# Scientific Programs

# Plenary Lectures

May 16 (Thu) 15:30-16:30 Room A
Chairperson: Hiroshi Sasaki (Osaka University)

**PL-1** 15:30-16:30 Imaging How Cells Choose their Fate, Shape and Position in the Living Mammalian Embryo
○Nicolas Plachta (IMCB ASTAR)

Preimplantation development has typically been studied using fixed specimens. To reveal the real-time dynamics that form the embryo, we established advanced imaging technologies, to visualize cell behaviors and molecular events in real time within the living mouse embryo. With this approach, we discovered how transcription factors bind to DNA in single cells to regulate the first cell differentiation during development. We also found new forms of actin and microtubule organization that control how the cells of the embryo become polarized during compaction, how they interact with each other to establish the first forms of tissue architecture, and how they specify the pluripotent and trophectoderm lineages. Together, our findings reveal new mechanisms controlling how the mammalian embryo forms and grows.

May 16 (Thu) 16:30-17:30 Room A
Chairperson: Kenji Matsuno (Osaka University)

**PL-2** 16:30-17:30 Paterning Transcription in Early Drosophila Embryos.
○Eric Wieschaus (Molecular Biology Department, HHMI, Princeton University)

In Drosophila embryos, gradients produced by three maternal patterning systems (Bicoid, Nanos and Torsolike) result in region-specific activation of gap and pair-rule gene expression. The maternal gradients are highly reproducible from embryo to embryo, providing sufficient positional information to distinguish neighboring cells. To determine whether the gap and pair-rule gene enhancers make maximum use of this information, we have developed a Bayesian-based system of "look-up" tables that allows measuring the information content and reproducibility of gap gene concentration profiles. In the middle region of the embryos, precision is established by ten minutes into cycle 14 and persists until 40 minutes when pair-rule gene expression is well established. We see little evidence supporting systems-level stepwise models where pattern is gradually established through interactions between the gap genes themselves. Using Bcd ChIP seq from embryos expressing different concentrations of Bcd, we compare the in vivo binding affinities of enhancers that activate expression at different points along the AP axis of the

embryo. We find that enhancers expressed in the posterior of the embryo have high affinities and remain bound even at lowest concentration. We propose chromatin models for how the low levels of Bicoid protein in these regions might activate enhancers in a concentration dependent manner.

Mariela D. Petkova, Gašper Tkačik, William Bialek, Eric F. Wieschaus, Thomas Gregor Optimal decoding of information from a genetic network.arXiv:1612.08084v1 [q-bio.MN]

Hannon CE, Blythe SA, Wieschaus EF. (2017) Concentration dependent chromatin states induced by the bicoid morphogen gradient. Elife. 6. pii: e28275.

# Symposia

## Symposium 1 : Towards understanding multicellular systems in development? Measurement and Modeling

DATE: May 17 (Fri) 9:00-11:30 Room A
Chairpersons: Tsuyoshi Hirashima (Kyoto University)
Tatsuo Shibata (RIKEN BDR)

Fundamental processes in developmental biology including tissue morphogenesis and pattern formation are organized by an integration of dynamics over multiple scales spanning molecular to supra-cellular levels. Although constituent cellular activities and critical genes underlying the processes have been identified, understanding of regulatory systems in which such factors are dynamically interacted to function is far from complete. In this symposium we invite seven speakers who tackle this issue using mainly quantitative imaging and mathematical modeling, and discuss key concepts with audiences for stimulating the field of developmental biology.

Co-organized by: SPIRITS (Kyoto University)

09:00-09:01 Introduction

**S1-01** 09:01-09:28 Sculpting the vertebrate body axis
○Otger Campas (UCSB)

**S1-02** 09:28-09:47 Oscillations of Notch signaling in cell-cell interactions regulate dynamic gene expression networks and tissue morphogenesis
形態形成における Notch シグナル伝達ダイナミクスの意義
○Hiromi Shimojo[1], Hiroshi Kori[2], Ryoichiro Kageyama[1] (IFLMS, Kyoto Univ.[1], Univ. of Tokyo[2])

**S1-03** 09:47-10:06 Cell size-dependent polarity dynamics
細胞サイズ依存的な細胞極性動態
○Akihiko Nakajima[1,2] (Grad Sch Arts Sci, Univ. Tokyo[1], Res Cent Comp Sys Biol[2])

**S1-04** 10:06-10:25 Tiling mechanism of the compound eye
複眼のタイリングメカニズム
Takashi Hayashi[1], Masakazu Akiyama[2], Shin-Ichiro Ei[3], Takamichi

Sushida[2], ○Makoto Sato[1] (InFiniti, Kanazawa Univ[1], RIES, Hokkaido Univ[2], Dept. Mathematics, Hokkaido Univ[3])

**S1-05** 10:25-10:44 Modeling and experimental analysis of epithelial tube elongation in Drosophila revealed distinct biomechanical properties of tubes

○Fu-Lai Wen[1,2], Housei Wada[3], Katsuhiko Sato[4], Hisao Honda[3,5], Tatsuo Shibata[2], Shigeo Hayashi[3] (IoP, Academia Sinica, Taiwan[1], Laboratory for Physical Biology, RIKEN BDR, Japan[2], Laboratory for Morphogenetic Signaling, RIKEN BDR, Japan[3], Research Institute for Electronic Science, Hokkaido University, Japan[4], Department of Physiology and Cell Biology, Kobe University Garduate School of Medicine, Japan[5])

**S1-06** 10:44-11:03 Mechano-chemical feedback regulation via ERK signal for branching morphogenesis of lung epithelial sheet

肺上皮シートの形態形成における ERK シグナルを介したメカノケミカルフィードバック制御

○Tsuyoshi Hirashima[1], Takuya Yoshida[2], Michiyuki Matsuda[1,2] (Grad Sch Med, Kyoto Univ[1], Grad Sch Biostudies, Kyoto Univ[2])

**S1-07** 11:03-11:30 Self-organized principles of branching morphogenesis

○Edouard Hannezo (IST Austria)

## Symposium 2 : Topics in Plant and Animal Development

DATE: May 17 (Fri) 9:00-11:30 Room B
Chairpersons: Hirokazu Tsukaya (University of Tokyo)
Hiroki Nishida (Osaka University)

This symposium is aimed at facilitating communication and discussion between plant and animal developmental biologists to share cutting-edge researches in both fields. We invite established and young researchers who are actively studying to understand developmental phenomena from fertilization to organ formation in the two kingdoms. We hope that the symposium provides a nice opportunity to enhance relationship between plant and animal developmental biologists and to create totally novel field of developmental biology.
Key words: polarity and morphology.

Co-organized by: Developmental Dynamics (Wiley), Supported by JSPS

**S2-01** 09:00-09:30 The EGF Receptor Pathway Regulates Axis Establishment in Drosophila and Serves as Model for Disease in Humans
○Trudi Schupbach[1], Yogesh Goyal[2], Granton Jindal[2], Rebecca Burdine[1], Stas Shvartsman[2] (Dept MolBio, Princeton University[1], Dept. CBE, Princeton University[2])

**S2-02** 09:30-10:00 Convergence of cell polarity systems across multicellular kingdoms
○Dolf Weijers (Wageningen University, the Netherlands)

**S2-03** 10:00-10:30 Analysis of the SP8-dependent regulatory network in the limb ectoderm
○Marian Ros[1], Roco Prez-Gmez[1], Marc Fernndez-Guerrero[1], Juan Lpez-Gimnez[1], lvaro Rada-Iglesias[1,2] (IBBTEC[1], CMMC[2])

**S2-04** 10:30-11:00 Topological Data Analysis: What is it? What is it good for? How can it be used to study developmental biology?
○Daniel Chitwood[1], Elizabeth Munch[2], Erik Amézquita[3], Mitchell Eithun[3], Tim Ophelders[3], Michelle Quigley[4] (Dept. Hort. and Dept. Comp. Math., Sci., & Eng., Michigan State Univ.[1], Dept. Comp. Math., Sci., & Eng. and Dept. Math., Michigan State Univ.[2], Dept. Comp. Math., Sci., & Eng., Michigan State Univ.[3], Dept. Hort., Michigan State Univ.[4])

**S2-05** 11:00-11:30 Regulation of proximal-distal specification of the lung epi-

thelium by Fibroblast Growth Factor 9 signaling pathways

Yongjun Yin, ○David Ornitz (Dev. Biol., Washington Univ. in St. Louis)

## Symposium 3 : APDBN Symposium

DATE: May 17 (Fri) 9:00-11:30 Room C
Chairpersons: Kenji Matsuno (Osaka University)
Timothy Saunders (MBI, Singapore)

The Asia-Pacific Developmental Biology Network (APDBN) is an organization for the promotion of scientific and educational activities relevant to developmental biology and related fields in the Asia-Pacific region. In the 52nd Annual Meeting of the Japanese Society of Developmental Biology, APDBN is organizing the "APDBN Symposium." We have invited six prominent speakers from across the Asia-Pacific region, who are conducting leading research in developmental biology using various model organisms and different experimental and analytical techniques. In this symposium, you will find out how active developmental biology is in the Asia-Pacific region.

Co-organized by: Development, Growth & Differentiation, JSDB Okada Tokindo Fund

**S3-01** 09:00-09:25 Cell fate determination and tissue morphogenesis in the zebrafish myotome
○Timothy Saunders[1,2], Jianmin Yin[1], Sham Tlili[1], Jean-Francois Rupprecht[1], Jacques Prost[3], Philip Ingham[2,4] (MBI, Singapore[1], Institute of Molecular and Cell Biology, A*Star, Singapore[2], Institute Curie, Paris, France[3], Nanyang Technological University, Singapore[4])

**S3-02** 09:25-09:50 Hypoxia and embryonic patterning during sea urchin development
Wei-Lun Chang, ○Yi-Hsien Su (ICOB, Academia Sinica)

**S3-03** 09:50-10:15 Translational control by RNA G-quadruplex/zinc-finger protein in plant development
○Ildoo Hwang (Department of Life Sciences, Pohang University of Science and Technology)

**S3-04** 10:15-10:40 Timely and robust cell fate commitment in neural stem cell lineages
○Yan Song[1,2] (SLS, Peking Univ.[1], CLS[2])

**S3-05** 10:40-11:05 Delineating the Immune-Epithelial Crosstalk in Embryonic Skin
○Srikala Raghavan, Ambika Kurbet, Oindrila Bhattacharjee, Uttkarsh

Ayyangar (inStem)

**S3-06** 11:05-11:30 A novel 3D morphologic change, cell twisting, may drive left-right directional tissue rotation

消化管の左右非対称な捻転を引き起こす上皮細胞の 3 次元形態変化

○Mikiko Inaki[1], Taishi Takigawa[1], Akino Okubo[1], Takamichi Sushida[2], Masakazu Akiyama[2], Yasuhiro Inoue[3], Kenji Matsuno[1] (Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ.,[1], RIES, Hokkaido Univ.[2], IFLMS, Kyoto Univ.[3])

## Symposium 4：Enhancer function explaining morphological diversity

DATE: May 17 (Fri) 13:30-16:00 Room A
Chairpersons: Takayuki Suzuki (Nagoya University)
Shigeyuki Koshikawa (Hokkaido University)

Developmental biology researchers have been focused on conserved developmental mechanisms over species, resulted in a big achievement in this research field during past three decades. On the other, recent next generation sequencing is becoming to uncover species-specific developmental mechanism even in non-model animals. Insights from this new technology highlight that difference or evolution of enhancer sequence rather than evolution of coding sequence brought about species-specific morphology. We would like to discuss how morphological diversity or specie-specific unique morphology were brought about by elucidation of acquired enhancer function based on the method of developmental biology.

**S4-01** 13:30-13:55 Enhancer function and evolution of polka-dots in *Drosophila guttifera*
ミズタマショウジョウバエにおけるエンハンサー機能と水玉模様の進化
○Shigeyuki Koshikawa[1], Yuichi Fukutomi[2] (Environ. Earth Sci, Hokkaido Univ.[1], Environ. Sci, Hokkaido Univ.[2])

**S4-02** 13:55-14:20 Live imaging of transcriptional enhancers
エンハンサーによる転写制御のライブイメージング解析
○Takashi Fukaya (IQB, Univ Tokyo)

**S4-03** 14:20-14:40 Arid3a regulates nephric tubule regeneration through the evolutionarily conserved regeneration signal-response enhancers
Nanoka Suzuki[1,2], Kodai Hirano[1], Hajime Ogino[2], ○Haruki Ochi[1] (Yamagata Univ., Fac. of Med.[1], Yamagata University, Faculty of Medicine[2], Amphibian Research Center, Hiroshima University[3])

**S4-04** 14:40-15:05 Regulatory mechanism and evolution of mammalian Dlx gene clusters
哺乳類 Dlx 遺伝子クラスター発現調節機構と進化
○Kenta Sumiyama (RIKEN BDR)

**S4-05** 15:05-15:30 Similarities and differences in the regulation of *Hoxd* genes during tetrapod limb development

○Nayuta Yakushiji-Kaminatsui[1], Lucille Lopez-Delisle[2], Christopher Chase Bolt[2], Guillaume Andrey[3], Leonardo Beccari[3], Denis Duboule[2,3] (Tokyo Univ. of Sci.[1], EPFL[2], UNIGE[3])

**S4-06** 15:30-15:55 Identification of Gdf11 enhancer reveals difference of trans-acting factors that determine the unique hindlimb position in tetrapods.

後肢の位置を決定する Gdf11 のエンハンサーの同定とトランス因子の重要性

Seiji Saito[2], Utsugi Kanazawa[2], Nobuyuki Hibino[2], Shinya Oki[4], Tatsuya Takemoto[3], Yoichi Matsuda[1], Atsushi Kuroiwa[2], ○Takayuki Suzuki[1] (Grad Sch. of Biolagr. Sci., Nagoya Univ.[1], Div. Biol. Sci, Grad. Sch. of Sci, Nagoya Univ.[2], IAMS, Tokushima Univ.[3], Dep of BasMed, Fac of MedSci, Kyushu univ[4])

## Symposium 5：Cell and tissue mechanics of organogenesis

DATE: May 17 (Fri) 13:30-16:00 Room B
Chairpersons: Naoto Ueno (NIBB)
Isao Matsuo (Osaka Women's and Children's Hospital)

To understand organogenesis, although spatio-temporal regulation of gene expression is considered to be essential, developmental processes of shape change, movement and rearrangement of cells and tissues are also very important. In this symposium, we focus on mechanics at the level from the cell to entire embryonic body for understanding principles underlying organogenesis. Speakers will introduce unique experimental and genetic studies considering mechanical force and also discuss future development and challenges of this field.

This symposium is partly supported by Grant-in-Aid for Scientific Research on Innovative Areas "3D Morphologic" and Platforms for Advanced Technologies and Research Resources "Advanced Bioimaging Support", MEXT.

**S5-01** 13:30-13:55 Mechanisms of force generation by cytoskeletal motors during nuclear migration of developing neurons
発生中のニューロン核移動を制御する細胞骨格モーターの力発生機構
You Wu[2], Chuying Zhou[2], Hiroki Umeshima[1], Gianluca Grenci[3], Naotaka Nakazawa[1], ○Mineko Kengaku[1,2] (KUIAS-iCeMS, Kyoto Univ.[1], Grad. Sch. Biostudies, Kyoto Univ.[2], MBI, Nat. Univ. Singapore[3])

**S5-02** 13:55-14:15 Endothelial cell response to haemodynamic forces in developing blood vessels
○Li-Kun Phng (RIKEN BDR)

**S5-03** 14:15-14:45 Biophysical approaches to morphogenesis in the organ stage mouse embryo
Hirotaka Tao[1], Min Zhu[1,2], Mohammad Samani[1], Evan Thomas[1], Clarissa Pasiliao[1,3], Kelli Fenelon[1,3], Huaxiong Huang[4], Yu Sun[2], ○Sevan Hopyan[1,3,5] (Program in Dev. Bio. and Stem Cell Bio., RI, Hosp. for Sick Children and U. of T.[1], Department of Mechanical and Industrial Engineering, University of Toronto[2], Department of Molecular Genetics, University of Toronto[3], Department of Mathematics and Statistics, York University and University of Toronto[4], Division of Orthopaedic Surgery, Hospital for Sick Children and University of Toronto[5])

**S5-04** 14:45-15:05 Strain-triggered mechanical feedback in self-organizing optic-cup morphogenesis
眼杯組織形成における機械的ひずみ惹起性力学フィードバック機構
○Satoru Okuda[1,2] (PRESTO, JST[1], IFLMS, Kyoto Univ.[2])

**S5-05** 15:05-15:30 YAP is essential for tissue tension to ensure vertebrate 3D body/organ shape
○Makoto Furutani-Seiki (Yamaguchi University)

**S5-06** 15:30-15:55 Intrauterine mechanics for mouse egg-cylinder morphogenesis
マウス胚卵円筒形成に必要な子宮内の力学的環境
Yoko Ueda, Chiharu Kimura-Yoshida, ○Isao Matsuo (Osaka Women's and Children's Hospital)

## Symposium 6：Theory of the brain diversity based on evolution of developmental mechanism

DATE: May 17 (Fri) 13:30-16:00 Room C
Chairpersons: Yu Katsuyama (Shiga University of Medical Science)
Yasunori Murakami (Ehime University)
Tadashi Nomura (Kyoto Prefectural University of Medicine)

Over the last two decades, we have unveiled common developmental mechanisms of the central nervous systems in animals. Recent omics data analyses also enabled us to identify precise phylogenetic relationships and generalities of cellular and molecular regulations. On the contrary, we have witnessed the expansion of our knowledge on brain diversities: each species has unique brain in morphological and functional aspects, which cannot be addressed by using common model animals. How can we bridge the gap between conservations and diversifications of genes, development, and evolution of vertebrate brains? In this symposium, selected speakers will introduce the studies of brain evolution from the dawn of vertebrates to humans. Multiple experimental approaches with unique animal models provide insights into the developmental mechanisms underlying brain diversities. Mutual discussion between the speakers and audience is highly encouraged to find a future direction of this research field.

**S6-01** 13:30-13:45 Before the dawn of vertebrate brain
脊椎動物脳進化の黎明期を発生学研究から考察する
○Yu Katsuyama (Shiga Univ. Med. Sci.)

**S6-02** 13:45-14:10 The evolutionary origin of the vertebrate brain: special reference to the visual system
脊椎動物型の脳の進化的起源：視覚系を中心に
○Daichi Suzuki (ExCELLS, NINS)

**S6-03** 14:10-14:35 The role of signaling molecules in the evolution of the vertebrate brain
脊椎動物の脳の進化におけるシグナル分子の役割
○Yasunori Murakami (GSSE, Ehime Univ.)

14:35-14:45 Break Time

**S6-04** 14:45-15:10 Changes in Wnt-dependent neuronal migration patterns contributed to the evolution of the mammalian neocortex
Wnt シグナル依存性の神経細胞移動の変化が哺乳類大

脳皮質の進化に寄与した
○Tadashi Nomura (Dev. Neurobiol. Kyoto Pref. Univ. Med.)

