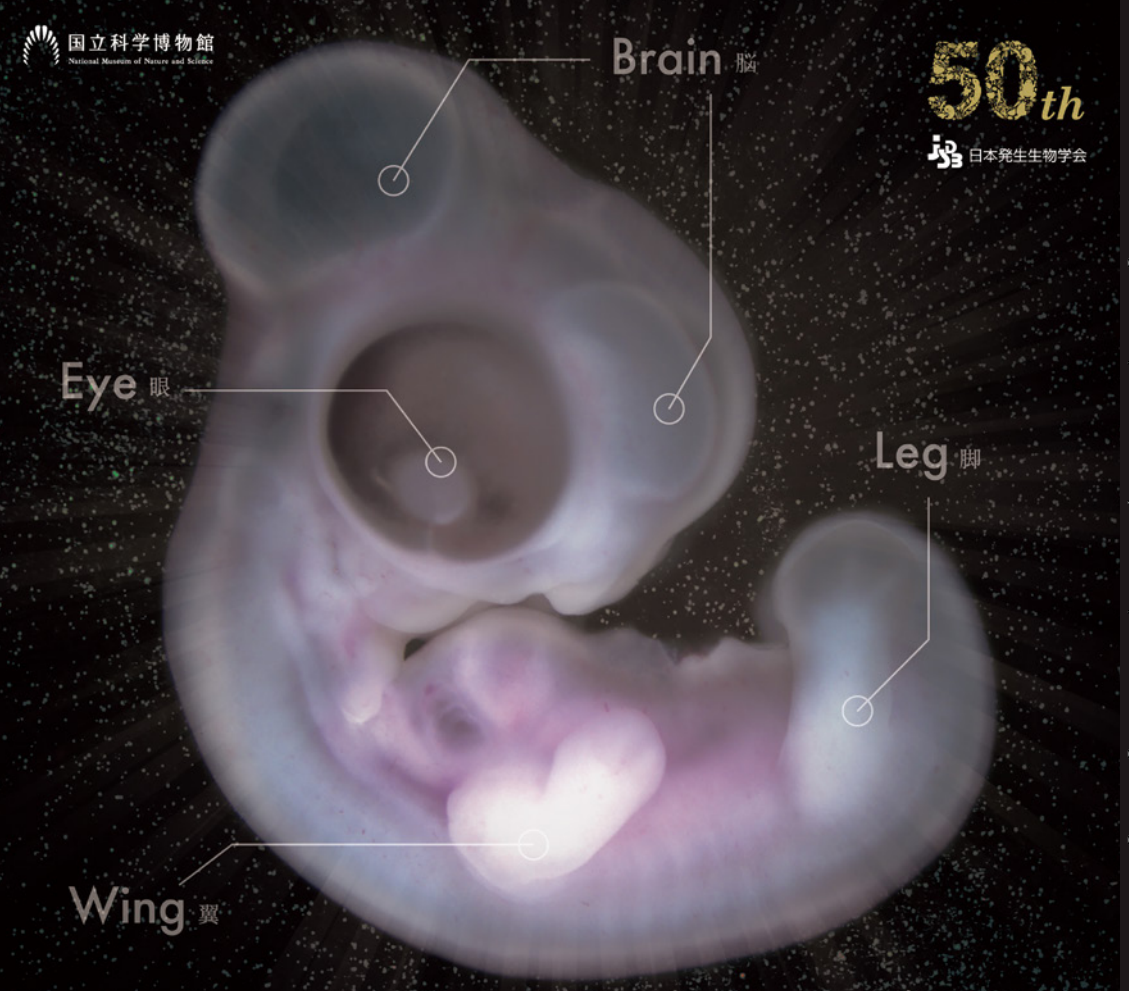
国立科学博物館
National Museum of Nature and Science



50th
日本発生生物学会

企画展

卵からはじまる形づくり

発生生物学への誘い
The amazing journey from egg to adult

2017年 4/4(火)→6/11(日)

開館時間／午前9時～午後5時
（金・土曜日は午後8時まで。
4月30日(日)～5月4日(木)は午後6時まで）
※入館は各閉館時刻の30分前まで

休 館 日／毎週月曜日
※5月1日(月)、6月5日(月)は開館

入 館 料／一般・大学生620円(団体310円)
高校生以下および65歳以上無料

主　　催／国立科学博物館、日本発生生物学会

国立科学博物館（東京・上野公園）
日本館1階企画展示室
および地球館1階オープンスペース

50th Annual Meeting of the Japanese Society of Developmental Biologists Program Book

May 10-13, 2017 TOKYO

Annual Meeting of the Japanese Society of Developmental Biologists

Co-sponsored by Asia-Pacific Developmental Biology Network

May 10-13, 2017
Tower Hall Funabori
TOKYO

*Public talks at the National Museum of Nature and Science in Ueno on 13th.

