sup>1</sup>, Hiroshi Tanizawa <sup>1</sup>, Shin-Ichi Kawakami <sup>1,2</sup>,  
          Takashi Bungo <sup>1,2</sup>  
          (<sup>1</sup> Graduate school of Biosphere Science, Hiroshima University, <sup>2</sup>Japanese Avian Bioresource Project Research Center, Hiroshima University)

**Coffee Break (14:45-15:00)**

## SESSION II (15:00-15:45)

- II-1 Mechanism of seasonal testicular regression in quail  
○Yusuke Atsumi<sup>1,2</sup>, Keisuke Ikegami<sup>1</sup>, Hiroko Ono<sup>1</sup>, Itaru Murayama<sup>1</sup>, Yusuke Nakane<sup>1</sup>, Wataru Ota<sup>1</sup>, Natsumi Arai<sup>3</sup>, Akinori Tega<sup>3</sup>, Masayuki Iigo<sup>3</sup>, Shosei Yoshida<sup>4</sup>, Takashi Yoshimura<sup>1,2</sup>  
(<sup>1</sup>Graduate School of Bioagricultural Sciences, <sup>2</sup>Avian Bioscience Research Center, Nagoya Univ., <sup>3</sup>Faculty of Agriculture, Utsunomiya Univ., <sup>4</sup>National Institute for Basic Biology)
- II-2 Mechanism of prolonged sperm survival in sperm storage tubules of Japanese quail  
○Mei Matsuzaki<sup>1</sup>, Kogiku Shiba<sup>2</sup>, Kazuo Inaba<sup>2</sup>, Shusei Mizushima<sup>1</sup>, Katsuhiko Yoshimatsu<sup>1</sup>, Tomohiro Sasanami<sup>1</sup>  
(<sup>1</sup>Faculty of Agriculture, Shizuoka University, <sup>2</sup>Shimoda Marine Research Center, University of Tsukuba)
- II-3 Studies on the cryptic female choice in fertilization of Japanese quail  
○Tomomi Ito, Shusei Mizushima, Tomohiro Sasanami  
(Faculty of Agriculture, Shizuoka University)

## SESSION III (15:45-16:00)

- III-1 Genetic and developmental studies on "cerebral hernia" in the crested Polish chicken  
○Keiji Yoshimura<sup>1</sup>, Keiji Kinoshita<sup>2</sup>, Makoto Mizutani<sup>2</sup>, Yoichi Matsuda<sup>2</sup>, Noboru Saito<sup>1,2</sup>  
(<sup>1</sup>Graduate School of Bioagricultural Sciences, Nagoya Univ., <sup>2</sup>Avian Bioscience Research Center, Nagoya Univ.)
- III-2 Effect of sperm treatment on developmental enhancement and EGFP expression efficiency of quail embryos produced by ICSI-SMGT  
○Akio Sato<sup>1</sup>, Tomohiro Sasanami<sup>1</sup>, Norio Kansaku<sup>2</sup>, Tamao Ono<sup>3</sup>, Kiyoshi Shimada<sup>4</sup>, Shusei Mizushima<sup>1</sup>  
(<sup>1</sup>Faculty of Agriculture, Shizuoka University, <sup>2</sup>Department of Animal Science and Biotechnology, Azabu University, <sup>3</sup>Faculty of Agriculture, Shinshu University, <sup>4</sup>WCU Biomodulation, Seoul National University)
- III-3 Profile of cell cycle-related gene expression during development of quail embryo  
○Shusei Mizushima<sup>1</sup>, Tomohiro Sasanami<sup>1</sup>, Norio Kansaku<sup>2</sup>, Tamao Ono<sup>3</sup>, Kiyoshi Shimada<sup>4</sup>  
<sup>1</sup>Faculty of Agriculture, Shizuoka University, <sup>2</sup>Department of Animal Science and Biotechnology, Azabu University, <sup>3</sup>Faculty of Agriculture, Shinshu University, <sup>4</sup>WCU Biomodulation, Seoul National University.
- III-4 Innate immune functions in rooster reproductive organs  
Zhang Ming<sup>1,2</sup>, Yoko Watanabe<sup>1</sup>, Naoki, Isobe<sup>1</sup>, ○Yukinori Yoshimura<sup>1</sup>  
(<sup>1</sup>Grad. Schl. of Biosphere Sci., Hiroshima Univ.; <sup>2</sup>Sichuan Agricultural Univ., China)

**Coffee Break (16:45-17:00)**

**INVITED LECTURE I (17:00-17:40)**

The role of sperm-borne oocyte-activating factor in different species

Junya Ito

(Laboratory of Animal Reproduction, Department of Animal Science & Biotechnology, School of Veterinary Medicine, Azabu University)