**S6-05** 15:10-15:35 Molecular mechanism controlling generation of outer radial glia during cerebral development
大脳発生における outer radial glia 誕生の制御機構
○Ayano Kawaguchi[1], Takumi Kawaue[1], Atsunori Shitamukai[2], Yuji Tsunekawa[2], Arata Nagasaka[1,2], Kanako Saito[1], Tomoyasu Shinoda[1], Fumio Matsuzaki[2], Takaki Miyata[1] (Dept of Anatomy and Cell Biology, Nagoya Univ Grad Sch Med[1], Lab for Cell Asymmetry, RIKEN BDR[2])

**S6-06** 15:35-16:00 Human-Specific NOTCH2NL Genes Expand Cortical Neurogenesis through Delta/Notch Regulation
ヒト固有遺伝子 NOTCH2NL は Notch シグナルを調節することにより大脳皮質の神経細胞数を拡大する
○Ikuo Suzuki[1,2,3], David Gacquer[5], Roxane Van Heurck[2,3], Devesh Kumar[2,3], Marta Wojno[2,3], Angeline Bilheu[3], Adele Herpoel[3], Nelle Lambert[3], Julian Cheron[3], Franck Polleux[6], Vincent Detours[5], Pierre Vanderhaeghen[2,3,4,7] (Dept. Biological Sciences, Grad. Sch. Science, Univ. Tokyo[1], CBD, VIB-KUL[2], IRIBHM & UNI, ULB[3], Dept. Neurosci, LBI[4], IRIBHM, ULB[5], Dept. Neurosci, Columbia Univ.[6], WELBIO[7])

# Oral Presentations

## Oral presentation 1: Morphogenesis (1)

DATE: May 15 (Wed) 9:00 ～ 11:45 Room A
Chairpersons: Daisuke Saito (Kyushu Univ.)
Yoshiko Takahashi (Kyoto Univ.)

**OP1-01 (P-081)** 09:00-09:15

Three-dimensional tissue stiffness mapping reveals durotaxis during mouse limb bud initiation

三次元組織剛性率マッピング法によりマウス肢芽初期形成における硬領域指向性細胞移動を明らかにする

○Hirotaka Tao[1], Zhu Min[1,2], Mohammad Samani[1], Mengxi Luo[2], Xian Wang[2], Sevan Hopyan[1,3,4], Yu Sun[2,5,6] (DSCB, Sick Kids[1], MIE, U of T[2], MoGen, U of T[3], Division of Orthopaedic Surgery, Sick Kids and U of T[4], IBBME, U of T[5], ECE, U of T[6])

**OP1-02 (P-102)** 09:15-09:30

Vascular remodeling: dynamics of avascular pillars regulated by local differences in blood flow

生体内血管リモデリング：局所的な血流の差異による血管網内の無血管領域 “pillar” の変形制御

○Yuta Takase[1,2], Kenichi Nakazato[3], Atsushi Mochizuki[3,4], Yoshiko Takahashi[1] (Dept. of Zoology, Grad. Sch. of Sci., Kyoto Univ.[1], MACS, Grad. Sch. of Sci., Kyoto Univ.[2], Theor. Biol. Lab., RIKEN[3], IFLMS, Kyoto Univ.[4])

**OP1-03 (P-104)** 09:30-09:45

Cell Budding During Endothelial to Hematopoietic Transition is Regulated by Aquaporin Water Channels

水チャネル Aquaporin は内皮―造血転換時の細胞出芽を制御する

Mugiho Shigematsu, Chie Tamura, ○Yuki Sato (Grad. Sch. Med. Sci., Kyushu Univ.)

**OP1-04 (P-072)** 09:45-10:00

Epithelial barrier homeostasis by cell competition

上皮バリアのホメオスタシスにおける細胞競合の役割

○Tetsuhisa Otani[1,2], Mikio Furuse[1,2] (Division of Cell Structure, NIPS[1], Department of Physiological Sciences, SOKENDAI[2])

**OP1-05 (P-085)** 10:00-10:15

Trynity controls epidermal barrier function and respiratory tube maturation in *Drosophila* by modulating apical

extracellular matrix nano-patterning
ショウジョウバエ Trynity 分子は細胞外基質の微細構造形成を介して表皮バリア機能と気管成熟の制御を行う
○Yuki Itakura[1], Sachi Inagaki[2], Housei Wada[1], Shigeo Hayashi[1,3] (RIKEN BDR[1], Biosignal Research Center, Kobe University[2], Department of Biology, Kobe University Graduate School of Science[3])

**OP1-06 (P-082)** 10:15-10:30 Patterns of proliferation in the developing tendon differ between embryonic and postnatal stages
○Saundra Schlesinger[1], Seongkyung Seo[2], Alice Huang[3], Brian Pryce[2], Ronen Schweitzer[1,2] (OHSU[1], Shriner's Hospital[2], Mount Sinai[3])

**OP1-07 (P-003)** 10:30-10:45 Nanopore formation in the cuticle of the insect olfactory sensillum
匂い分子取り込みにはたらく昆虫嗅覚器官ナノポア構造の構築機構
○Shigeo Hayashi[1], Toshiya Ando[1,2], Sayaka Sekine[1], Sachi Inagaki[2], Kazuyo Misaki[1], Laurent Badel[3], Hiroyuki Moriya[4], Mustafa Sami[1], Takahiro Chihara[5], Hokuto Kazama[3], Shigenobu Yonemura[1] (RIKEN BDR[1], NIBB[2], RIKEN CBS[3], U. Tokyo[4], U. Hiroshima[5])

**OP1-08 (P-083)** 10:45-11:00 Tissue-scale mechanical coupling reduces morphogenetic noise to ensure precision during epithelial folding
○Anthony Eritano[1], Claire Bromley[1], Lucas Schütz[2], Fu-Lai Wen[3], Tatsuo Shibata[3], Mustafa Sami[1], Michiko Takeda[1], Steffen Lemke[2], Yu-Chiun Wang[1] (Riken BDR[1], Centre for Organismal Studies Heidelberg, University of Heidelberg, Heidelberg, Germany[2], Laboratory for Physical Biology, RIKEN Center for Biosystems Dynamics Research, Kobe, Japan[3])

**OP1-09** 11:00-11:15 Coordinated growth of midline tissues in the zebrafish axis elongation
ゼブラフィッシュ体軸伸長における正中軸組織の協調した伸長
○Toru Kawanishi[1,2], Hiroyuki Takeda[1], Sean Megason[2] (UT[1], HMS[2])

**OP1-10** 11:15-11:30 Mechanism of chirality formation in cardiac looping

初期胚心臓のキラリティー形成の機構
○Hisao Honda[1], Takaya Abe[2], Toshihiko Fujimori[2,3] (Kobe Univ. Medicine[1], RIKEN CBDR[2], NIBB[3])

**OP1-11 (P-095)** 11:30-11:45 The G-protein coupled receptor GPR17 is an Essential Component of the Negative Feedback Loop of the Sonic Hedgehog Pathway in the Neural Tube Development
GPR17 による Sonic Hedgehog シグナルへの負のフィードバック制御機構が与える神経管発生への影響
○Atsuki Yatsuzuka[1], Akiko Hori-Nishi[1], Minori Kadoya[1], Toru Kondo[2], Noriaki Sasai[1] (NAIST[1], Insititute for Genetic Medicine, Hokkaido Univercity[2])

## Oral presentation 2: Reproduction & Germ Cells & Neural Development (1)

DATE: May 15 (Wed) 9:00 ～ 11:45 Room B
Chairpersons: Takashi Shinohara (Kyoto Univ.)
Toshie Kai (Osaka Univ.)

**OP2-01 (P-014)** 09:00-09:15 Examination the potential of using first polar body mitochondrial DNA content as an indicator of oocyte quality
○Wing Tung Lee, Tin Lap Lee (SBS, CUHK)

**OP2-02** 09:15-09:30 Role of Dhh signaling pathway in the reconstruction of seminiferous tubule-like structures in 3-D re-aggregate culture of dissociated testicular cells
○Ming Min[1], Tingting Wang[2], Jidong Zhang[3] (SBMS, Zunyi Med uni[1], SBMS, Zunyi Med uni[2], SBMS, Zunyi Med uni[3])

**OP2-03 (P-021)** 09:30-09:45 DEAD-box RNA helicase Belle post-transcriptionally promotes gene expression in an ATPase activity-dependent manner in *Drosophila* oocytes
○Susan Liao, Ryuya Fukunaga (Dept. Biol. Chem., JHUSOM)

**OP2-04 (P-020)** 09:45-10:00 *Drosophila* Tpp ensures the germ plasm assembly by facilitating the posterior localization of Aubergine in the oocyte
○Hirono Kina[1,2], Hina Nakashima[1,2], Tsubasa Tanaka[1,2,3], Kazuko Hanyu-Nakamura[1], Akira Nakamura[1,2,3] (Department of Germline Development, Institute of Molecular Embryology and Genetics[1],

School of Pharmacy[2], Graduate School of Pharmaceutical Sciences, Kumamoto University[3])

**OP2-05 (P-018)** 10:00-10:15 H3K27me3 is required to prevent sister somatic gene expression in the ascidian germline

○Tao Zheng, Ayaki Nakamoto, Gaku Kumano (Asamushi Research Center for Marine Biology)

**OP2-06 (P-023)** 10:15-10:30 Exploring the murine germ cell masculinization mechanism using scRNA-Seq data

scRNA-Seq を利用したマウス生殖細胞オス化機構の研究

○Ryuki Shimada, Yumiko Saga (NIG)

**OP2-07** 10:30-10:45 Germline stem cell proliferation is regulated by octopaminergic neurons directly projecting to the ovary in female *Drosophila*

ショウジョウバエのメス生殖幹細胞の増殖は卵巣に直接投射するオクトパミン作動性神経によって制御される

Yuto Yoshinari[2], Tomotsune Ameku[2], Shu Kondo[3], Yuko Shimada-Niwa[4], Hiromu Tanimoto[5], Takayuki Kuraishi[6], ○Ryusuke Niwa[1,7] (Faculty Life Environ. Sci., Univ. Tsukuba[1], Grad. Sch. Life Environ. Sci., Univ. Tsukuba[2], GSRC, NIG[3], TARA Center, Univ. Tsukuba[4], Grad. Sch. Life Sci., Tohoku Univ.[5], Faculty Pharm., Kanazawa Univ.[6], AMED-CREST, AMED[7])

**OP2-08** 10:45-11:00 Unique differentiation processes support the sharp seasonal response of Japanese quail spermatogenesis

ニホンウズラ精子形成のキレのある季節応答を実現する特徴的な分化プロセス

Yusuke Atsumi[2], Kodai Hirano[1,3], Itaru Murayama[2], Kana Yoshido[1,6], Miyuki Togari[2], Keisuke Ikegami[2], Yusuke Nakane[2], Eriko Yorinaga[2], Yoshiaki Nakamura[7], Yoichi Matsuda[2], Takashi Yoshimura[1,2,4,5], ○Shosei Yoshida[1,3] (Div. Germ Cell Biol., Natl. Inst. Basic Biol.[1], Grad. Sch. Agric. Sci. Nagoya Univ.[2], Sch. Life Sci. Sokendai[3], WPI-ITbM, Nagoya Univ.[4], Div. Seasonal Biol, Natl. Inst, Basic Biol.[5], Grad. Sch. Sci. Nagoya Univ.[6], Grad. Sch. Biosphere Sci., Hiroshima Univ.[7])

Chairpersons: Makoto Sato (Kanazawa Univ.)
Carina Hanashima (Waseda Univ.)

**OP2-09 (P-135)** 11:00-11:15 Possible Sox2 autoregulation involving POU partner factors in the establishment of embryonic neural primordia
胚の神経系原基を成立させる過程での、POU 因子をパートナーとした Sox2 の自己制御
○Hideaki Iida[1], Masanori Uchikawa[2], Hisato Kondoh[1] (DBGSE, Kyoto Sangyo Univ.[1], GSFB, Osaka Univ.[2])

**OP2-10 (P-144)** 11:15-11:30 Induction of ganglioside synthesis in Drosophila brain
ショウジョウバエの脳神経で発現させたガングリオシドの機能解析
○Leo Tsuda, Yasutoyo Yamasaki, Young-Mi Lim (NCGG)

**OP2-11** 11:30-11:45 Investigating the role of the class IV POU/brn-3 gene in cnidarian neural development
刺胞動物イソギンチャクの神経発生における POU-IV/Brn-3 遺伝子の機能解析の試み
○Nagayasu Nakanishi (Univ. of Arkansas)

## Oral presentation 3: Evolution (1)

DATE: May 15 (Wed) 9:00 ～ 11:45 Room C
Chairpersons: Yoshiaki Morino (Univ. of Tsukuba)
Yuuri Yasuoka (RIKEN IMS)
Koji Tamura (Tohoku Univ.)

**OP3-01** 09:00-09:15 In light of Nitric Oxide during chordate ontogeny
Filomena Caccavale[1], Giovanni Annona[1], Juan Pascual-Anaya[2], Shigeru Kuratani[2], ○Salvatore D'Aniello[1] (SZN[1], RIKEN[2])

**OP3-02** 09:15-09:30 Evolution of nitric oxide regulation of gut function in deuterostomes
一酸化窒素による腸管制御の進化
Junko Yaguchi, ○Shunsuke Yaguchi (SMRC, Univ. Tsukuba)

**OP3-03** 09:30-09:45 Germ layer specification in the cephalochordate amphioxus and the evolution of the segmental mesoderm in chordates
頭索類ナメクジウオの胚葉特異化と脊索動物の分

節状中胚葉の進化
○Takayuki Onai (UFSMS)

**OP3-04** 09:45-10:00 Why was the *notail* gene lost in many vertebrate lineages?
何故 *notail* 遺伝子は繰り返し失われたのか？
○Yuuri Yasuoka[1,2], Noriyuki Satoh[2] (RIKEN IMS[1], OIST[2])

**OP3-05** 10:00-10:15 Hagfish genome provides insights into cyclostome and ancestral vertebrate evolution
○Juan Pascual-Anaya[1], Daqi Yu[2], Yandong Ren[3,4], Yongxin Li[4], Fumiaki Sugahara[5], Yong Zhang[2], Wen Wang[3,4], Shigeru Kuratani[6] (RIKEN CPR[1], Key Laboratory of Zoological Systematics and Evolution & State Key Laboratory of Integrated Management of Pest Insects and Rodents, Institute of Zoology, Chinese Academy of Sciences, Beijing 100101, China[2], State Key Laboratory of Genetic Resources and Evolution, Kunming Institute of Zoology, Chinese Academy of Sciences, Kunming 650223, China[3], Center for Ecological and Environmental Sciences, Northwestern Polytechnical University, Xi'an 710072, China[4], Division of Biology, Hyogo College of Medicine, Nishinomiya, Japan.[5], Laboratory for Evolutionary Morphology, RIKEN Center for Biosystems Dynamics Research (BDR)[6])

**OP3-06** 10:15-10:30 Evolution and development of muscle tissues at the head/trunk interface
頭部-体幹部境界領域における筋組織の発生進化
○Rie Kusakabe[1], Shigeru Kuratani[1,2] (RIKEN BDR[1], RIKEN CPR[2])

**OP3-07** 10:30-10:45 Molecular mechanisms underlying morphological diversity of goldfish
キンギョ品種の形態形成を制御するメカニズムの解析
○Yoshihiro Omori[1,2], Tetsuo Kon[1], Kentaro Fukuta[3], Hironori Wada[4], Masakatsu Watanabe[5], Zelin Chen[6], Koichi Kawakami[7], Takahisa Furukawa[1], Hideki Noguchi[3], Shawn Burgess[6], Atsushi Toyoda[8] (IPR, Osaka Univ.[1], Nagahama Inst of Bio-science and Technology[2], Joint Support-Center for Data Sci Res[3], College of Liberal Arts and Sciences, Kitasato Univ[4], Graduate School of Frontier Biosciences, Osaka Univ[5], Translational and Functional Genomics Branch, NIH[6], Division of Molecular and Develop-

mental Biology, NIG[7], Center for Information Biology, NIG[8])

**OP3-08** 10:45-11:00 Ornamental goldfish as a model for experimental evolutionary developmental biology
実験進化発生学のモデルとしての金魚
Gembu Abe[2], Shu-Hua Lee[1], Ing-Jia Li[1], ○Kinya Ota[1] (Lab of Aquatic Zoology, Yilan MRS, ICOB, Academia Sinica[1], Lab. of Organ Morphogenesis, Dep. of Ecological Developmental Adaptability Life Sciences, Graduate School of Life Sciences, Tohoku Univ.[2])

**OP3-09** 11:00-11:15 The reconstruction of the evolutionary history of femoral morphogenesis in archosaur.
主竜類における大腿骨の形態形成の進化史の復元
○Shiro Egawa[1], Joao Botelho[1,2], Bhart-Anjan Bhullar[1] (Dept. G&G, Yale univ.[1], Fac. of Biol. Sci.[2])

**OP3-10** 11:15-11:30 Developmental system drift of blastomere fate specification mechanism in spiralian development
らせん卵割型発生における割球特異化機構の発生システム浮動
○Yoshiaki Morino, Hiroshi Wada (Univ. of Tsukuba)

**OP3-11** 11:30-11:45 Color pattern diversification through a 100 kb-scale pannier intron in ladybird beetles
100kb スケールの pannier イントロンを介したテントウムシの斑紋パターンの多様化
○Toshiya Ando[1,2], Teruyuki Niimi[1,2] (NIBB[1], SOKENDAI, Dpt. Basic Biol.[2])

## Oral presentation 4: Morphogenesis (2)

DATE: May 15 (Wed) 16:00 ～ 18:45 Room A
Chairpersons: Erina Kuranaga (Tohoku Univ.)
Yoshiko Takahashi (Kyoto Univ.)

**OP4-01** 16:00-16:15 Decoy receptor, Fgfrl1, spatially regulates lens fiber differentiation through fine-tuning of FGF signaling
囮受容体 Fgfrl1 は FGF 経路の微調整を介して水晶体線維細胞分化を空間的に制御する
○Yuki Takeuchi, Ichiro Masai (OIST)

**OP4-02** 16:15-16:30 A molecular mechanism of the core group-independent

PCP pathway
コアグループ非依存的 PCP 経路の分子機構
○Tomonori Ayukawa[1], Masakazu Akiyama[2], Yasukazu Hozumi[1], Masakazu Yamazaki[1] (Dept. Cell Biol. and Morphol., Akita Univ.[1], RIES, Hokkaido Univ.[2])

**OP4-03** 16:30-16:45 Local and mutual regulations between Wnt and planar cell polarity components propagate global coordination of the planar cell polarity.
Wnt とコア PCP 因子のローカルな相互作用により、広い範囲の平面細胞極性が揃えられる。
○Yusuke Mii[1], Ritsuko Takada[1], Makoto Matsuyama[2], Shinji Takada[1] (NIBB[1], SMRI[2])

**OP4-04 (P-087)** 16:45-17:00 Identification of Wnt5a downstream targets during early development in mouse
マウス初期発生における Wnt5a 下流因子の探索
○Rieko Ajima[1,2], Yumiko Saga[1,2] (NIG[1], SOKENDAI[2])

**OP4-05** 17:00-17:15 Canonical and non-canonical Wnt signaling are linked by zic1/zic4 in dorsal somite patterning
○Ann Kathrin Heilig[1,2], Astsuko Shimada[1], Ryohei Nakamura[1], Jochen Wittbrodt[2], Hiroyuki Takeda[1] (Dept. Biol. Scis., Grad. Sch. Sci., Univ. Tokyo[1], COS, Heidelberg Univ.[2])

**OP4-06 (P-080)** 17:15-17:30 Bioelectrical signal regulates organ size
膜電位を介した器官サイズスケーリング機構
○Toshihiro Aramaki, Shigeru Kondo (FBS, Osaka Univ.)

**OP4-07 (P-084)** 17:30-17:45 Gap junctions are required for neolamination in Drosophila
○Guangxia Miao, Denise Montell (UCSB)

**OP4-08** 17:45-18:00 Quantification of tissue deformation dynamics of Xenopus limb development and comparative analysis with chick embryo
アフリカツメガエル四肢発生過程における組織変形動態の定量解析とニワトリ胚との比較解析
○Yoshihiro Morishita[1], Takayuki Suzuki[2], Hitoshi Yokoyama[3], Yasuhiro Kamei[4], Koji Tamura[5], Aiko Kawasumi-Kita[1] (RIKEN BDR[1], Nagoya Univ.[2], Hirosaki Univ.[3], NIBB[4], Tohoku Univ.[5])

**OP4-09 (P-093)** 18:00-18:15 The mechanism about the growth of collagen crystal

involved with fin skeletal development.
魚類ヒレ骨の形態形成に必須なコラーゲン結晶の成長メカニズム
○Junpei Kuroda[1], Takeshi Itabashi[2], Atsuko H Iwane[2], Toshihiro Aramaki[1], Hibiki Nakagawa[1], Shigeru Kondo[1] (FBS, Osaka Univ[1], Biosystems Dynamics Center, Riken[2])

**OP4-10 (P-078)** 18:15-18:30 Systematic comparison of gene regulation in fin and limb development
鰭と四肢の発生における遺伝子制御のシステマティックな比較
○Koh Onimaru, Kaori Tatsumi, Chiharu Tanegashima, Mitsutaka Kadota, Osamu Nishimura, Shigehiro Kuraku (BDR)

**OP4-11 (P-076)** 18:30-18:45 Transcriptome analysis of the cardiac neural crest reveals a critical role for *MafB*
トランスクリプトーム解析により明らかとなった心臓神経堤細胞における *MafB* の重要な機能
○Saori Tani-Matsuhana[1,2], Kunio Inoue[1], Marianne Bronner[2] (Dept. Biol., Grad. Sch. Sci., Kobe Univ.[1], Caltech[2])

## Oral presentation 5: Neural Development (2)

DATE: May 15 (Wed) 16:00 ～ 18:45 Room B
Chairpersons: Makoto Sato (Kanazawa Univ.)
Carina Hanashima (Waseda Univ.)

**OP5-01 (P-129)** 16:00-16:15 Dscam regulates lineage dependent repulsion during columnar unit formation in the fly brain
○Chuyan Liu, Olena Trush, Makoto Sato (Kanazawa Univ)

**OP5-02** 16:15-16:30 Experience-driven development of motor circuits in Drosophila
ショウジョウバエにおける経験依存的な運動回路の発生
Xiangsunze Zeng[1], Tappei Kawasaki[1], Kengo Inada[3], Hokto Kazama[3], ○Akinao Nose[1,2] (Dept.of Complexity Science and Engineering, Grad. Sch. of Frontier Sciences, Univ. of Tokyo[1], Dept. of Physics, Grad. Sch. of Science, The Univ. of Tokyo[2], RIKEN Center for Brain Science[3])

**OP5-03** 16:30-16:45 Disruption of Tsukushi function leads to the neurodegen-

erative diseases by aberrant neurogenesis in the brain
Tsukushi の欠損は、脳内の神経発生を乱し、神経変性疾患を発症させる
○Kunimasa Ohta, Shah Ahmad, Mohammad Anam, Naofumi Ito (Dept. of Dev. Neurobiol., Kumamoto Univ. Grad. Sch. of Life Scis.)

**OP5-04 (P-143)** 16:45-17:00 Chemotactic implementation of topographic axonal wiring
走化性によるトポグラフィック神経回路の配線
○Naoki Honda (Kyoto University)

**OP5-05 (P-138)** 17:00-17:15 Preselection of long- and short-range projection neurons through reciprocal Foxg1 and COUP-TFI actions establish the sensory cortical circuit
○Peishan Hou, Carina Hanashima (Dept of Biol, Faculty of Education, Waseda Univ.)

**OP5-06 (P-141)** 17:15-17:30 Mechanisms Underlying Left-Right Asymmetry formation of the *Drosophila* brain
ショウジョウバエの脳における左右非対称性形成機構
○So Sakamura[1], Fuyu Hsu[2], Ann-shyn Chiang[2], Kenji Matsuno[1] (FBS[1], NTHU[2])

**OP5-07 (P-130)** 17:30-17:45 The role of the Strawberry Notch Homolog 1 in the neurite growth of the cortical neurons
ストロベリーノッチ１遺伝子は皮質ニューロンの神経突起伸長に働く
○Munkhsoyol Erkhembaatar[1], Keito Minemori[1], Iroha Yamamoto[1], Fuduki Inoguchi[1], Takashi Imaz[1], Shinsuke Ikeno[1], Carine Hanashima[2], Satoru Yamagishi[3], Hayato Naka-Kaneda[1], Kosuke Taki[1], Yu Katsuyama[1] (SUMS[1], ASE, Waseda Univ[2], Hamamatsu Univ Scho Med[3])

**OP5-08** 17:45-18:00 Molecular mechanisms for differentiation of the inferior olivary nucleus neurons in zebrafish
ゼブラフィッシュにおける下オリーブ核ニューロン分化の分子機構
○Tsubasa Itoh[1], Miki Takeuchi[1,2], Marina Sakagami[1], Takashi Shimizu[1,2], Masahiko Hibi[1,2] (Grad. School of Science, Nagoya Univ.[1], BBC, Nagoya Univ.[2])

**OP5-09 (P-140)** 18:00-18:15 Unraveling 3D structure of functional compartments in the developing cerebellum: Spatiotemporal analysis in zebrafish

小脳発達における小脳機能コンパートメントの 3 次元的理解 : ゼブラフィッシュを用いた時空間的解析

○Kanae Hiyoshi[1], Narumi Fukuda[1], Kyo Yamasu[1], Sachiko Tsuda[1,2] (Grad Sch of Sci and Eng, Saitama Univ.[1], Research and Development Bureau, Saitama Univ.[2])

**OP5-10 (P-142)** 18:15-18:30 Mutation in strip1 gene leads to impaired retinal neural circuit formation in zebrafish

ゼブラフィッシュにおける Strip1 遺伝子変異は網膜神経回路形成を阻害する

○Mai Ahmed, Yutaka Kojima, Ichiro Masai (OIST)

**OP5-11 (P-137)** 18:30-18:45 Tsukushi affects hippocampal neurogenesis in mouse brain

○Shah Adil Ishtiyaq Ahmad, Mchammad Badrul Anam, Naofumi Ito, Kunimasa Ohta (Dev Neur, Kumamoto Univ.)

## Oral presentation 6: Evolution (2) & Early Embryogenesis

DATE: May 15 (Wed) 16:00 ～ 18:45 Room C
Chairpersons: Gaku Kumano (Tohoku Univ.)
Shunsuke Yaguchi (Univ. of Tsukuba)

**OP6-01 (P-169)** 16:00-16:15 Acquiring a zip-code sequence for basal transport of Ccnd2 mRNA contributes to the cerebral basal progenitor proliferation in placental mammals.

Ccnd2 mRNA の basal endofoot 輸送配列の獲得が有胎盤類における大脳 basal progenitor の増殖に貢献した。

Takako Kikkawa[1], ○Yoshio Wakamatsu[1], Yukiko Inoue[2], Kunihiro Suzuki[3], Takayoshi Inoue[2], Noriko Osumi[1] (Dept. Dev. Neurosci., Tohoku Univ. Grad. Sch. Med.[1], Dept. Biochem. Cell. Biol., Nat. Inst. Neurosci., Nat. Cent. Neurol. Psy.[2], Nihon Univ., Scho. Dent. Matsudo[3])

**OP6-02 (P-029)** 16:15-16:30 Retinoic acid deficiency results in midfacial cleft and upper incisor defects with increased cell death of cranial

neural crest cells
○Yanran Wu[1], Hiroshi Kurosaka[1], Qi Wang[1], Lisa L Sandell[2], Paul Trainor[3], Takashi Yamashiro[1] (Orthodontics of Osaka University[1], UL[2], Stowers Institute[3])

**OP6-03 (P-036)** 16:30-16:45 Fam46a regulates pre-placodal ectoderm differentiation via BMP signaling
Fam46a は BMP シグナルを介して予定プラコード分化を制御する
○Tomoko Watanabe[1,2], Takayoshi Yamamoto[2], Kohei Tsukano[2], Sayuki Hirano[2], Ayumi Horikawa[2], Tatsuo Michiue[2] (AIST[1], Dept. of Life Sci., Grad. Sch. of Arts & Sci., Univ. of Tokyo[2])

**OP6-04 (P-028)** 16:45-17:00 Functional analysis of intraciliary Calcium signal in mouse Left-Right symmetry breaking
左右決定における繊毛内カルシウムシグナルの機能解析
○Katsutoshi Mizuno, Kei Shiozawa, Hiroshi Hamada (RIKEN, BDR)

**OP6-05 (P-046)** 17:00-17:15 The roles of DDX6 in early mouse embryogenesis and progenitor cells
○Jessica Kim[1], Yumiko Saga[1,2] (The University of Tokyo[1], NIG[2])

**OP6-06 (P-032)** 17:15-17:30 Axial stem cells generate intermediate mesoderm during mouse body axis formation.
マウス体軸形成において体軸幹細胞は中間中胚葉を産み出す。
○Shinichi Hayashi, Tatsuya Takemoto (Embryology, Tokushima University)

**OP6-07 (P-034)** 17:30-17:45 Importin13 is essential for the peri-implantation mouse embryo development
Importin13 は、マウス初期胚の原始外胚葉の発生に必須である
Yasuka Yamaguchi[1], Patrick Tam[2], ○Satomi Tanaka[1] (Kumamoto Health Sci. Univ.[1], CMRI, Australia[2])

**OP6-08** 17:45-18:00 Molecular architecture of lineage specification and tissue organization in post-implantation mouse embryo
○Naihe Jing (SIBCB, CAS)

**OP6-09 (P-025)** 18:00-18:15 The autism-related gene *cdc-like kinase 2* (*clk2*) pro-

motes early neural development via modulation of morphogen signals in *Xenopus* embryos

○Regina Putri Virgirinia[1], Nusrat Jahan[1], Maya Okada[1], Kimiko Takebayashi-Suzuki[1], Hitoshi Yoshida[1], Makoto Nakamura[1], Hajime Akao[1], Fatchiyah Fatchiyah[2], Naoto Ueno[3], Atsushi Suzuki[1] (Amphibian Research Center, Grad Sch of Sci, Hiroshima Univ[1], Dept of Biol, Fac of Math and Nat Sci, Brawijaya Univ[2], Div of Morphogenesis, NIBB[3])

**OP6-10 (P-030)** 18:15-18:30 Segmentation dynamics and diversity controlled by Hedgehog signaling

ヘッジホッグシグナルにより制御された体節形成のダイナミクスと多様性

○Yasuko Akiyama-Oda[1,2], Hiroki Oda[1] (JT Biohistory Res. Hall[1], Osaka Med. College[2])

**OP6-11 (P-047)** 18:30-18:45 Identification of a novel Gata gene involved in the first-axis formation of the spider embryo using RNA sequencing of regional cells

局所細胞の RNA-Seq による、クモ初期胚の第一軸形成に関わる新規 Gata 遺伝子の同定

○Sawa Iwasaki-Yokozawa[1], Yasuko Akiyama-Oda[1,2], Hiroki Oda[1] (JT Biohistory Res. Hall[1], Osaka Medical College[2])

## Oral presentation 7: Organogenesis & Metabolism

DATE: May 16 (Thu) 9:00 ～ 11:45 Room A
Chairpersons: Keiko Nonomura (NIBB)
Kimiko Fukuda (Tokyo Metropol. Univ.)

**OP7-01 (P-117)** 09:00-09:15 Ecdysone-inducible polished rice temporally regulates fate decision of tracheal tip cells in *Drosophila* embryonic tracheal morphogenesis.

エクジソン誘導性 *polished rice* 遺伝子は、ショウジョウバエ胚発生において気管先端細胞の分化を時期特異的に制御する。

○Yuki Taira[1], Housei Wada[2], Shigeo Hayashi[2], Yuji Kageyama[1,3] (Dept. Biol., Grad. Sch. Sci., Kobe Univ.[1], RIKEN, BDR[2], Biosig. Res. Ctr., Kobe Univ.[3])

**OP7-02 (P-113)** 09:15-09:30 Foxg is required for the palp formation in ascidian embryos

○Boqi Liu, Yutaka Satou (GSS, Kyoto Univ.)

**OP7-03 (P-115)** 09:30-09:45 Endodermal SOX2 expression determines the esophagus character of the anterior foregut in both epithelial and mesenchymal components

内胚葉で発現する SOX2 が消化管前部の上皮と間充織の双方を食道に発生させる

○Machiko Teramoto[1], Ryo Sugawara[1], Atsushi Kuroiwa[2], Yasuo Ishii[3], Hisato Kondoh[1] (Fac. of Life Sci., Kyoto Sangyo Univ.[1], Div. of Biol. Sci., Grad. Sch. of Sci., Nagoya Univ.[2], Dept. of Biol. Sch. of Med, TWM Univ.[3])

**OP7-04 (P-125)** 09:45-10:00 A novel chromatin remodeling factor, Arip4 controls the cardiac chamber development via regulation of Notch signaling

新規クロマチンリモデリング因子 Arip4 は Notch シグナルを介して心室形成を制御する

○Nodoka Yanagi[1], Hidesato Ogawa[1,2], Yuika Morita[1,3], Megumi Tsuchiya[2], Tetsuya Asano[1], Manabu Shirai[4], Robert Schwart[5], Ken-ichirou Morohashi[6], Tetsushi Furukawa[1], Kazuko Koshiba-Takeuchi[7], Jun Takeuchi[1] (Dept. BIP., MRI., TMDU[1], Nuclear Dynamics Group, Graduate School of Frontier Biosciences, Osaka University[2], Department of Cardiology, Keio University School of Medicine[3], Department of Bioscience and Genetics, National Cerebral and Cardiovascular Center Research Institute[4], Department of Biology and Biochemistry, University of Houston[5], Department of Molecular Biology, Graduate School of Medical Sciences, Kyushu University[6], Faculty of Life Sciences, Department of Applied Biosciences, Toyo University[7])

**OP7-05** 10:00-10:15 Genetics of Individuality

Ewan Birney[1], Felix Loosli[2], Kiyoshi Naruse[3], ○Joachim Wittbrodt[4] (EMBL-EBI, Hinxton, Sanger Campus, UK[1], Karlsruhe Institute of Technology, ITG, Karlsruhe, Germany[2], National Insitute for Basic Biology, Okasaki, Japan[3], Heidelberg University, Centre for Organismal Studies (COS), Heidelberg, Germany[4])

**OP7-06** 10:15-10:30 Embryonic Neural Crest derived Cardiomyocytes (NC-Cms) in trabeculation, adult heart failure and cardiac

regeneration
○H Joseph Yost (U2M2)

**OP7-07** 10:30-10:45 Neurocristopathies: Neural crest cell derived birth defects of the peripheral nervous system and craniofacial skeleton and the potential for prevention.
○Paul Trainor (SIMR)

**OP7-08 (P-124)** 10:45-11:00 Chirality in the dynamic behavior of blood cell cytoplasm in *Drosophila*
○Takeshi Sasamura[1], Daisuke Kurisu[1], Masakazu Akiyama[2], Kohei Otomo[2], Tomomi Nemoto[2], Hiroaki Mizuno[3], Naoki Watanabe[3], Hiromi Miyoshi[4], Arata Kaneko[4], Kenji Matsuno[1] (Grad. Sch. Sci., Osaka Univ.[1], RIES, Hokkaido Univ.[2], Grad. Sch. Med., Kyoto Univ.[3], Grad. Sch. Sys. Des. Tokyo Met. Univ.[4])

**OP7-09** 11:00-11:15 MESENCHYMAL ACTOMYOSIN CONTRACTILITY IS REQUIRED FOR ANDROGEN-DRIVEN URETHRAL MASCULINIZATION
○Alvin Acebedo[1], Kentaro Suzuki[1], Shinjiro Hino[2], Mellissa Alcantara[1], Yuki Sato[3], Hisashi Haga[4], Ken-ichi Matsumoto[5], Mitsuyoshi Nakao[2], Kenji Shimamura[6], Toru Takeo[7], Naomi Nakagata[7], Shinichi Miyagawa[1], Ryuichi Nishinakamura[8], Robert Adelstein[9], Gen Yamada[1] (Department of Developmental Genetics, Wakayama Medical University[1], Department of Medical Cell Biology, Institute of Molecular Embryology and Genetics, Kumamoto University[2], Department of Anatomy and Cell Biology, Graduate School of Medical Sciences, Kyushu University[3], Transdisciplinary Life Science Course, Faculty of Advanced Life Science, Hokkaido University[4], Department of Biosignaling and Radioisotope Experiment, Interdisciplinary Center for Science Research, Organization for Research, Shimane University[5], Department of Brain Morphogenesis, Institute of Molecular Embryology and Genetics, Kumamoto University[6], Division of Reproductive Engineering, Center for Animal Resources and Development (CARD), Kumamoto University[7], Department of Kidney Development, Institute of Molecular Embryology and Genetics (IMEG), Kumamoto University[8], Laboratory of Molecular Cardiology, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda[9])

**OP7-10** 11:15-11:30 Efficient single-copy HDR by 5’ modified long dsDNA

donors

○Thomas Thumberger[1], Jose Arturo Gutierrez-Triana[2], Tinatini Tavhelidse[1], Isabelle Thomas[1], Beate Wittbrodt[1], Tanja Kellner[1], Kerim Anlas[1], Erika Tsingos[1], Joachim Wittbrodt[1] (Centre for Organismal Studies, Heidelberg University, Heidelberg, Germany[1], Escuela de Microbiología, Facultad de Salud, Universidad Industrial, Santander, Colombia[2])

**OP7-11 (P-178)** 11:30-11:45 The role of the polyol pathway in sugar-sensing and the Mondo/ChREBP-mediated metabolic switch

糖感知および Mondo/ChREBP を介した代謝調節におけるポリオール経路の役割

○Hiroko Sano[1], Akira Nakamura[2], Mariko Yamane[2], Hitoshi Niwa[2], Kimi Araki[3], Kazumasa Takemoto[3], Kei-ichiro Ishiguro[2], Yuki Takada[2], Takashi Nishimura[4], Masayasu Kojima[1] (Inst. of Life Science, Kurume Univ.[1], Inst. of Molecular Embryology and Genetics, Kumamoto Univ.[2], Inst. of Resource Development and Analysis, Kumamoto Univ.[3], RIKEN BDR[4])

## Oral presentation 8: Stem Cells & Regeneration & Epigenetics

DATE: May 16 (Thu) 9:00 ～ 11:45 Room B
Chairpersons: Takashi Takeuchi (Tottori Univ.)
Hitoshi Yokoyama (Hirosaki Univ.)
Atsushi Kawakami (Tokyo Ins. of Tech.)