**INVITED LECTURE II (17:40-18:20)**

Individual variation in corticosterone stress responses in birds

John Cockrem

(Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North, New Zealand)

**Banquet (19:00-21:00)**

**November 21**

**Breakfast (7:00-8:45)**

**SESSION IV (8:45-9:45)**

IV-1 RNA interference of gonadotropin-inhibitory hormone (GnIH) gene induces arousal in songbirds

○Takayoshi Ubuka<sup>1</sup>, Takanobu Mizuno<sup>1</sup>, Yujiro Fukuda<sup>1</sup>, George E. Bentley<sup>2</sup>, John C. Wingfield<sup>3</sup>, Kazuyoshi Tsutsui<sup>1</sup>

(<sup>1</sup>Laboratory of Integrative Brain Sciences, Department of Biology, Waseda University, <sup>2</sup>University of California at Berkeley, Department of Integrative Biology)

IV-2 Identification, localisation and functional implication of 26RFa orthologue peptide in the brain of zebra finch (*Taeniopygia guttata*)

○Y. Tobari<sup>1,2</sup>, N. Iijima<sup>2</sup>, K. Tsunekawa<sup>1</sup>, T. Osugi<sup>1</sup>, S. Haraguchi<sup>1</sup>, T. Ubuka<sup>1</sup>, K. Ukena<sup>3</sup>, K. Okanoya<sup>4</sup>, H. Ozawa<sup>2</sup> and K. Tsutsui<sup>1</sup>

(<sup>1</sup>Department of Biology, Center for Medical Life Science of Waseda University, Waseda University, Tokyo, Japan, <sup>2</sup>Department of Anatomy and Neurobiology, Graduate School of Medicine, Nippon Medical School, Tokyo, Japan, <sup>3</sup>Section of Behavioral Sciences, Graduate School of Integrated Arts and Sciences, Hiroshima University, Hiroshima, Japan, <sup>4</sup>Laboratory for Bilingualistics, RIKEN Brain Science Institute (RIKEN-BSI), Saitama, Japan.)



- IV-3      Glucocorticoid and mineralocorticoid receptor expression in the song system of songbirds.  
○Kenta Suzuki<sup>1,2,3</sup>, Eiji Matsunaga<sup>2</sup>, Tetsuya Kobayashi<sup>3</sup>, Kazuo Okanoya<sup>1,2,4</sup>  
(<sup>1</sup>JST-ERATO Okanoya Emotional information project, <sup>2</sup>RIKEN BSI, <sup>3</sup>Graduate School of Science and Engineering, Saitama University, <sup>4</sup>Graduate School of Arts and Sciences, the University of Tokyo)
- IV-4      Hypothalamic Gonadotropin-Inhibitory Hormone Precursor mRNA is Increased during Depressed Food Intake in Heat-Exposed Chicks  
○Vishwajit S. Chowdhury<sup>a</sup>, Shozo Tomonaga<sup>a</sup>, Shotaro Nishimura<sup>a</sup>, Shoji Tabata<sup>a</sup>, Kazuyoshi Tsutsui<sup>b</sup>, Mitsuhiro Furuse<sup>a</sup>  
(<sup>a</sup>Department of Bioresource Sciences, Faculty of Agriculture, Kyushu University, Fukuoka 812-8581, Japan, <sup>b</sup>Department of Biology, Waseda University, and Center for Medical Life Science of Waseda University, Tokyo 162-8480, Japan)

### **SESSION V (9:45-10:30)**

- V-1      Degradation of egg envelope glycoprotein ZP1 with sperm-proteasome in Japanese quail  
Yasunori Hattori<sup>1</sup>, Toshinobu Tokumoto<sup>2</sup>, Shusei Mizushima<sup>1</sup>, Katsuhiko Yoshimatsu<sup>1</sup>, ○Tomohiro Sasanami<sup>1</sup>  
(<sup>1</sup>Faculty of Agriculture, Shizuoka University, <sup>2</sup>Faculty of Science, Shizuoka University)
- V-2      Molecular Cloning of Prolactin Regulatory Element Binding Protein (PREB) in Chicken and Turkey  
○Hiyama G<sup>1</sup>, Kansaku N<sup>2</sup> and Zadworny D<sup>1</sup>  
(<sup>1</sup>Department of Animal Science, McGill University, QC, Canada, <sup>2</sup>Laboratory of Animal Genetics and Breeding, Azabu University, Sagamihara, Japan)
- V-3      Effect of growth hormone on chicken testis  
Riki Kuwahara, Itaru Murayama, Hiroko Ono, Takashi Yoshimura, Manabu Sahashi, Ai Hishinuma, ○Akira Tsukada  
Laboratory of Animal Physiology, Graduate School of Bioagricultural Sciences, Nagoya University

### **Closing of the meeting (10:30-11:00)**