**OP8-01 (P-148)** 09:00-09:15 Mammalian cells acquire cellular lineage plasticity by incorporating ribosomes

リボソームによる細胞分化可塑性の誘導

○Naofumi Ito, Adil Ishtiyaq Ahmad Shah, Badrul Anam Mohammad, Kunimasa Ohta (Dev. neurobiol., Kumamoto University)

**OP8-02 (P-150)** 09:15-09:30 IL-1 and TNFa in the inflammatory niche enhance the proliferation of alveolar type 2 epithelial cell and contribute to alveolar regeneration

炎症性ニッチにおける IL-1 と TNFa は 2 型肺胞上皮細胞の増殖を促進し、肺胞の再生に寄与する

○Hiroaki Katsura, Yoshihiko Kobayashi, Purushothama Tata, Brigid Hogan (Duke University)

**OP8-03 (P-168)** 09:30-09:45 Planarian Promoter Architecture

○Reza Bagherzadeh[1,2,3,5], Ruslan Deviatiiarov[7], Elena Minkina[7],

Seyed Ahmad Mousavi[1], Ali Sharifi-Zarchi[1,4], Oleg Gusev[6,7], Hossein Bahrvand[1,5], Kiyokazu Agata[2,3] (Royan Institute for Stem Cell Biology and Technology[1], Kyoto University[2], Gakushuin University[3], Sharif University of Technology[4], University of Science and Culture[5], RIKEN Center for Life Science Technologies (CLST)[6], Institute of Fundamental Medicine and Biology[7])

**OP8-04 (P-161)** 09:45-10:00

Genetic analysis of thr roles of Hox genes in newt limb regeneration

イモリ四肢再生における Hox 遺伝子機能についての遺伝学的解析

○Takashi Takeuchi, Fumina Minamitani, Toshinori Hayashi (Sch. of Life Sci., Fac. of Med., Tottori Univ.)

**OP8-05 (P-160)** 10:00-10:15

Local induction of shh expression alters limb development and regeneration in *Xenopus laevis*

局所的な shh 発現の誘導はアフリカツメガエルの四肢発生と再生を変化させる

Riho Hasugata[1], Takuya Kobayashi[2], Haruki Ochi[3], Koji Tamura[2], ○Hitoshi Yokoyama[1] (Dept. of Biochem. & Mol. Biol., Facul. of Agri. & Life Sci., Hirosaki Univ.[1], Dept. of Dev. Adap., Grad. Schol. Life Sci., Tohoku Univ.[2], Facul. of Med., Yamagata Univ.[3])

**OP8-06 (P-159)** 10:15-10:30

PI3K signal is required for regenerative cell survival by recruiting the macrophage to amputation site

○Siyu Zhou, Atsushi Kawakami (Tokyo Inst. Technology)

**OP8-07** 10:30-10:45

A signal mediated by retinoic acid functions as a novel regulative step for allowing zebrafish fin regeneration

レチノイン酸を介したシグナルは、組織再生の可否を決める調節ステップとして働く

○Atsushi Kawakami, Eri Tanishita, Tomoya Nakashima (Tokyo Tech.)

**OP8-08 (P-154)** 10:45-11:00

Analysis on cellular and molecular mechanisms for regeneration of the enteric nervous system of zebrafish

ゼブラフィッシュを用いた腸神経細胞除去後の再生機構の解明

Maria Ohno[1], Natsumi Horiuchi[2], Koichi Kawakami[3], ○Masataka Nikaido[1], Kohei Hatta[1] (Grad. Sch. of Life Sci., Univ. of Hyogo,[1], Sch. of Sci., Univ. of Hyogo[2], Div. of Mol. & Dev. Biol., NIG & Dep. of Genet. SOKENDAI[3])

**OP8-09** 11:00-11:15 A transcriptome analysis for identifying downstream molecules of nerve factors, and Tva system in urodele amphibians.
有尾両生類四肢再生における神経因子下流で働く因子の探索と TVA システムの構築
○Akira Satoh[1], Aki Makanae[1], Kiyokazu Agata[2], Takeshi Inoue[2] (RCIS, Okayama Univ.[1], Dept. of Life Sci., Gakushuin Univ.[2])

**OP8-10 (P-157)** 11:15-11:30 Tsukushi inhibits myofibroblast differentiation by competing with TGF-β1
分泌因子 Tukushi は TGF-β1 と競合することによって筋線維芽細胞の分化を抑制する
○Rie Kawano[1,2], Naofumi Ito[2], Kunimasa Ohta[2] (Dep. Med. Oncology and Hematology, Oita Univ.[1], Div. Develop. Neuro, Kumamoto Univ.[2])

**OP8-11 (P-155)** 11:30-11:45 Dilp8 is involved in *winged eye* -mediated transdetermination of *Drosophila* imaginal disc
ショウジョウバエ成虫原基の決定転換における Dilp8 の役割
○Kazuya Nemoto, Keita Masuko, Naoyuki Fuse, Shoichiro Kurata (Graduate School of Pharmaceutical Sciences, Tohoku University)

## Oral presentation 9: Patterning & Cell signaling & Imaging & Theory and Modeling

DATE: May 16 (Thu) 9:00 ～ 11:45 Room C
Chairpersons: Tsuyoshi Hirashima (Kyoto Univ.)
Yuki Sato (Kyushu Univ.)

**OP9-01 (P-065)** 09:00-09:15 The cell-type specific functions of an ER modulating factor, Pecanex in Notch and Wnt signaling pathways
小胞体調節因子 Pecanex の Notch シグナル伝達と Wnt シグナル伝達における細胞型特異的な機能の解析
○Tomoko Yamakawa, Kenji Matsuno (Dept. of Biol. Sci., Grad. school of Sci., Osaka Univ.)

**OP9-02** 09:15-09:30 Role of the RhoA/ROCK pathway in regulating the migration of mouse enteric neural crest cells

○Cheuk Ling Leung[1], Wing Ching Yip[1], Jessica Aijia Liu[2], Martin Cheung[2], Wood Yee Chan[1] (Sch Biomed Sci, Chinese Univ HK[1], Sch Biomed, HK Univ[2])

**OP9-03 (P-064)** 09:30-09:45 Loss of Akhirin leads to abnormal phenotype and impaired neurogenesis at neurogenic niches of mouse brain

○Mchammad Badrul Anam, Shah Adil Ishtiyaq Ahmad, Mikiko Kudo, Naofumi Ito, Kunimasa Ohta (Dev. Neuro, Kumamoto Univ.)

**OP9-04 (P-002)** 09:45-10:00 A new fate map and anterior mesendoderm-dependent regulation of brain precursor development determined via live imaging of avian embryos

鳥類胚のライブイメージングが明らかにした、各脳領域の新しい前駆体マップと、脳形成を開始させる前部中内胚葉の作用

○Hisato Kondoh[1], Koya Yoshihi[1], Hideaki Iida[1], Machiko Teramoto[1], Kagayaki Kato[2] (Kyoto SU[1], NINS, ExCELLS[2])

**OP9-05 (P-059)** 10:00-10:15 Instructive role of melanocytes in the pigment patterning of avian skin

鳥類の皮膚模様形成におけるメラノサイトの主導的な役割

○Masafumi Inaba[1], Ting-Xin Jiang[1], Ya-Chen Liang[1,2], Stephanie Tsai[1,3,4], Yung-Chih Lai[2], Randall Widelitz[1], Cheng-Ming Chuong[1,2,5] (Keck School of Medicine, Dept. of Pathology USC[1], Integrative Stem Cell Center, China Medical University Hospital[2], Ostrow School of Dentistry, University of Southern California[3], Graduate School of Clinical Dentistry, National Taiwan University[4], Center for the Integrative and Evolutionary Galliformes Genomics, National Chung Hsing University[5])

**OP9-06** 10:15-10:30 Cell blebbing bridges time and space in zebrafish gastrulation

ブレブ形成細胞によるゼブラフィッシュ原調胚の時空間制御機構

○Yuuta Moriyama[1], Carl-Philipp Heisenberg[2] (Dept. Phys & Math, Aoyama Gakuin University[1], IST Austria[2])

**OP9-07 (P-052)** 10:30-10:45 Aurora-A breaks symmetry in contractile actomyosin networks independently of its role in centrosome matu-

ration
線虫受精卵における対称性の破れは Aurora-A キナーゼにより誘導される
Peng Zhao[1], Xiang Teng[2], Sarala Tantirimudalige[3], Masatoshi Nishikawa[4], Thorsten Wohland[3], Yusuke Toyama[2,3], ○Fumio Motegi[1] (TLL, MBI, DBS, NUS[1], MBI, NUS[2], DBS, NUS[3], Hosei Univ[4])

**OP9-08 (P-181)** 10:45-11:00 Tissue force-mediated wound healing in zebrafish epithelia.
ゼブラフィッシュ胚上皮組織にかかる力を利用した創傷治癒の解析
○Sohei Yamada[1], Yasumasa Bessho[2], Yoichiroh Hosokawa[1], Takaaki Matsui[2] (Bio-Process Engineering, NAIST[1], Gene Regulation Research, NAIST[2])

**OP9-09 (P-186)** 11:00-11:15 Morphological diversity explained by physical properties of cell-cell interaction in living organisms
細胞間相互作用の物理的性質に基づいた形態の多様性の実現
○Hiroshi Koyama[1,2], Toshihiko Fujimori[1,2] (Div. Embryology, NIBB[1], SOKENDAI[2])

**OP9-10 (P-188)** 11:15-11:30 Single molecule dynamics of MyosinI dictating chiral behaviors of *Drosophila* cells
ショウジョウバエ細胞のキラルな振る舞いを制御するⅠ型ミオシンの一分子動態
○Sosuke Utsunomiya[1], Takeshi Sasamura[1], Yukihiro Miyanaga[2], Masahiro Ueda[2], Kenji Matsuno[1] (Dept.Bio.Sci, Osaka Univ.[1], Grad. Sch. of Frontier Bio., Osaka Univ.[2])

**OP9-11 (P-183)** 11:30-11:45 SSBD: an open public database of microscopy images and quantitative data of biological dynamics
SSBD: 細胞・発生画像情報と生命動態情報の統合データベース
○Kenneth Ho[1], Yukako Tohsato[1,2], Koji Kyoda[1], Hiroya Itoga[1], Shuichi Onami[1] (RIKEN BDR[1], Osaka Electro-Communication University[2])

# Poster Sessions

## P-001~P-010 is “Special Event~Professor's Poster Street~”
## The white number is Poster Award candidate.

DATE: May 15 (Wed)-May 16 (Thu)

| | |
|---|---|
| **Mounting:** | **9:00-11:30 on Day1 (May 15 (Wed))** |
| Day1 (May 15 (Wed)) Discussion: | 13:30-14:30 for **odd number** posters<br>14:30-15:30 for **even number** posters |
| | 13:30-15:30 for<br>**Special Event ~ Professor’s Poster Street ~** |
| Day2 (May 16 (Thu)) Discussion: | 13:15-14:15 for **even number** posters<br>14:15-15:15 for **odd number** posters |
| **Removal:** | **9:00-11:30 on Day3 (May 17 (Fri))** |

**P-001** Developmental behaviors of adult fat body cells during metamorphosis in Drosophila melanogaster
ショウジョウバエの変態期における成虫型脂肪組織の発生
Taiichi Tsuyama, Hanae Komai, Kohei Shimono, ○Tadashi Uemura (Grad. Sch. of Biostudies, Kyoto Univ.)

**P-002 (OP9-04)** A new fate map and anterior mesendoderm-dependent regulation of brain precursor development determined via live imaging of avian embryos
鳥類胚のライブイメージングが明らかにした、各脳領域の新しい前駆体マップと、脳形成を開始させる前部中内胚葉の作用
○Hisato Kondoh[1], Koya Yoshihi[1], Hideaki Iida[1], Machiko Teramoto[1], Kagayaki Kato[2] (Kyoto SU[1], NINS, ExCELLS[2])

**P-003 (OP1-07)** Nanopore formation in the cuticle of the insect olfactory sensillum
匂い分子取り込みにはたらく昆虫嗅覚器官ナノポア構造の構築機構
○Shigeo Hayashi[1], Toshiya Ando[1,2], Sayaka Sekine[1], Sachi Inagaki[2], Kazuyo Misaki[1], Laurent Badel[3], Hiroyuki Moriya[4], Mustafa Sami[1], Takahiro Chihara[5], Hokuto Kazama[3], Shigenobu Yonemura[1] (RIKEN BDR[1], NIBB[2], RIKEN CBS[3], U. Tokyo[4], U. Hiroshima[5])

**P-004** Evolutionary Cell Biology (Evo-Cello) for transition into walking limbs.
鰭から四肢への進化に対する進化細胞生物学的考察
○Koji Tamura, Yoshitaka Tanaka, Tetsuya Umeda, Hidehiro Kudoh, Sayuri Yonei-Tamura, Gembu Abe (Grad. Sch. of Life Sci., Tohoku Univ.)

**P-005** The hourglass model of limb regeneration
四肢再生の砂時計モデル
○Kiyokazu Agata, Rikuya Sakamoto, Ryou Matsumoto, Sousuke Kimura, Ei Kakuta, Takeshi Inoue (Life Sci. Gakushuin Univ.)

**P-006** From "Nan-ja korya?!" to big success
「なんじゃこりゃ？！」が切り拓く発生生物学
○Yoshiko Takahashi (Grad. Sch. of Sci., Kyoto Univ.)

**P-007** Cell chirality is the link between molecular and body chirality
細胞キラリティは分子キラリティとからだの左右非対称性をはしわたす
○Kenji Matsuno (Dept. Biol. Sci., Osaka Univ.)

**P-008** How is the shape of the beetle horn determined?
○Shigeru Kondo (Osaka University, Graduate School of Frontier Biosciences)

**P-009** How animal development utilizes the mechanisms of programmed cell death?
発生はプログラム細胞死の仕組みをどう利用するか
○Masayuki Miura (Dept. of Genetics, Grad. Sch. of Pharm. Scis., Univ. of Tokyo)

**P-010** Dynamics and mechanics of axon-dendrite wiring geometries in the developing brain
脳発生におけるニューロン突起パターンと回路のジオメトリーを決定する分子細胞機構
Kazuto Fujishima[1], Midori Yamada[2], Junko Kurisu[1], ○Mineko Kengaku[1,2] (KUIAS-iCeMS, Kyoto Univ.[1], Grad. Sch. Biostudies, Kyoto Univ.[2])

**P-011** Maternal microchimeric cells in shaping the developing immune system
○Flore Castellan[1], Hidetoshi Kassai[2], Naoki Irie[1] (Grad. Sch. Sci., UTokyo[1],

Grad. Sch. Med, UTokyo[2])

**P-012** Phenotypic analysis of the gonads of conditional SF-1 knockout mice
コンディショナル SF-1 ノックアウトマウス生殖腺の表現型の解析
○Mamiko Maekawa, Ayako Tagami, Akiko Nagai, Yayoi Ikeda (Dept. Anat., Sch. Dent., Aichi Gakuin Univ.)

**P-013 (SW1-01)** Primordial germ cells in avian embryos display a variety of morphology when they exit blood vessels
トリ胚始原生殖細胞の血管外遊走における形態多様性
○Kanta Mizumoto[1], Daisuke Saito[2], Yuta Takase[1,3], Ryosuke Tadokoro[1], Yoshiko Takahashi[1] (Dept of Zool. Kyoto Univ[1], Grad School of Systems Life Sci. Kyushu Univ[2], MACS. Kyoto Univ[3])

**P-014 (OP2-01)** Examination the potential of using first polar body mitochondrial DNA content as an indicator of oocyte quality
○Wing Tung Lee, Tin Lap Lee (SBS, CUHK)

**P-015** Crucial role of sugar metabolism in the female meiosis in fruit fly Drosophila
ショウジョウバエの減数分裂進行における血糖代謝の役割
○Yuka Yoshii[1,2], Takashi Nishimura[1,2] (NAIST[1], RIKEN BDR[2])

**P-016** Pax6 deficiency leads to an altered YX ratio in round spermatids during spermatogenesis
○Jasper Germeraad, Ryuichi Kimura, Misako Tatehana, Noriko Osumi (Dept. of Dev. Neurosci.)

**P-017** Microbes enhance the germline development in Drosophila
腸内微生物による卵形成亢進機構の解明
○Ritsuko Suyama[1], Nicolas Cetraro[2], Joanne Yew[1,2], Toshie Kai[1] (FBS, Osaka Univ.[1], PBRC, Hawaii Univ.[2])

**P-018 (OP2-05)** H3K27me3 is required to prevent sister somatic gene expression in the ascidian germline
○Tao Zheng, Ayaki Nakamoto, Gaku Kumano (Asamushi Research Center for Marine Biology)

**P-019** Functional redundancy of NANOS proteins supports mouse germ cell survival

○Danelle Wright[1], Yumiko Saga[2] (NIG, SOKENDAI[1], NIG[2])

**P-020 (OP2-04)** *Drosophila* Tpp ensures the germ plasm assembly by facilitating the posterior localization of Aubergine in the oocyte

○Hirono Kina[1,2], Hina Nakashima[1,2], Tsubasa Tanaka[1,2,3], Kazuko Hanyu-Nakamura[1], Akira Nakamura[1,2,3] (Department of Germline Development, Institute of Molecular Embryology and Genetics[1], School of Pharmacy[2], Graduate School of Pharmaceutical Sciences, Kumamoto University[3])

**P-021 (OP2-03)** DEAD-box RNA helicase Belle post-transcriptionally promotes gene expression in an ATPase activity-dependent manner in *Drosophila* oocytes

○Susan Liao, Ryuya Fukunaga (Dept. Biol. Chem., JHUSOM)

**P-022 (SW2-04)** Super low cell density culture for understanding cell-cell interaction during human cardiomyogenesis

心筋分化における相互作用を理解するための超低細胞密度培養

○Kiyoshi Ohnuma (Bioeng, Nagaoka Univ Tech)

**P-023 (OP2-06)** Exploring the murine germ cell masculinization mechanism using scRNA-Seq data

scRNA-Seq を利用したマウス生殖細胞オス化機構の研究

○Ryuki Shimada, Yumiko Saga (NIG)

**P-024** NANOS3 is required for proper expansion of spermatogonial progenitors in mice.

マウス NANOS3 は精原細胞の適切な増殖に必要である。

○Hiroki Inoue[1], Takayuki Sakurai[1,2], Danelle Wright[1,2], Yumiko Saga[1,2,3] (National Institute of Genetics[1], SOKENDAI[2], The University of Tokyo[3])

**P-025 (OP6-09)** The autism-related gene *cdc-like kinase 2* (*clk2*) promotes early neural development via modulation of morphogen signals in *Xenopus* embryos

○Regina Putri Virgirinia[1], Nusrat Jahan[1], Maya Okada[1], Kimiko Takebayashi-Suzuki[1], Hitoshi Yoshida[1], Makoto Nakamura[1], Hajime Akao[1], Fatchiyah Fatchiyah[2], Naoto Ueno[3], Atsushi Suzuki[1] (Amphibian Research Center, Grad Sch of Sci, Hiroshima Univ[1], Dept of Biol, Fac of Math and Nat Sci, Brawijaya Univ[2], Div of Morphogenesis, NIBB[3])

**P-026** Axis elongation during *Xenopus* tail-bud stage is regulated by GABA expressed in anterior-to-mid neural tube

ツメガエルの尾芽胚期における軸伸長は神経管の前方から中央にかけて発現する GABA によって制御される

○Mizuki Sakurai[1], Tomoyo Furukawa[2], Yusuke Hara[3,4], Hiroki Kuroda[3,4,5,6] (Keio Univ., Faculty of Policy Management[1], Shizuoka Univ., Graduate School of Science and Technology[2], AOI lab., Keio Research Institute at SFC[3], Graduate School of Media and Governance, Keio Univ.[4], Keio Univ., Faculty of Environment and Information Studies[5], Institute for Advanced Biosciences, Keio Univ.[6])

**P-027** Mesodermal cell migration does NOT depend on mesoderm-inducible transcriptional factor cTbx6L

中胚葉細胞の移動は中胚葉誘導因子である cTbx6L に依存しない

○Eisuke Shimokita[1], Hitomi Suzuki[2], Yoshihiro Tsuruo[3], Tatsuya Takemoto[4] (Dept. of Anat & Cell Biol., Tokushima Univ. Grad. Sch. of Med.[1], IAMS, Tokushima Univ.[2], Dept. of Anat & Cell Biol., Tokushima Univ. Grad. Sch. of Med.[3], IAMS, Tokushima Univ.[4])

**P-028 (OP6-04)** Functional analysis of intraciliary Calcium signal in mouse Left-Right symmetry breaking

左右決定における繊毛内カルシウムシグナルの機能解析

○Katsutoshi Mizuno, Kei Shiozawa, Hiroshi Hamada (RIKEN, BDR)

**P-029 (OP6-02)** Retinoic acid deficiency results in midfacial cleft and upper incisor defects with increased cell death of cranial neural crest cells

○Yanran Wu[1], Hiroshi Kurosaka[1], Qi Wang[1], Lisa L Sandell[2], Paul Trainor[3], Takashi Yamashiro[1] (Orthodontics of Osaka University[1], UL[2], Stowers Institute[3])

**P-030 (OP6-10)** Segmentation dynamics and diversity controlled by Hedgehog signaling

ヘッジホッグシグナルにより制御された体節形成のダイナミクスと多様性

○Yasuko Akiyama-Oda[1,2], Hiroki Oda[1] (JT Biohistory Res. Hall[1], Osaka Med. College[2])

**P-031** Analyze the molecular mechanism involved in basal body translocation posteriorly in mouse node cells

○Xiao Rei Sai, Katura Minegishi, Hiroshi Hamada (RIKEN BDR)

**P-032 (OP6-06)** Axial stem cells generate intermediate mesoderm during mouse body axis formation.
マウス体軸形成において体軸幹細胞は中間中胚葉を産み出す。
○Shinichi Hayashi, Tatsuya Takemoto (Embryology, Tokushima University)

**P-033** Coordinated regulation of the dorsal–ventral and anterior–posterior axes in *Xenopus* embryo by Biz/Zbtb14 and its associated protein Bap
Kimiko Takebayashi-Suzuki[1], Misa Uchida[1], Hitoshi Yoshida[1,2], Makoto Nakamura[1], ○Atsushi Suzuki[1] (Amphibian Res. Center, Hiroshima Univ. Grad. Sch. of Sci.[1], Marine Biol. Lab., Woods Hole, USA[2])

**P-034 (OP6-07)** Importin13 is essential for the peri-implantation mouse embryo development
Importin13 は、マウス初期胚の原始外胚葉の発生に必須である
Yasuka Yamaguchi[1], Patrick Tam[2], ○Satomi Tanaka[1] (Kumamoto Health Sci. Univ.[1], CMRI, Australia[2])

**P-035** Left-right axis determination in reptiles
爬虫類における左右軸形成
○Eriko Kajikawa[1], Uzuki Horo[2], Yayoi Ikawa[1], Hiromi Nishimura[1], Takahiro Ide[1], Hiroshi Hamada[1] (RIKEN BDR[1], SEEDS, Osaka Univ.[2])

**P-036 (OP6-03)** Fam46a regulates pre-placodal ectoderm differentiation via BMP signaling
Fam46a は BMP シグナルを介して予定プラコード分化を制御する
○Tomoko Watanabe[1,2], Takayoshi Yamamoto[2], Kohei Tsukano[2], Sayuki Hirano[2], Ayumi Horikawa[2], Tatsuo Michiue[2] (AIST[1], Dept. of Life Sci., Grad. Sch. of Arts & Sci., Univ. of Tokyo[2])

**P-037** Understanding endothelial cell heterogeneity during vascular development
○Wen Hui Jeronica Chong (RIKEN BDR)

**P-038** Redundant expression of type II classic cadherins supports cytoarchitectonic robustness during mouse cranial compartmentalization and neurulation
○Kou Hiraga[1], Yukiko Inoue[1], Junko Asami[1], Mayuko Hotta[1,2], Yuki Morimoto[1], Shoji Tatsumoto[3], Mikio Hoshino[1], Yasuhiro Go[3], Takayoshi Inoue[1]

(NCNP[1], TAT[2], NIPS[3])

**P-039 (SW1-02)** Quantitative analysis of spatial relationship between the mitotic spindle and the centrosome attracting body in early ascidian embryogenesis
ホヤ初期発生における紡錘体と centrosome attracting body の位置の定量的解析
○Hiromu Terui, Naohito Takatori (TMU)

**P-040** Quantitative analysis of cell shape features in C. elegans embryos
線虫 C. elegans 胚の細胞形状特徴の定量解析
○Yusuke Azuma, Shuichi Onami (RIKEN BDR)

**P-041** Ripply-mediated Nodal inhibition is required for proper head development
Inchul Yeo, ○Jin-Kwan Han (POSTECH)

**P-042** Precise in-frame integration of a GFP gene using microhomology-mediated knock-in technology in *Gryllus bimaculatus*
フタホシコオロギにおけるマイクロホモロジーに依存したノックイン技術の確立
○Kohei Kawamoto[1], Mayuko Matsuda[1], Takahisa Yamashita[1], Takahito Watanabe[1], Sayuri Tomonari[1], Yoshiyasu Isimaru[1], Sumihare Noji[2], Taro Mito[1] (Grad. Sch. of Adv. Tech. and Sci., Tokushima Univ.[1], Grad. Sch. of Tech, Ind. and Soc. Sci., Tokushima Univ.[2])

**P-043** Origin of anterior-posterior axis formation in mouse embryos.
マウス胚における前後軸の起源
○Katsuyoshi Takaoka (MPIbpc)

**P-044** Roles of N-cadherin mediated cell-cell contact in collective cell migration during chick mesoderm formation
N-cadherin を介した細胞間接着が細胞集団運動を制御するしくみ　―ニワトリ胚中胚葉細胞の遊走をモデルとした解析―
○Yukiko Nakaya, Sohei Tasaki, Ayako Isomura, Tatsuo Shibata (RIKEN BDR)

**P-045** Role of Greb1 in the regulation of axial stem cell
体軸幹細胞の制御における Greb1 の役割
○Naoya Takami, Shinichi Hayashi, Tatsuya Takemoto (IAMS, Tokushima

Univ)

**P-046 (OP6-05)** The roles of DDX6 in early mouse embryogenesis and progenitor cells

○Jessica Kim[1], Yumiko Saga[1,2] (The University of Tokyo[1], NIG[2])

**P-047 (OP6-11)** Identification of a novel Gata gene involved in the first-axis formation of the spider embryo using RNA sequencing of regional cells

局所細胞の RNA-Seq による、クモ初期胚の第一軸形成に関わる新規 Gata 遺伝子の同定

○Sawa Iwasaki-Yokozawa[1], Yasuko Akiyama-Oda[1,2], Hiroki Oda[1] (JT Biohistory Res. Hall[1], Osaka Medical College[2])

**P-048** Epiblast formation by Tead-Yap-dependent expression of pluripotency factors and competitive elimination of unspecified cells

○Masakazu Hashimoto, Hiroshi Sasaki (Laboratory for Embryogenesis, Graduate School of Frontier Biosciences, Osaka University)

**P-049** Quantitative analysis of chondrogenic pattern formation in cell culture system of developing limb mesenchyme

肢芽間充織細胞培養系における細胞凝集パターンの定量解析

○Keiichi Kitajima[1,2], Naofumi Kawahira[2], Daisuke Ohtsuka[2], Gembu Abe[1], Koji Tamura[1], Yoshihiro Morishita[2] (Grad. Sch. of Life Sci., Tohoku Univ.[1], RIKEN BDR[2])

**P-050 (SW1-03)** Left-right asymmetry of vascular patterns is regulated by blood flow

左右非対称に形成される卵黄静脈の血流依存性

○Junki Yoshida[1], Yuta Takase[1,2], Yoshiko Takahashi[1] (Dep of Zool., Grad Sch of Sci., Kyoto Univ.[1], MACS., Grad Sch of Sci., Kyoto Univ.[2])

**P-051** Quantitative and comparative analysis of limb morphogenesis between chick and Xenopus embryos

アフリカツメガエルとニワトリ胚における四肢形態形成動態の定量比較解析

○Aiko Kawasumi[1], Takayuki Suzuki[2], Hitoshi Yokoyama[3], Yasuhiro Kamei[4], Koji Tamura[5], Yoshihiro Morishita[1] (RIKEN BDR[1], Nagoya Univ.[2], Hirosaki Univ.[3], NIBB[4], Tohoku Univ.[5])

**P-052 (OP9-07)** Aurora-A breaks symmetry in contractile actomyosin networks independently of its role in centrosome maturation

線虫受精卵における対称性の破れは Aurora-A キナーゼにより誘導される

Peng Zhao[1], Xiang Teng[2], Sarala Tantirimudalige[3], Masatoshi Nishikawa[4], Thorsten Wohland[3], Yusuke Toyama[2,3], ○Fumio Motegi[1] (TLL, MBI, DBS, NUS[1], MBI, NUS[2], DBS, NUS[3], Hosei Univ[4])

**P-053** Identification and functional analysis of Gdf11 enhancer that determines the hindlimb position.

後肢の位置を決定する Gdf11 のエンハンサーの同定と機能的解析

○Seiji Saito[1], Utsugi Kanazawa[1], Nobuyuki Hibino[1], Tatsuya Takemoto[2], Yoichi Matsuda[3], Atsushi Kuroiwa[1], Takayuki Suzuki[2] (Grad. School of Sci., Nagoya Univ.[1], IAMS, Tokushima Univ.[2], Grad. School of Bioag Sci., Nagoya Univ.[3])

**P-054** Expression pattern of Hox11 paralogous genes in the somites is determined by GDF11 with dose-dependent manner.

GDF11 による仙椎の形成に必須な Hox11 パラロガスグループの発現領域決定メカニズムの解明

○Haruka Fujita[1], Marina Matsumiya[2], Ryoichiro Kageyama[2], Yoichi Matsuda[3], Takayuki Suzuki[3] (Grad. Sch. Sci., Nagoya Univ.[1], Institute for Frontier Life and Medical Sciences, Kyoto University[2], Graduate School of Bioagricultural Sciences, Nagoya University[3])

**P-055** Distribution of Sox10-positive chromatophore progenitors and neurons in metamorphosing flounder larvae

変態過程のヒラメ仔魚における Sox10 陽性の色素前駆細胞と神経細胞の分布

○Tohru Suzuki, Minato Miyake, Kota Sato, Hayato Yokoi (Grad. Sch. of Agric. Sci., Tohoku Univ.)

**P-056** Experimental Duplication of Bilaterian Body Axes in Spider Embryos: Holm's organizer and self-regulation of embryonic fields

クモ胚における左右相称性を規定する体軸の実験的重複化：ホルムのオルガナイザーと胚領域にある自己調節性

○Hiroki Oda[1,2], Sawa Iwasaki-Yokozawa[1], Toshiya Usui[3], Yasuko Akiyama-Oda[1,4] (JT BRH[1], Osaka Univ.[2], Nagoya M. High[3], Osaka Med. Coll.[4])

**P-057** Generation of an enhancer-trap strain of the scalloped gene in the

cricket Gryllus bimaculatus
フタホシコオロギにおける scalloped 遺伝子のエンハンサートラップ系統の作製
○Takahisa Yamashita, Taro Mito, Yoshiyasu Ishimaru, Takahito Watanabe, Sayuri Tomonari, Kouhei Kawamoto, Mayuko Matuda (Tokushima Univ)

**P-058** SOX2 dosage dependent control of otic cell identity revealed by single-cell transcriptome analyses
○Kok Ting Tam[1], Peikai Chen[1], Wai Hang Kwong[1], Kai Hung Leung[1], Anna Pelling[1], Bernd Fritzsch[2], Robin Lovell-badge[3], Kathryn Cheah[1] (SBMS, HKU[1], Department of Biology, CLAS, University of Iowa[2], Stem Cell Biology and Developmental Genetics Laboratory, The Francis Crick Institute[3])

**P-059 (OP9-05)** Instructive role of melanocytes in the pigment patterning of avian skin
鳥類の皮膚模様形成におけるメラノサイトの主導的な役割
○Masafumi Inaba[1], Ting-Xin Jiang[1], Ya-Chen Liang[1,2], Stephanie Tsai[1,3,4], Yung-Chih Lai[2], Randall Widelitz[1], Cheng-Ming Chuong[1,2,5] (Keck School of Medicine, Dept. of Pathology USC[1], Integrative Stem Cell Center, China Medical University Hospital[2], Ostrow School of Dentistry, University of Southern California[3], Graduate School of Clinical Dentistry, National Taiwan University[4], Center for the Integrative and Evolutionary Galliformes Genomics, National Chung Hsing University[5])

**P-060 (SW2-09)** ptr-18/PTCHD suppresses the activity of grl-7/Hedgehog through endocytosis.
ptr-18/PTCHD はエンドサイトーシスを介して grl-7/Hedgehog の活性を抑制する
○Hirohisa Chiyoda[1], Masahiko Kume[1,2], Toshiaki Katada[1,3], Masamitsu Fukuyama[1] (Dept of Physiol Chemistry, Grad Sch of Parmaceutical Sci, Univ of Tokyo[1], Laboratory of Molecular Medicine, Graduate School of Frontier Science, University of Tokyo[2], Molecular Cell Biology Laboratory, Research Institute of Pharmaceutical Sciences, Faculty of Pharmacy, Musashino University[3])

**P-061** Snail promotes JNK-mediated cell migration and tumor invasion
○Xiang Ding[1,2], Chenxi Wu[1,2,3], Zhuojie Li[1,2], Ying Sun[1,2], Lei Xue[1,2] (SLST, Tongji Univ[1], IIV, Shanghai Tenth Hosp[2], CCM, North China Univ[3])

**P-062** Snail modulates JNK-dependent FoxO-mediated cell death in Dro-

sophila
○Zhuojie Li[1,2], Chenxi Wu[1,2,3], Xiang Ding[1,2], Lei Xue[1,2] (SLST, Tongji Univ[1], IIV, Shanghai Tenth Hosp[2], CCM, North China Univ[3])

**P-063** Interactome analysis of steroidogenic transcription factors regulating molting hormone biosynthesis in Drosophila
ショウジョウバエにおける脱皮ホルモン生合成を制御する転写因子のインタラクトーム解析
○Takumi Kamiyama[1], Outa Uryu[1], Naoki Tani[2], Akira Nakamura[2], Ryusuke Niwa[3] (Grad. Sch. of Life Environ. Sci., Univ. of Tsukuba[1], Inst. of Mol. Embryol. Genet., Kumamoto Univ.[2], Faculty of Life Environ. Sci., Univ. of Tsukuba[3])

**P-064 (OP9-03)** Loss of Akhirin leads to abnormal phenotype and impaired neurogenesis at neurogenic niches of mouse brain
○Mchammad Badrul Anam, Shah Adil Ishtiyaq Ahmad, Mikiko Kudo, Naofumi Ito, Kunimasa Ohta (Dev. Neuro, Kumamoto Univ.)

**P-065 (OP9-01)** The cell-type specific functions of an ER modulating factor, Pecanex in Notch and Wnt signaling pathways
小胞体調節因子 Pecanex の Notch シグナル伝達と Wnt シグナル伝達における細胞型特異的な機能の解析
○Tomoko Yamakawa, Kenji Matsuno (Dept. of Biol. Sci., Grad. school of Sci., Osaka Univ.)

**P-066** An inter-embryonic hemocyte transplantation: a novel method to analyze developmental defects caused by abnormality of hemocytes
ショウジョウバエ胚における血球細胞の移植に関する新規技術開発：血球細胞を原因とする発生異常の解析
○Takaya Kondo, Izumi Morita, Tomoko Yamakawa, Kenji Matsuno (Department of Biological Sciences, Graduate School of Science and Faculty of Science, Osaka University)

**P-067** Automated FRET quantification reveals distinct subcellular ERK activation kinetics in response to graded EGFR signaling in Drosophila
○Mustafa Sami, Yosuke Ogura, Housei Wada, Shigeo Hayashi (RIKEN BDR)

**P-068** SUFU and GLI regulate the dynamic progression of mammalian cochlear hair cell differentiation

○Tianli Qin[1], Chin Chung Ho[1], Boshi Wang[1], Chi Chung Hui[2,3], Mai Har Sham[1] (SBMS, HKU[1], Developmental and Stem Cell Biology Program, The Hospital for Sick Children, Toronto, Canada[2], Department of Molecular Genetics, The University of Toronto, Toronto, Canada[3])

**P-069** Analysis of retinoic acid response element in the cis-regulatory region of Foxp1
Foxp1 シス制御領域におけるレチノイン酸応答配列の解析
○Katsuki Mukaigasa, Chie Sakuma, Hiroyuki Yaginuma (Fukushima Med. Univ.)

**P-070** In vivo calcium signaling induced by mechanosensitive channel Piezo1 during lymphatic valve morphogenesis
リンパ管弁形成過程における機械受容チャネル Piezo1 由来の in vivo カルシウムシグナルの役割
○Hiroki Katsuta[1,2], Keiko Nonomura[2], Akemi Kanie[2], Takaki Miyata[1], Toshihiko Fujimori[2] (Nagoya Univ. Grad. Sch. Med. Dept. Dev. Cell Biol.[1], Div. Embryology, NIBB[2])

**P-071** The Role of the Cell Cortex in Regulating Endothelial Cell Shape Plasticity During Angiogenesis.
○Wei Ting Joyce Goh[1,2], Li-Kun Phng[2] (Osaka University FBS[1], RIKEN BDR[2])

**P-072 (OP1-04)** Epithelial barrier homeostasis by cell competition
上皮バリアのホメオスタシスにおける細胞競合の役割
○Tetsuhisa Otani[1,2], Mikio Furuse[1,2] (Division of Cell Structure, NIPS[1], Department of Physiological Sciences, SOKENDAI[2])

**P-073 (SW2-01)** Resynchronization of the segmentation clock in Delta-Notch mutants
Delta-Notch 変異体における分節時計の再同期
○Koichiro Uriu[1], Bo-Kai Liao[2], Luis Morelli[3], Andrew Oates[4] (Kanazawa University[1], National Taiwan Ocean University[2], IBioBA-MPSP[3], EPFL[4])

**P-074** The roles of *pou5f3* and Wnt/FGF signaling in the extension of the posterior structure in zebrafish development
ゼブラフィッシュ胚の後方伸長での *pou5f3* と Wnt/FGF シグナルの役割
○Tatsuya Yuikawa, Takehisa Sato, Masaaki Ikeda, Sachiko Tsuda, Kyo Yamasu (Div. Life Sci., Grad. Sch. Sci. Eng., Saitama Univ.)

**P-075** Morphological change of Wnt-producing roof plate cells promotes proliferation of neural progenitor cells in the mouse spinal cord
マウス脊髄神経管における Wnt 産生細胞の伸長は神経前駆細胞の増殖を促進する
○Takuma Shinozuka[1,2,3], Ritsuko Takada[1,2], Shosei Yoshida[2,3], Shigenobu Yonemura[4,5], Shinji Takada[1,2,3] (ExCELLS[1], NIBB[2], SOKNEDAI[3], RIKEN CLST[4], Tokushima Univ.[5])

**P-076 (OP4-11)** Transcriptome analysis of the cardiac neural crest reveals a critical role for *MafB*
トランスクリプトーム解析により明らかとなった心臓神経堤細胞における *MafB* の重要な機能
○Saori Tani-Matsuhana[1,2], Kunio Inoue[1], Marianne Bronner[2] (Dept. Biol., Grad. Sch. Sci., Kobe Univ.[1], Caltech[2])

**P-077** Cytoplasmic localization of GRHL3 upon epidermal differentiation triggers cell shape change for epithelial morphogenesis
GRHL3 タンパクの細胞質における局在が上皮細胞の分化過程から形態形成過程へと進行させる
○Chiharu Kimura-Yoshida[1], Kyoko Mochida[1], Masa-Aki Nakaya[2], Takeomi Mizutani[3], Isao Matsuo[1] (OWCH[1], YCU[2], HGU[3])

**P-078 (OP4-10)** Systematic comparison of gene regulation in fin and limb development
鰭と四肢の発生における遺伝子制御のシステマティックな比較
○Koh Onimaru, Kaori Tatsumi, Chiharu Tanegashima, Mitsutaka Kadota, Osamu Nishimura, Shigehiro Kuraku (BDR)

**P-079** Mechanically activated channel PIEZO1 is required for lymphatic valve formation
メカノセンサーチャネル PIEZO1 はリンパ管の弁の形成に必要である
○Keiko Nonomura[1,2,3], Hiroki Katsuta[1,4], Viktor Lukacs[3], Akemi Kanie[1], Tess Whitwam[3], Sanjeev Ranade[3], Ardem Patapoutian[3], Toshihiko Fujimori[1,2] (NIBB[1], SOKENDAI[2], HHMI, TSRI[3], Nagoya Univ. Grad. Med.[4])

**P-080 (OP4-06)** Bioelectrical signal regulates organ size
膜電位を介した器官サイズスケーリング機構
○Toshihiro Aramaki, Shigeru Kondo (FBS, Osaka Univ.)

**P-081 (OP1-01)** Three-dimensional tissue stiffness mapping reveals durotaxis during mouse limb bud initiation

三次元組織剛性率マッピング法によりマウス肢芽初期形成における硬領域指向性細胞移動を明らかにする

○Hirotaka Tao[1], Zhu Min[1,2], Mohammad Samani[1], Mengxi Luo[2], Xian Wang[2], Sevan Hopyan[1,3,4], Yu Sun[2,5,6] (DSCB, Sick Kids[1], MIE, U of T[2], MoGen, U of T[3], Division of Orthopaedic Surgery, Sick Kids and U of T[4], IBBME, U of T[5], ECE, U of T[6])

**P-082 (OP1-06)** Patterns of proliferation in the developing tendon differ between embryonic and postnatal stages

○Saundra Schlesinger[1], Seongkyung Seo[2], Alice Huang[3], Brian Pryce[2], Ronen Schweitzer[1,2] (OHSU[1], Shriner's Hospital[2], Mount Sinai[3])

**P-083 (OP1-08)** Tissue-scale mechanical coupling reduces morphogenetic noise to ensure precision during epithelial folding

○Anthony Eritano[1], Claire Bromley[1], Lucas Schütz[2], Fu-Lai Wen[3], Tatsuo Shibata[3], Mustafa Sami[1], Michiko Takeda[1], Steffen Lemke[2], Yu-Chiun Wang[1] (Riken BDR[1], Centre for Organismal Studies Heidelberg, University of Heidelberg, Heidelberg, Germany[2], Laboratory for Physical Biology, RIKEN Center for Biosystems Dynamics Research, Kobe, Japan[3])

**P-084 (OP4-07)** Gap junctions are required for neolamination in Drosophila

○Guangxia Miao, Denise Montell (UCSB)

**P-085 (OP1-05)** Trynity controls epidermal barrier function and respiratory tube maturation in *Drosophila* by modulating apical extracellular matrix nanopatterning

ショウジョウバエ Trynity 分子は細胞外基質の微細構造形成を介して表皮バリア機能と気管成熟の制御を行う

○Yuki Itakura[1], Sachi Inagaki[2], Housei Wada[1], Shigeo Hayashi[1,3] (RIKEN BDR[1], Biosignal Research Center, Kobe University[2], Department of Biology, Kobe University Graduate School of Science[3])

**P-086** Assessing the Roles of Bioelectric Signaling in Embryonic Patterning Using vertebrate limb buds

膜電位が駆動する四肢形成メカニズム

○Yuji Atsuta[1,2], Reiko Tomizawa[1,2], Michael Levin[2], Clifford Tabin[1,2] (Genetics, Harvard[1], Allen Center at Tufts[2])

**P-087 (OP4-04)** Identification of Wnt5a downstream targets during early development in mouse
マウス初期発生における Wnt5a 下流因子の探索
○Rieko Ajima[1,2], Yumiko Saga[1,2] (NIG[1], SOKENDAI[2])

**P-088** *dhfr* and *hdd*, genes involved in pigment cell differentiation isolated by transcriptome analysis of flounder metamorphosis
*dhfr* と *hdd*：ヒラメのトランスクリプトーム解析で単離された色素胞分化に関与する遺伝子
○Hayato Yokoi[1], Shunya Nakamura[1], Satoshi Ansai[2], Kiyoshi Naruse[2], Tohru Suzuki[1] (Grad Schl Agricultural Sci, Tohoku Univ[1], NIBB[2])

**P-089** Expression and Functional Analysis of Axial Protocadherin/Protocadherin-1 in mouse embryo
マウス胚における Axial Protocadherin/Protocadherin-1 の発現及び機能解析
○Kanako Fukunaga[1,2,3], Hiroki Kuroda[1,2], Masafumi Inui[3,4] (IAB, Keio Univ.[1], Faculty of Env. and Info., Keio Univ.[2], Dpt. Life Sci., Sch. of Agri., Meiji Univ.[3], NCCHD[4])

**P-090** Left-right asymmetric nuclear migration in the visceral muscles breaks lateral symmetry of the embryonic gut in Drosophila
○Dongsun Shin[1], Yoshitaka Morishita[2], Mototsugu Eiraku[1], Takeshi Sasamura[1], Mikiko Inaki[1], Kenji Matsuno[1] (Department of Biological Science, Graduate School of Science, Osaka University[1], Institute for Frontier Life and Medical Sciences, Kyoto University[2])

**P-091** Elucidation of spatiotemporal control of tentacle formation in cnidarians; Evo-Devo study focusing on Moon Jelly
刺胞動物触手形成の時空間制御の解明；ミズクラゲを中心とした進化発生学的研究
○Safiye Esra Sarper[1], Tamami Hirai[2], Shigeru Kuratani[2], Koichi Fujimoto[1] (Osaka Univ.[1], Riken BDR[2])

**P-092** Force-dependent tendinous ECM remodeling during flight muscle Development
○Wei-Chen Chu, Xiaorei Sai, Shigeo Hayashi (RIKEN BDR)

**P-093 (OP4-09)** The mechanism about the growth of collagen crystal involved with fin skeletal development.

魚類ヒレ骨の形態形成に必須なコラーゲン結晶の成長メカニズム

○Junpei Kuroda[1], Takeshi Itabashi[2], Atsuko H Iwane[2], Toshihiro Aramaki[1], Hibiki Nakagawa[1], Shigeru Kondo[1] (FBS, Osaka Univ[1], Biosystems Dynamics Center, Riken[2])

**P-094 (SW1-04)** Transcriptome analysis for elucidating genes expressed in the color pattern of *Drosophila guttifera*

ミズタマショウジョウバエの模様で発現する遺伝子の解明のためのトランスクリプトーム解析

○Yuichi Fukutomi[1], Shuji Shigenobu[2], Shigeyuki Koshikawa[1] (Hokkaido-U[1], NIBB[2])

**P-095 (OP1-11)** The G-protein coupled receptor GPR17 is an Essential Component of the Negative Feedback Loop of the Sonic Hedgehog Pathway in the Neural Tube Development

GPR17 による Sonic Hedgehog シグナルへの負のフィードバック制御機構が与える神経管発生への影響

○Atsuki Yatsuzuka[1], Akiko Hori-Nishi[1], Minori Kadoya[1], Toru Kondo[2], Noriaki Sasai[1] (NAIST[1], Insititute for Genetic Medicine, Hokkaido Univercity[2])

**P-096** Study on Paired Normal and Tumor Organoid Development from Adult Murine Pancreas and Female Reproductive Tract

Zong-Wei Chen[1], Yu-Chan Chih[1], Wei-Ling Tu[1], Li-Ru You[2], ○Chun-Ming Chen[1] (DLSIGS, Natl. Yang-Ming Univ.[1], IBMB, Natl. Yang-Ming Univ.[2])

**P-097 (SW2-02)** Left-right asymmetric cellular behavior drives directional heart twisting.

一定方向への心臓捻転を駆動する左右非対称な細胞の振る舞い

○Hinako Kidokoro[1,2,3], Gary C. Schoenwolf[2], Yukio Saijoh[2] (NCVC[1], Univ. of Utah[2], Doshisha Univ.[3])

**P-098** The molecular mechanisms regulating spatial arrangement of organ formation during regeneration in planarians

プラナリア再生時における空間的な器官配置を制御する分子機構

○Kazutaka Hosoda[1,2,3], Kiyokazu Agata[3,4], Yoshihiko Umesono[2] (RIKEN BDR[1], Grad. Sch. of Life Sci., Univ. of Hyogo[2], Dept. of Biophys., Grad.

Sch. of Sci., Kyoto Univ.[3], Dept. o Life Sci., Fact. of Sci., Grad. Course in Life Sci., Grad. Sch. of Sci., Gakushuin Univ.[4])

**P-099** Characterization of narigoma, a key regulator of anterior gut left-right asymmetry in Drosophila melanogaster

○Yi-Ting Lai[1], Tomoki Ishibashi[1], Mitsutoshi Nakamura[1], Katsushi Yamaguchi[2], Shuji Shigenobu[2], Kenji Matsuno[1] (Department of Biological Sciences, Osaka Univ.[1], NIBB Core Research Facilities, NIBB[2])

**P-100** The effect of retinoic acid signaling on the expression of Ripply3 gene in pharyngeal arch development

咽頭弓形成を制御する Ripply3 の発現調節とレチノイン酸シグナルの影響

○Tadashi Okubo[1], Keiko Hara[1], Sadahiro Azuma[1], Shinji Takada[2] (Lab. Animal Sci., Kitasato Univ. School of Medicine[1], Okazaki Institute for Integrative Bioscience, NINS[2])

**P-101** Single-cell analysis of embryo size regulation with production of dwarf ascidian tailbud embryo

ホヤの卵体積変化に伴う尾芽胚サイズ制御の 1 細胞レベル解析

○Kaoru Matsumura[1], Mitsuru Nakamura[2], Wataru Koizumi[1], Kohji Hotta[1], Kotaro Oka[1] (Keio Univ.[1], Tokyo Univ.[2])

**P-102 (OP1-02)** Vascular remodeling: dynamics of avascular pillars regulated by local differences in blood flow

生体内血管リモデリング：局所的な血流の差異による血管網内の無血管領域 "pillar" の変形制御

○Yuta Takase[1,2], Kenichi Nakazato[3], Atsushi Mochizuki[3,4], Yoshiko Takahashi[1] (Dept. of Zoology, Grad. Sch. of Sci., Kyoto Univ.[1], MACS, Grad. Sch. of Sci., Kyoto Univ.[2], Theor. Biol. Lab., RIKEN[3], IFLMS, Kyoto Univ.[4])

**P-103** a novel role of Fgf signaling for the roof plate formation in chick hindbrain.

ニワトリ後脳の発生における Fgf シグナルの新たな役割

○Jun Hatakeyama, Kenji Shimamura (IMEG, Kumamoto Univ.)

**P-104 (OP1-03)** Cell Budding During Endothelial to Hematopoietic Transition is Regulated by Aquaporin Water Channels

水チャネル Aquaporin は内皮―造血転換時の細胞出芽を制御す

る
Mugiho Shigematsu, Chie Tamura ○Yuki Sato (Grad. Sch. Med. Sci., Kyushu Univ.)

**P-105** Dorsal-to-ventral neocortical expansion is physically primed by ventral streaming of early embryonic prelate neurons
大脳新皮質の腹側方向への拡張的形成には胎生初期プレプレートニューロンの腹側移動が物理的に貢献する
○Kanako Saito, Mayumi Okamoto, Yuto Watanabe, Arata Nagasaka, Takaki Miyata (Dept Anat and Cell Biol, Grad Sch of Med, Nagoya Univ.)

**P-106** Quantitative analysis of chiral cell-twisting that drives left-right asymmetric rotation of the hindgut in Drosophila
ショウジョウバエ後腸捻転を誘発する後腸上皮細胞のねじれの定量的解析
○Taishi Takigawa[1], Akino Okubo[1], Takamichi Sushida[2], Masakazu Akiyama[2], Yasuhiro Inoue[3], Mikiko Inaki[1], Kenji Matsuno[1] (Dept. Biol.Sci., Grad. Sch. Sci., Osaka Univ.[1], RIES, Hokkaido Univ.[2], IFLMS, Kyoto Univ.[3])

**P-107** Mechanical force regulates epithelial tissue formation through FGFR/Erk2 signaling pathway in Xenopus embryos
アフリカツメガエル胚において力学刺激は FGFR/Erk2 を介して上皮組織形成を制御する
○Noriyuki Kinoshita[1], Yutaka Hashimoto[1,2], Ileana Cristea[2], Naoto Ueno[1] (NIBB[1], Dept of Mol Biol, Princeton Univ[2])

**P-108** Resolving the correlation between phenotype and genotype in a segmentation gene *even-skipped* in the cricket *Gryllus bimaculatus*
フタホシコオロギ *Gryllus bimaculatus* における、体節形成遺伝子 *even-skipped* の表現型と遺伝子型間の相関関係の解明
○Yuki Nakamura[1], Sayuri Tomonari[2], Kohei Kawamoto[1], Takahito Watanabe[3], Yoshiyasu Ishimaru[3], Sumihare Noji[4], Taro Mito[3] (Grad. Sch. of Adv. Tech. and Sci., Tokushima Univ.[1], Center for Technical Support, Tokushima University[2], Graduate School of Bioscience and Bioindustry, Tokushima University[3], Tokushima University[4])

**P-109 (SW1-05)** Arrangement of collagen fibers is required for the fin bone formation in zebrafish

ヒレ骨の形態形成には槍状コラーゲン結晶体が関与する
○Hibiki Nakagawa, Toshihiro Aramaki, Junpei Kuroda, Shigeru Kondo (FBS, Osaka Univ)

**P-110** Physical characteristics of the epithelium during limb morphogenesis
肢芽の形態形成期における上皮組織の物理的な性質について
○Kazuki Kawamura[1], Makoto Ono[1], Atsushi Kuroiwa[1], Yoshihiro Morishita[2], Takayuki Suzuki[3,4] (Grad School of Sci, Nagoya Univ[1], BDR, RIKEN[2], Grad School of Bioag Sci, Nagoya Univ[3], ABRC, Nagoya Univ[4])

**P-111** Spontaneous and periodic contraction of embryonic gut cells: in vitro culture system to visualize peristaltic movements
腸管細胞の自発的かつ周期的な細胞収縮：腸蠕動運動の理解にむけた培養系の確立
○Rei Yagasaki[1], Ryo Nakamura[2], Yuuki Shikaya[1], Ryosuke Tadokoro[1], Yoshiko Takahashi[1] (Dept of Zool. Kyoto Univ.[1], OIST[2])

**P-112 (SW1-06)** Origins of peristaltic waves are confined to specific sites in the developing gut of chick embryos
発生過程における腸蠕動運動の定量化と起点位置の解析
○Yuuki Shikaya[1], Tadayoshi Watanabe[1], Ryosuke Tadokoro[1], Ryo Nakamura[3], Yuta Takase[1,2], Yoshiko Takahashi[1] (Department of Zoology, Graduate School of Science, Kyoto Univ.[1], MACS, Graduate School of Science, Kyoto Univ.[2], Evolutionary Neurobiology Unit, OIST[3])

**P-113 (OP7-02)** Foxg is required for the palp formation in ascidian embryos
○Boqi Liu, Yutaka Satou (GSS, Kyoto Univ.)

**P-114** Single-cell transcriptome approach to investigate the mechanism of specifying mesoderm lineages using human iPSCs
○Wei Zhao, Minoru Takasato (BDR)

**P-115 (OP7-03)** Endodermal SOX2 expression determines the esophagus character of the anterior foregut in both epithelial and mesenchymal components
内胚葉で発現する SOX2 が消化管前部の上皮と間充織の双方を食道に発生させる
○Machiko Teramoto[1], Ryo Sugawara[1], Atsushi Kuroiwa[2], Yasuo Ishii[3], Hisato Kondoh[1] (Fac. of Life Sci., Kyoto Sangyo Univ.[1], Div. of Biol. Sci., Grad. Sch. of Sci., Nagoya Univ.[2], Dept. of Biol. Sch. of Med, TWM Univ.[3])

**P-116** Identification of collaborating transcriptional factor of androgen receptor (AR) for the sexually dimorphic organ formation.
性差器官形成過程におけるアンドロゲンレセプター（AR）の転写共役因子の同定
○Daiki Kajioka, Kentaro Suzuki, Shoko Matsushita, Gen Yamada (Dep. Dev. Genet., WMU)

**P-117 (OP7-01)** Ecdysone-inducible polished rice temporally regulates fate decision of tracheal tip cells in *Drosophila* embryonic tracheal morphogenesis.
エクジソン誘導性 *polished rice* 遺伝子は、ショウジョウバエ胚発生において気管先端細胞の分化を時期特異的に制御する。
○Yuki Taira[1], Housei Wada[2], Shigeo Hayashi[2], Yuji Kageyama[1,3] (Dept. Biol., Grad. Sch. Sci., Kobe Univ.[1], RIKEN, BDR[2], Biosig. Res. Ctr., Kobe Univ.[3])

**P-118** Pax3 and Pax7 sequentially regulate fate choice of pigment cells in medaka and zebrafish
Pax3 と Pax7 はメダカおよびゼブラフィッシュにおける色素細胞の運命決定を制御する
Motohiro Miyadai[1,2], Hiroyuki Takada[1,2], Tetsuaki Kimura[3], Yuuri Tsunogai[1,2], Robert Kelsh[4], Kiyoshi Naruse[3], Masahiko Hibi[1], ○Hisashi Hashimoto[1] (Biosci. & Biotech. Ctr., Nagoya Univ.[1], Grad. Sch. Sci., Nagoya Univ.[2], NIBB[3], Univ. Bath[4])

**P-119** On-chip construction of perfusable vascular network with human iPS cell-derived kidney organoid
ヒト iPS 細胞由来腎臓オルガノイドのオンチップ血管網構築
○Ryu Okada[1], Yoshikazu Kameda[1], Toshikazu Araoka[2], Minoru Takasato[3], Ryuji Yokokawa[1] (Kyoto Univ.[1], CiRA, Kyoto Univ.[2], RIKEN BDR[3])

**P-120 (SW2-03)** Identification of the earliest progenitor for the cardiac conduction system
マウス胚における刺激伝導系初期前駆細胞の解析
○Akane Sakaguchi[1,2], Hiroki Kokubo[3], Rieko Ajima[2], Yumiko Saga[2,4] (BDR[1], NIG[2], Hiroshima University[3], The University of Tokyo[4])

**P-121** A Challenge of Generating Distal Tips in Developing Lung by Optogenetic Control of ERK Activity
マウス胎仔肺における ERK 活性の光遺伝学的制御と上皮管の

先端化誘導の試み

○Takuya Yoshida[1], Michiyuki Matsuda[1,2], Tsuyoshi Hirashima[2] (Lab. of Bioimaging and Cell Signaling, Grad. Sch. of Biostudies, Kyoto Univ.[1], Dept. of Pathol. and Biol. of Diseases, Grad. Sch. of Med., Kyoto Univ.[2])

**P-122** The amniotic collar is formed by different speed of posterior extension between the endoderm and the ectoderm at the anterior intestinal portal

羊膜えりは前腸門内胚葉と外胚葉の後方への伸長の差によって生じる

Nao Yamaguchi, ○Kimiko Fukuda (Dept,. Biol., Tokyo Metropol. Univ.)

**P-123 (SW1-07)** Secondary neurulation precursors in the tail bud undergo self-renewal and neural differentiation regulated by differential levels of Sox2 expression in chicken embryos

トリ胚尾芽の secondary neurulaton 前駆細胞の Sox2 発現レベル依存的な自己複製と神経分化の制御

○Teruaki Kawachi[1], Eisuke Shimokita[2], Ryosuke Tadokoro[1], Yoshiko Takahashi[1] (Kyoto Univ.[1], Tokushima Univ.[2])

**P-124 (OP7-08)** Chirality in the dynamic behavior of blood cell cytoplasm in *Drosophila*

○Takeshi Sasamura[1], Daisuke Kurisu[1], Masakazu Akiyama[2], Kohei Otomo[2], Tomomi Nemoto[2], Hiroaki Mizuno[3], Naoki Watanabe[3], Hiromi Miyoshi[4], Arata Kaneko[4], Kenji Matsuno[1] (Grad. Sch. Sci., Osaka Univ.[1], RIES, Hokkaido Univ.[2], Grad. Sch. Med., Kyoto Univ.[3], Grad. Sch. Sys. Des. Tokyo Met. Univ.[4])

**P-125 (OP7-04)** A novel chromatin remodeling factor, Arip4 controls the cardiac chamber development via regulation of Notch signaling

新規クロマチンリモデリング因子 Arip4 は Notch シグナルを介して心室形成を制御する

○Nodoka Yanagi[1], Hidesato Ogawa[1,2], Yuika Morita[1,3], Megumi Tsuchiya[2], Tetsuya Asano[1], Manabu Shirai[4], Robert Schwart[5], Ken-ichirou Morohashi[6], Tetsushi Furukawa[1], Kazuko Koshiba-Takeuchi[7], Jun Takeuchi[1] (Dept. BIP., MRI., TMDU[1], Nuclear Dynamics Group, Graduate School of Frontier Biosciences, Osaka University[2], Department of Cardiology, Keio University School of Medicine[3], Department of Bioscience and Genetics, National Cerebral and Cardiovascular Center Research Institute[4], Department of

Biology and Biochemistry, University of Houston[5], Department of Molecular Biology, Graduate School of Medical Sciences, Kyushu University[6], Faculty of Life Sciences, Department of Applied Biosciences, Toyo University[7])

**P-126** Cell-non-autonomous interaction between the endoderm and mesoderm is essential for morphogenetic movements of both tissues during gastrulation of the *Drosophila* embryo
ショウジョウバエ原腸形成時の内胚葉と内臓中胚葉の形態形成運動は両組織間の細胞非自律的な相互作用を必要とする
○Ryutaro Murakami, Satomi Kawamura, Mai Hanada, Yuichi Yoshimura, Saki Kamioka, Yumiko Harada (Grad. Sch. Sci. Tech. for Innov., Yamaguchi Univ.)

**P-127 (SW2-05)** Isolation of single nuclei from injured spinal cord of adult and neonatal mice.
成体および幼弱マウスで損傷した脊髄の核の単離
○Iyo Yorifuji[1,2], Hiroshi Tsujioka[1], Yasushi Sakata[2], Toshihide Yamashita[1,3,4,5] (Department of Molecular Neuroscience, Osaka University[1], Department of Cardiovascular Medicine, Osaka University[2], Department of Neuro-Medical Science, Osaka University[3], Frontier Biosciences, Osaka University[4], WPI Immunology Frontier Research Center[5])

**P-128** Molecular mechanism for the layer and column-specific targeting in the Drosophila visual system.
ショウジョウバエ視神経系における層・カラム特異的軸索投射の分子機構
○Hiroki Takechi, Satoko Hakeda-Suzuki, Takashi Suzuki (Tokyo Institute of Technology Suzuki Lab)

**P-129 (OP5-01)** Dscam regulates lineage dependent repulsion during columnar unit formation in the fly brain
○Chuyan Liu, Olena Trush, Makoto Sato (Kanazawa Univ)

**P-130 (OP5-07)** The role of the Strawberry Notch Homolog 1 in the neurite growth of the cortical neurons
ストロベリーノッチ１遺伝子は皮質ニューロンの神経突起伸長に働く
○Munkhsoyol Erkhembaatar[1], Keito Minemori[1], Iroha Yamamoto[1], Fuduki Inoguchi[1], Takashi Imaz[1], Shinsuke Ikeno[1], Carine Hanashima[2], Satoru

Yamagishi[3], Hayato Naka-Kaneda[1], Kosuke Taki[1], Yu Katsuyama[1] (SUMS[1], ASE, Waseda Univ[2], Hamamatsu Univ Scho Med[3])

**P-131** The expression pattern of neuronal intermediate filament α-internexin in the developing pineal gland of *Hoplobatrachus rugulosus*
○Tzu-Chuen Lin, Meng-Lin Liao, Chung-Liang Chien (Dept. of Anat. & Cell Biol., NTU, Taipei, Taiwan)

**P-132** Cfdp1 regulates cell cycle and differentiation of granule cells in the zebrafish cerebellum
Cfdp1 は、ゼブラフィッシュ小脳顆粒細胞の細胞周期と分化を制御する
○Takashi Shimizu[1,2], Shinsuke Inoue[1,2], Xiaoding Sun[1,2], Masahiko Hibi[1,2] (BBC, Nagoya Univ.[1], Grad. Sch. of Sci., Nagoya Univ.[2])

**P-133** Analysis of nutrient-dependent responses of somatosensory neurons in Drosophila larvae: their underlying mechanisms and adaptive roles
ショウジョウバエ幼虫の感覚神経細胞における栄養応答メカニズムとその役割の解析
○Yasutetsu Kanaoka[1], Henrik Skibbe[2], Yusaku Hayashi[1], Koun Onodera[1], Ayumi Mure[1], Yuuki Takahashi[1], Tadao Usui[1], Yukako Hattori[1], Tadashi Uemura[1] (Grad. Sch. of Biostudies., Kyoto Univ.[1], Grad. Sch. of Informatics., Kyoto Univ.[2])

**P-134** Roles of transcriptional regulators Foxp1b/Foxp4 and Skor1b/Skor2 in differentiation of Purkinje cells in the zebrafish cerebellum
ゼブラフィッシュ小脳プルキンエ細胞分化における転写制御因子 Foxp1b/Foxp4 および Skor1b/Skor2 の役割
Shinnosuke Yura, Tsubasa Itoh, Takashi Shimizu, ○Masahiko Hibi (Grad. Sch. Sci., Nagoya Univ.)

**P-135 (OP2-09)** Possible Sox2 autoregulation involving POU partner factors in the establishment of embryonic neural primordia
胚の神経系原基を成立させる過程での、POU 因子をパートナーとした Sox2 の自己制御
○Hideaki Iida[1], Masanori Uchikawa[2], Hisato Kondoh[1] (DBGSE, Kyoto Sangyo Univ.[1], GSFB, Osaka Univ.[2])

**P-136** Differential and overlapping pattern of Foxp1 and Foxp2 expression in the striatum of adult mouse brain

Weng Lam Fong, Hsiao-Ying Kuo, Hsiao-Lin Wu, Shih-Yun Chen, ○Fu-Chin Liu (INS, National Yang-Ming University)

**P-137 (OP5-11)** Tsukushi affects hippocampal neurogenesis in mouse brain
○Shah Adil Ishtiyaq Ahmad, Mchammad Badrul Anam, Naofumi Ito, Kunimasa Ohta (Dev Neur, Kumamoto Univ.)

**P-138 (OP5-05)** Preselection of long- and short-range projection neurons through reciprocal Foxg1 and COUP-TFI actions establish the sensory cortical circuit
○Peishan Hou, Carina Hanashima (Dept of Biol, Faculty of Education, Waseda Univ.)

**P-139** Decreases in Numbers of Mitotic Cells and Pattern of Spontaneous Intracellular Calcium Oscillations During Mouse Cortex Development
○Rhaditya Putu Adi Andhika, Jun Motoyama (Developmental Neurobiology, Doshisha Univ)

**P-140 (OP5-09)** Unraveling 3D structure of functional compartments in the developing cerebellum: Spatiotemporal analysis in zebrafish
小脳発達における小脳機能コンパートメントの 3 次元的理解 : ゼブラフィッシュを用いた時空間的解析
○Kanae Hiyoshi[1], Narumi Fukuda[1], Kyo Yamasu[1], Sachiko Tsuda[1,2] (Grad Sch of Sci and Eng, Saitama Univ.[1], Research and Development Bureau, Saitama Univ.[2])

**P-141 (OP5-06)** Mechanisms Underlying Left-Right Asymmetry formation of the *Drosophila* brain
ショウジョウバエの脳における左右非対称性形成機構
○So Sakamura[1], Fuyu Hsu[2], Ann-shyn Chiang[2], Kenji Matsuno[1] (FBS[1], NTHU[2])

**P-142 (OP5-10)** Mutation in strip1 gene leads to impaired retinal neural circuit formation in zebrafish
ゼブラフィッシュにおける Strip1 遺伝子変異は網膜神経回路形成を阻害する
○Mai Ahmed, Yutaka Kojima, Ichiro Masai (OIST)

**P-143 (OP5-04)** Chemotactic implementation of topographic axonal wiring
走化性によるトポグラフィック神経回路の配線

○Naoki Honda (Kyoto University)

**P-144 (OP2-10)** Induction of ganglioside synthesis in Drosophila brain
ショウジョウバエの脳神経で発現させたガングリオシドの機能解析
○Leo Tsuda, Yasutoyo Yamasaki, Young-Mi Lim (NCGG)

**P-145** Synchronized cell differentiation via exosomes for proper development
エクソソームを介した細胞間分化同調機構
○Tomohiro Minakawa, Kae Nakamura, Akira Watanabe, Jun K Yamashita (CiRA, Kyoto University)

**P-146** Transdifferentiation of human cancer cells by ribosome
リボソームによるヒトがん細胞の分化転換
○Mikiko Kudo, Mohammad Anam, Shah Ahmad, Naofumi Ito, Kunimasa Ohta (Dep. Dev. Neuro, Grad. Sch. Life Sci., Kumamoto Univ.)

**P-147 (SW2-06)** Dramatic effect of oct3/4 on somatic reprograming in 3T3 cells and mouse embryonic fibroblasts (MEF)
3T3 及び MEF のリプログラミング時における Oct3/4 の機能追跡
○Shuji Matsuguchi, Yohei Hirai (DBC, Kwansei Gakuin Univ)

**P-148 (OP8-01)** Mammalian cells acquire cellular lineage plasticity by incorporating ribosomes
リボソームによる細胞分化可塑性の誘導
○Naofumi Ito, Adil Ishtiyaq Ahmad Shah, Badrul Anam Mohammad, Kunimasa Ohta (Dev. neurobiol., Kumamoto University)

**P-149** A culture system for maintenance of multipotent neural crest stem cells (NCSCs) derived from human iPS cells.
ヒト iPS 細胞由来神経堤細胞の維持拡大培養系の構築
○Yayoi Toyooka[1,3], Nami Kawaraichi[2,3], Makoto Ikeya[1,3] (CiRA[1], Takeda Pharmaceutical Company Ltd.[2], T-CiRA[3])

**P-150 (OP8-02)** IL-1 and TNFa in the inflammatory niche enhance the proliferation of alveolar type 2 epithelial cell and contribute to alveolar regeneration
炎症性ニッチにおける IL-1 と TNFa は 2 型肺胞上皮細胞の増殖を促進し、肺胞の再生に寄与する

○Hiroaki Katsura, Yoshihiko Kobayashi, Purushothama Tata, Brigid Hogan (Duke University)

**P-151** Cell clusters formation by ribosome is reproducible with various kinds of cell lines
様々な細胞株におけるリボソームによる細胞塊形成の再現
○Yuichi Goto[1], Hiroki Nakagawa[1], Ryusei Yoneda[1], Nao Nishiyama[1], Maiko Goto[1], Kunimasa Ohta[2] (Uto Senior High School[1], Kumamoto University[2])

**P-152** Heterogeneity of RNP granules specific to planarian adult pluripotent stem cells and its functions
分化全能性幹細胞特異的 RNP 顆粒の不均一性の発見とその機能
○Nobuyoshi Kumagai[1], Makoto Kashima[2], Norito Shibata[3], Kiyokazu Agata[1] (Department of Life Science, Gakushuin University[1], Department of Biophysics, Kyoto University[2], Department of Integrated Science and Technology, Tsuyama College[3])

**P-153** Trial for reconstruction of a planarian body from pluripotent stem cells
プラナリア多能性幹細胞から個体再構築への試み
○Miyuki Ishida[1], Reza Bagherzadeh[1], Hiroyuki Kayo[2], Kiyokazu Agata[1] (Gakushuin Univ.[1], BD[2])

**P-154 (OP8-08)** Analysis on cellular and molecular mechanisms for regeneration of the enteric nervous system of zebrafish
ゼブラフィッシュを用いた腸神経細胞除去後の再生機構の解明
Maria Ohno[1], Natsumi Horiuchi[2], Koichi Kawakami[3], ○Masataka Nikaido[1], Kohei Hatta[1] (Grad. Sch. of Life Sci., Univ. of Hyogo,[1], Sch. of Sci., Univ. of Hyogo[2], Div. of Mol. & Dev. Biol., NIG & Dep. of Genet. SOKENDAI[3])

**P-155 (OP8-11)** Dilp8 is involved in *winged eye* -mediated transdetermination of *Drosophila* imaginal disc
ショウジョウバエ成虫原基の決定転換における Dilp8 の役割
○Kazuya Nemoto, Keita Masuko, Naoyuki Fuse, Shoichiro Kurata (Graduate School of Pharmaceutical Sciences, Tohoku University)

**P-156** The roles of aging- related LIN28 during anterior regeneration in aquatic annelid A. viride

○Yao-Hsiang Chang, Jiun-Hong Chen (NTULS)

**P-157 (OP8-10)** Tsukushi inhibits myofibroblast differentiation by competing with TGF-β1
分泌因子 Tukushi は TGF-β1 と競合することによって筋線維芽細胞の分化を抑制する
○Rie Kawano[1,2], Naofumi Ito[2], Kunimasa Ohta[2] (Dep. Med. Oncology and Hematology, Oita Univ.[1], Div. Develop. Neuro, Kumamoto Univ.[2])

**P-158** The unique mmp1 expression for the stump of the joint regeneration in *Xenopus laevis*
アフリカツメガエル関節再生時のスタンプ領域における特異的な mmp1 発現
○Haruka Matsubara, Takeshi Inoue, Ei Kakuta, Kiyokazu Agata (Department of Life Science, Gakushuin University)

**P-159 (OP8-06)** PI3K signal is required for regenerative cell survival by recruiting the macrophage to amputation site
○Siyu Zhou, Atsushi Kawakami (Tokyo Inst. Technology)

**P-160 (OP8-05)** Local induction of shh expression alters limb development and regeneration in *Xenopus laevis*
局所的な shh 発現の誘導はアフリカツメガエルの四肢発生と再生を変化させる
Riho Hasugata[1], Takuya Kobayashi[2], Haruki Ochi[3], Koji Tamura[2], ○Hitoshi Yokoyama[1] (Dept. of Biochem. & Mol. Biol., Facul. of Agri. & Life Sci., Hirosaki Univ.[1], Dept. of Dev. Adap., Grad. Schol. Life Sci., Tohoku Univ.[2], Facul. of Med., Yamagata Univ.[3])

**P-161 (OP8-04)** Genetic analysis of thr roles of Hox genes in newt limb regeneration
イモリ四肢再生における Hox 遺伝子機能についての遺伝学的解析
○Takashi Takeuchi, Fumina Minamitani, Toshinori Hayashi (Sch. of Life Sci., Fac. of Med., Tottori Univ.)

**P-162** Identification of the cells expected to participate in mouse joint regeneration
マウス関節再生に参画が期待される細胞の同定
○Masakazu Hotta[1], Haruka Matsubara[1], Tetsuya Endo[2], Kiyokazu Agata[1] (Graduate School of Science, Gakushuin University[1], Division of Liberal

Arts and Sciences, Aichi Gakuin University[2])

**P-163 (SW1-08)** Knockdown of *ouro* genes represses metamorphic disappearance of brachial sac skin of *Xenopus* tadpoles
ouro 遺伝子のノックダウンによるツメガエル幼生上腕嚢皮膚の消失の阻害
○Izumi Ishimori, Yumi Izutsu (Grad. Sch. of Sci. and Tech., Niigata Univ.)

**P-164 (SW1-09)** Enhancer elements for tissue regeneration in zebrafish
ゼブラフィッシュの組織再生に関するエンハンサー配列の同定
○Teruhisa Tamaki, Eri Shibata, Atsushi Kawakami (Tokyo Tech)

**P-165** Involvement of macrophages in leg regeneration of the cricket Gryllus bimaculatus
フタホシコオロギでの脚再生におけるマクロファージの関与
○Takuya Watari[1], Yoshiyasu Ishimaru[2], Sumihare Noji[2], Taro Mito[2] (Grad. Sch. of Adv. and Sci., Tokushima Univ.[1], Division of Bioscience and Bioindustry, Graduate School of Technology, Industrial and Social Sciences, Tokushima University[2])

**P-166** Transcriptomic analyses of sexually dimorphic expressed genes in chicken feathers
○Yen-Ching Wang[1], Chia-Hsuan Lin[1], Chih-Kuan Chen[2], Hsu-Chen Cheng[1] (Dept. Life Sci. NCHU[1], Dept. Pathology, Keck School of Medicine of USC[2])

**P-167** Zebrafish primitive erythropoiesis does not require demethylation activity of LSD1
ゼブラフィッシュの一次赤血球造血には LSD1 の脱メチル化能は必要ではない
○Junya Tamaoki, Miki Takeuchi, Makoto Kobayashi (University of Tsukuba Department of Molecular and Developmental Biology)

**P-168 (OP8-03)** Planarian Promoter Architecture
○Reza Bagherzadeh[1,2,3,5], Ruslan Deviatiiarov[7], Elena Minkina[7], Seyed Ahmad Mousavi[1], Ali Sharifi-Zarchi[1,4], Oleg Gusev[6,7], Hossein Bahrvand[1,5], Kiyokazu Agata[2,3] (Royan Institute for Stem Cell Biology and Technology[1], Kyoto University[2], Gakushuin University[3], Sharif University of Technology[4], University of Science and Culture[5], RIKEN Center for Life Science Technologies (CLST)[6], Institute of Fundamental Medicine and Biology[7])

**P-169 (OP6-01)** Acquiring a zip-code sequence for basal transport of Ccnd2 mRNA contributes to the cerebral basal progenitor proliferation in placental mammals.

Ccnd2 mRNA の basal endofoot 輸送配列の獲得が有胎盤類における大脳 basal progenitor の増殖に貢献した。

Takako Kikkawa[1], ○Yoshio Wakamatsu[1], Yukiko Inoue[2], Kunihiro Suzuki[3], Takayoshi Inoue[2], Noriko Osumi[1] (Dept. Dev. Neurosci., Tohoku Univ. Grad. Sch. Med.[1], Dept. Biochem. Cell. Biol., Nat. Inst. Neurosci., Nat. Cent. Neurol. Psy.[2], Nihon Univ., Scho. Dent. Matsudo[3])

**P-170** Development of antero-posterior pattern in fin ray-distal radial connection of zebrafish pectoral fin

ゼブラフィッシュ胸鰭における前後軸に沿った鰭条パターンの発生

Yoshitaka Tanaka[1], Hiroki Hamada[1], Toshiaki Uemoto[1], Yuki Honda[1], Tetsuya Umeda[1], Keiichi Kitajima[1], Minori Shinya[2], Atsushi Kawakami[3], Koichi Kawakami[4], Koji Tamura[1], ○Gembu Abe[1] (Grad. Sch. Life Sci. Tohoku Univ.[1], Dept. Biol., Keio Univ.[2], Sch. Life Sci. Tech., Tokyo Inst. Tech.[3], Mol. Dev. Biol., NIG[4])

**P-171 (SW2-07)** Tandemly arrayed 4.5SH noncoding RNA genes are essential for early mouse development

4.5SH ノンコーディング RNA のタンデム遺伝子クラスターはマウスの初期発生に必須である

Ikue Yamamoto[1], Michihiko Sugimoto[2], Kimi Araki[2], ○Shinichi Nakagawa[1] (Facult. Pharm., Hokkaido Univ.[1], Div. Dev. Genet., IRDA, Kumamoto Univ.[2])

**P-172 (SW2-08)** Examination of the dorsal-ventral and left-right patterning related genes in the development of a feather star Anneissia japonica

ニッポンウミシダ発生過程における背腹および左右パターニング関連遺伝子の解析

○Akihito Omori[1,2], Yongxin Li[3], Wen Wang[3], Naoki Irie[4], Mariko Kondo[2] (SMBS, Niigata Univ.[1], MMBS, Univ. Tokyo[2], KIZ, CAS[3], Dept. Biol. Sci., Grad. Sch. Sci., Univ. Tokyo[4])

**P-173** Functional analyses of Hox and related genes by CRISPR/Cas9-mediated genome editing in the water flea, *Daphnia magna*

CRISPR/Cas9 によるゲノム編集を利用したオオミジンコ Hox 遺

伝子群の機能解析

Kouki Kusaba, Daichi Naruse, Nagisa Miyazaki, ○Yasuhiro Shiga (Tokyo Univ. Pham. & Life Sci., Sch.of Life Scis.)

**P-174** Do echinoderm embryos have more derived developmental programs than chordates? −A search for "derivedness index" from transcriptomic data

○Jason Cheok Kuan Leong[1], Yongxin Li[2], Yandong Ren[2], Akihito Omori[3], Cynthia Bradham[4], Brian Livingston[5], Masahiro Uesaka[6], Robert Cameron[7], Gary Wessel[8], Mariko Kondo[1], Luonan Chen[1,9], Wen Wang[2,9], Naoki Irie[1] (Dept. Biol. Sci., Univ. of Tokyo[1], State Key Laboratory of Genetic Resources and Evolution, Kunming Institute of Zoology, Chinese Academy of Sciences[2], Sado Marine Biological Station, Faculty of Sci, Niigata Univ[3], Dept of Biol, Boston Univ[4], Dept of Biol Sci, California State Univ[5], RIKEN[6], Div of Biol and Biol Eng, Caltech[7], Dept of Mol and Cell Biol and Biochem, Brown Univ[8], Chinese Academy of Sciences[9])

**P-175** The functional domain-localized mutations hidden in the allotetraploid genome of *Xenopus laevis*

アフリカツメガエルの偽４倍体ゲノムに潜在する機能ドメイン集中型変異

○Mikio Tanouchi[1], Yui Iwata[1], Takeshi Igawa[1], Kiyo Sakagami[2], Nanoka Suzuki[1], Hajime Ogino[1] (Amph. Res. Center, Hiroshima Univ.[1], Dept. of Animal Bio., Nagahama Inst. of Bio-sci. Tech.[2])

**P-176** Isolation of novel classes of C. elegans mutants defective in coupling initiation of larval growth to the availability of food

個体成長の食餌環境適応機構に異常を呈する新規線虫変異体群

○Masamitsu Fukuyama[1,2], Fumiaki Obata[3], Masayuki Miura[3], Kenji Kontani[4], Toshiaki Katada[5] (Dept. of Physiological Chem, Grad. Sch. of Pharmaceutical Sci., Univ. of Tokyo[1], AMED-PRIME, AMED[2], Dept. of Genetics, Grad. Sch. of Pharmaceutical Sci., Univ. of Tokyo[3], Dept. of Biochemistry, Meiji Pharmaceutical University[4], Molecular Cell Biology Laboratory, Research Institute of Pharmaceutical Sciences, Faculty of Pharmacy, Musashino University[5])

**P-177** Glycogen is essential for hypoxia tolerance in Drosophila

ショウジョウバエの低酸素耐性にグリコーゲンは、必須である。

○Takayuki Yamada, Okiko Habara, Takashi Nishimura (BDR)

**P-178 (OP7-11)** The role of the polyol pathway in sugar-sensing and the Mondo/ChREBP-mediated metabolic switch
糖感知および Mondo/ChREBP を介した代謝調節におけるポリオール経路の役割
○Hiroko Sano[1], Akira Nakamura[2], Mariko Yamane[2], Hitoshi Niwa[2], Kimi Araki[3], Kazumasa Takemoto[3], Kei-ichiro Ishiguro[2], Yuki Takada[2], Takashi Nishimura[4], Masayasu Kojima[1] (Inst. of Life Science, Kurume Univ.[1], Inst. of Molecular Embryology and Genetics, Kumamoto Univ.[2], Inst. of Resource Development and Analysis, Kumamoto Univ.[3], RIKEN BDR[4])

**P-179** Dataset of tags of low molecular weight compounds that shared for each of taxonomic groups
動物分類群毎に共通の低分子化合物タグの作成
○Takeshi Kawashima, Nozomu Sakurai (NIG)

**P-180** Live imaging of immune cells in zebrafish
ゼブラフィッシュを用いた免疫細胞のライブイメージング
○Takashi Akanuma, Akihiko Yoshimura (Keio University)

**P-181 (OP9-08)** Tissue force-mediated wound healing in zebrafish epithelia.
ゼブラフィッシュ胚上皮組織にかかる力を利用した創傷治癒の解析
○Sohei Yamada[1], Yasumasa Bessho[2], Yoichiroh Hosokawa[1], Takaaki Matsui[2] (Bio-Process Engineering, NAIST[1], Gene Regulation Research, NAIST[2])

**P-182** The possibility of CD163 as a tool of macrophage origin analysis in mouse; CD163 is expressed on resident macrophages, but not on bone marrow-derived macrophages
CD163 はマウスにおける卵黄嚢-組織在住マクロファージのマーカーとなる可能性がある
○Yoichi Saito[1,2], Yukio Fujiwara[2], Yoshihiro Komohara[2] (Lab. of Biomaterials, Inst. for Frontier Life and Med. Sci., Kyoto Univ.[1], Dept. of Cell Pathol., Grad. Sch. of Med. Sci., Fac. of Life Sci., Kumamoto Univ.[2])

**P-183 (OP9-11)** SSBD: an open public database of microscopy images and quantitative data of biological dynamics
SSBD: 細胞・発生画像情報と生命動態情報の統合データベース
○Kenneth Ho[1], Yukako Tohsato[1,2], Koji Kyoda[1], Hiroya Itoga[1], Shuichi

Onami[1] (RIKEN BDR[1], Osaka Electro-Communication University[2])

**P-184** Pericyte morphogenesis: endothelial cell wrapping and preference for vascular branching.
ペリサイトの形態形成：内皮細胞の被覆と血管分岐部への選好性
○Kei Sugihara[1], Saori Sasaki[2], Akiyoshi Uemura[3], Satoru Kidoaki[2], Takashi Miura[1,4] (Kyushu Univ Grad Sch of Med Sci[1], Kyushu Univ Inst of Mat Chem and Eng[2], Nagoya City Univ Grad Sch of Med Sci[3], JST CREST[4])

**P-185** Roles and mechanisms of the twin peaks of Notch activity at the proneural wave front in the developing fly brain
○Miaoxing Wang[1], Makoto Sato[1,2] (Inst. Front. Sci. Inuit, Kanazawa Univ.[1], Grad. Sch. of Med. Sci., Kanazawa Univ.[2])

**P-186 (OP9-09)** Morphological diversity explained by physical properties of cell-cell interaction in living organisms
細胞間相互作用の物理的性質に基づいた形態の多様性の実現
○Hiroshi Koyama[1,2], Toshihiko Fujimori[1,2] (Div. Embryology, NIBB[1], SOKENDAI[2])

**P-187** Mathematical and morphological analysis of “monospirostichy”, a special kind of spiral phyllotaxis unique to Costaceae plants
コスツス科植物に見られる特異な螺旋葉序「一列斜生」の数理的および形態学的解析
○Takaaki Yonekura, Munetaka Sugiyama (Botanical Gardens, Grad. Sch. Sci., Univ. Tokyo)

**P-188 (OP9-10)** Single molecule dynamics of MyosinI dictating chiral behaviors of *Drosophila* cells
ショウジョウバエ細胞のキラルな振る舞いを制御するI型ミオシンの一分子動態
○Sosuke Utsunomiya[1], Takeshi Sasamura[1], Yukihiro Miyanaga[2], Masahiro Ueda[2], Kenji Matsuno[1] (Dept. Bio. Sci, Osaka Univ.[1], Grad. Sch. of Frontier Bio., Osaka Univ.[2])

**P-189** System identification of mechano-chemical epithelial sheet dynamics
上皮メカノケミカル動態の同定
○Yoshifumi Asakura[1], Yohei Kondo[2], Kazuhiro Aoki[2], Naoki Honda[1] (Kyoto Univ.[1], ExCELLs, NIBB[2])

**P-190** High-throughput and cost-effective RNA-extraction and RNA-Seq method for large scale transcriptome analysis
大規模トランスクリプトーム解析を可能とする低コスト RNA 抽出法及び RNA-Seq ライブラリー調製法
○Makoto Kashima[1], Mari Kamitani[1], Suguru Tanaka[2], Ayumi Tezuka[1], Atsushi Nagano[3] (RIFA, Ryukoku Univ.[1], RDL, Clockmics Inc.[2], FA, Ryukoku Univ.[3])

**P-191** The developmental toxicity of metal nanoparticle in zebrafish
Kazumi Tsukazawa, ○Ka Fai William Tse (Agr, Kyushu Univ.)

**P-192** Function of Polished rice small peptide for the determination of prepupal period in *Drosophila melanogaster*
キイロショウジョウバエの短いペプチド Polished rice の前蛹期間決定における役割
Koich Miyagawa[1], Hamdy Aly[1], Yuji Kageyama[2,3], ○Hitoshi Ueda[1,4] (Grad. Sch. of Natl. Sci. Tech., Okayama Univ.[1], Biosignal Research Center, Kobe University, Japan[2], Dept. Biol., Grad. Sch. of Sci. Kobe University, Japan[3], Fac. of Sci., Dept. of Biol., Okayama Univ.[4])

**P-193** Shadow stimulus-triggered upward swimming of Xenopus larvae is mediated by photoreception of the eyes and the pineal complex
影刺激が引き起こすツメガエル幼生の反射的な上昇遊泳は、眼と松果体複合体による光受容が介在する
○Yumiko Harada[1], Yumi Kondo[2], Hikari Ishii[3], Ryutaro Murakami[1] (Grad. Sch.Sci.Tech. for Innov., Yamaguchi Univ.[1], Dept.Biol Sci. Chem., Fac. Sci., Yamaguchi Univ.[2], Grad.Sch.Med., Yamaguchi Univ.[3])

## Satellite Workshop 1

DATE: May 14 (Tue) 15:30 ～ 17:45 Room B
Chairpersons: Masanori Uchikawa (Osaka Univ.)
Mikiko Inaki (Osaka Univ.)

**SW1-01 (P-013)** 15:30-15:45 Primordial germ cells in avian embryos display a variety of morphology when they exit blood vessels
トリ胚始原生殖細胞の血管外遊走における形態多様性
○Kanta Mizumoto[1], Daisuke Saito[2], Yuta Takase[1,3], Ryosuke Tadokoro[1], Yoshiko Takahashi[1] (Dept of Zool. Kyoto Univ[1], Grad School of Systems Life Sci. Kyushu Univ[2], MACS. Kyoto Univ[3])

**SW1-02 (P-039)** 15:45-16:00 Quantitative analysis of spatial relationship between the mitotic spindle and the centrosome attracting body in early ascidian embryogenesis
ホヤ初期発生における紡錘体と centrosome attracting body の位置の定量的解析
○Hiromu Terui, Naohito Takatori (TMU)

**SW1-03 (P-050)** 16:00-16:15 Left-right asymmetry of vascular patterns is regulated by blood flow
左右非対称に形成される卵黄静脈の血流依存性
○Junki Yoshida[1], Yuta Takase[1,2], Yoshiko Takahashi[1] (Dep of Zool., Grad Sch of Sci., Kyoto Univ.[1], MACS., Grad Sch of Sci., Kyoto Univ.[2])

**SW1-04 (P-094)** 16:15-16:30 Transcriptome analysis for elucidating genes expressed in the color pattern of *Drosophila guttifera*
ミズタマショウジョウバエの模様で発現する遺伝子の解明のためのトランスクリプトーム解析
○Yuichi Fukutomi[1], Shuji Shigenobu[2], Shigeyuki Koshikawa[1] (Hokkaido-U[1], NIBB[2])

**SW1-05 (P-109)** 16:30-16:45 Arrangement of collagen fibers is required for the fin bone formation in zebrafish
ヒレ骨の形態形成には槍状コラーゲン結晶体が関与する
○Hibiki Nakagawa, Toshihiro Aramaki, Junpei Kuroda, Shigeru Kondo (FBS, Osaka Univ)

**SW1-06 (P-112)** 16:45-17:00 Origins of peristaltic waves are confined to specific sites in the developing gut of chick embryos
発生過程における腸蠕動運動の定量化と起点位置の解析
○Yuuki Shikaya[1], Tadayoshi Watanabe[1], Ryosuke Tadokoro[1], Ryo Nakamura[3], Yuta Takase[1,2], Yoshiko Takahashi[1] (Department of Zoology, Graduate School of Science, Kyoto Univ.[1], MACS, Graduate School of Science, Kyoto Univ.[2], Evolutionary Neurobiology Unit, OIST[3])

**SW1-07 (P-123)** 17:00-17:15 Secondary neurulation precursors in the tail bud undergo self-renewal and neural differentiation regulated by differential levels of Sox2 expression in chicken embryos
トリ胚尾芽の secondary neurulaton 前駆細胞の Sox2 発現レベル依存的な自己複製と神経分化の制御
○Teruaki Kawachi[1], Eisuke Shimokita[2], Ryosuke Tadokoro[1], Yoshiko Takahashi[1] (Kyoto Univ.[1], Tokushima Univ.[2])

**SW1-08 (P-163)** 17:15-17:30 Knockdown of *ouro* genes represses metamorphic disappearance of brachial sac skin of *Xenopus* tadpoles
ouro 遺伝子のノックダウンによるツメガエル幼生上腕嚢皮膚の消失の阻害
○Izumi Ishimori, Yumi Izutsu (Grad. Sch. of Sci. and Tech., Niigata Univ.)

**SW1-09 (P-164)** 17:30-17:45 Enhancer elements for tissue regeneration in zebrafish
ゼブラフィッシュの組織再生に関するエンハンサー配列の同定
○Teruhisa Tamaki, Eri Shibata, Atsushi Kawakami (Tokyo Tech)

## Satellite Workshop 2

DATE: May 14 (Tue) 15:30 ～ 17:45 Room C
Chairpersons: Kaoru Imai (Osaka Univ.)
Takeshi Onuma (Osaka Univ.)

**SW2-01 (P-073)** 15:30-15:45 Resynchronization of the segmentation clock in Delta-Notch mutants
Delta-Notch 変異体における分節時計の再同期
○Koichiro Uriu[1], Bo-Kai Liao[2], Luis Morelli[3], Andrew Oates[4] (Kanazawa University[1], National Taiwan Ocean University[2], IBioBA-MPSP[3], EPFL[4])

**SW2-02 (P-097)** 15:45-16:00 Left-right asymmetric cellular behavior drives directional heart twisting.
一定方向への心臓捻転を駆動する左右非対称な細胞の振る舞い
○Hinako Kidokoro[1,2,3], Gary C. Schoenwolf[2], Yukio Saijoh[2] (NCVC[1], Univ. of Utah[2], Doshisha Univ.[3])

**SW2-03 (P-120)** 16:00-16:15 Identification of the earliest progenitor for the cardiac conduction system
マウス胚における刺激伝導系初期前駆細胞の解析
○Akane Sakaguchi[1,2], Hiroki Kokubo[3], Rieko Ajima[2], Yumiko Saga[2,4] (BDR[1], NIG[2], Hiroshima University[3], The University of Tokyo[4])

**SW2-04 (P-022)** 16:15-16:30 Super low cell density culture for understanding cell-cell interaction during human cardiomyogenesis
心筋分化における相互作用を理解するための超低細胞密度培養
○Kiyoshi Ohnuma (Bioeng, Nagaoka Univ Tech)

**SW2-05 (P-127)** 16:30-16:45 Isolation of single nuclei from injured spinal cord of adult and neonatal mice.
成体および幼弱マウスで損傷した脊髄の核の単離
○Iyo Yorifuji[1,2], Hiroshi Tsujioka[1], Yasushi Sakata[2], Toshihide Yamashita[1,3,4,5] (Department of Molecular Neuroscience, Osaka University[1], Department of Cardiovascular Medicine, Osaka University[2], Department of Neuro-Medical Science, Osaka University[3], Frontier Biosciences, Osaka University[4], WPI Immunology Frontier Research Center[5])

**SW2-06 (P-147)** 16:45-17:00 Dramatic effect of oct3/4 on somatic reprograming in 3T3 cells and mouse embryonic fibroblasts (MEF)
3T3 及び MEF のリプログラミング時における Oct3/4 の機能追跡
○Shuji Matsuguchi, Yohei Hirai (DBC, Kwansei Gakuin Univ)

**SW2-07 (P-171)** 17:00-17:15 Tandemly arrayed 4.5SH noncoding RNA genes are essential for early mouse development
4.5SH ノンコーディング RNA のタンデム遺伝子クラスターはマウスの初期発生に必須である
Ikue Yamamoto[1], Michihiko Sugimoto[2], Kimi Araki[2], ○Shinichi Nakagawa[1] (Facult. Pharm., Hokkaido Univ.[1], Div. Dev. Genet., IRDA, Kumamoto Univ.[2])

**SW2-08 (P-172)** 17:15-17:30 Examination of the dorsal-ventral and left-right patterning related genes in the development of a feather star Anneissia japonica

ニッポンウミシダ発生過程における背腹および左右パターニング関連遺伝子の解析

○Akihito Omori[1,2], Yongxin Li[3], Wen Wang[3], Naoki Irie[4], Mariko Kondo[2] (SMBS, Niigata Univ.[1], MMBS, Univ. Tokyo[2], KIZ, CAS[3], Dept. Biol. Sci., Grad. Sch. Sci., Univ. Tokyo[4])

**SW2-09 (P-060)** 17:30-17:45 ptr-18/PTCHD suppresses the activity of grl-7/Hedgehog through endocytosis.

ptr-18/PTCHD はエンドサイトーシスを介して grl-7/Hedgehog の活性を抑制する

○Hirohisa Chiyoda[1], Masahiko Kume[1,2], Toshiaki Katada[1,3], Masamitsu Fukuyama[1] (Dept of Physiol Chemistry, Grad Sch of Parmaceutical Sci, Univ of Tokyo[1], Laboratory of Molecular Medicine, Graduate School of Frontier Science, University of Tokyo[2], Molecular Cell Biology Laboratory, Research Institute of Pharmaceutical Sciences, Faculty of Pharmacy, Musashino University[3])