Program Book

We celebrate

Chair: **Naoto Ueno** (JSDB President)

Plenary Lecture
Lewis Wolpert (University College London, UK)
Eddy De Robertis (University of California, Los Angeles, USA)
Patrick Tam (University of Sydney, Australia)
Anne Ephrussi (EMBL, Germany)

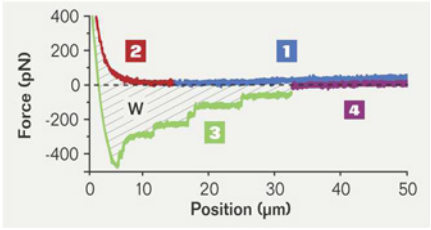
Symposia
Fertilization, Germ Cell, Developmental Signals (Differentiation), Organogenesis, Neurogenesis, Regeneration & Metamorphosis, Environment, Nutrition, Evo Devo, Technology (genome editing, big data), Early patterning, Stem Cell, Theory & Modeling (imaging), and more

http://www2.jsdb.jp/kaisai/jsdb2017/

ナノスケールの生体試料硬さ・凝着性評価システム

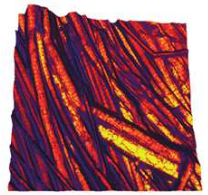
CELLHESION® 200

■細胞や生体組織の硬さ・凝着性などの
機械的特性を直接計測
■プローブとサンプルに生じる相互間力を
pNレンジ精度で定性的に測定
■細胞−細胞間の凝着性や細胞硬さ、
生体組織の硬さ、細胞応答性の実験に



NANOWIZARD® 4

□機械的特性をマッピング：nm～mmの範囲まで
□倒立顕微鏡・実体顕微鏡・共焦点顕微鏡・
蛍光顕微鏡などと同時使用が可能
□専用ソフトウェアでROIを指定
□修飾プローブを用いることで局所的な
分子認識実験にも拡張可能



▲(上) PBSバッファー中の腱組織切片の光学像とAFMイメージ。AFMで測定した3D高さイメージにヤング率情報をオーバーレイ　スキャンサイズ：3µm×3µm

◀(左)カンチレバーに取り付けた細胞と生体材料の接着力測定のイメージ

JPK Instruments AG 日本支店
東京都千代田区岩本町3-9-15
フォロス岩本町ビル4階
Tel:03-5829-4777
FAX:03-5829-4778
E-mail: sales.japan@jpk.com

JPK Instruments

Nanotechnology for Life Science

Visit the JPK web site for more information and sign up for our eNewsletter. Web address:www.jpk.com

Follow us on Facebook, Youtube and Linkedin.

Welcome to the 50th Annual Meeting of the JSDB in Tokyo !

Dear colleagues,

One behalf of the meeting organizing committee, I am pleased to hold this 50th annual meeting of the Japanese Society of Developmental Biologists (JSDB), cosponsored by the Asia Pacific Developmental Biology Network (APDBN), in Tokyo from May 10 to 13, 2017.

It is our pleasure to celebrate the 50th anniversary of JSDB with all the participants of this meeting. This meeting is also dedicated to encourage colleagues in Kumamoto who experienced the hardest time of the earthquakes that hit Kyushu in 2016 and had to give-up to host the last annual meeting.

On this special occasion, we are having the scientific exhibition "The amazing journey from egg to adult" at the National Museum of Nature and Science in Ueno Park which is about 30 min from the venue.
I hope that you will enjoy this memorial meeting the-state-of-the-art developmental biology the unique scientific atmosphere at the museum, learning about how developmental biology has advanced and contributed to the science community as well as to human society in the last half a century.

I sincerely hope you will enjoy this meeting.

Naoto Ueno
The President of JSDB and
Chair of the 2017 JSDB/APDBN meeting organizing committee

目次

Contents

Acknowledgement of Sponsorship

The organizing committee of 50th Annual Meeting for JSDB gratefully acknowledges the generous financial support of the following:

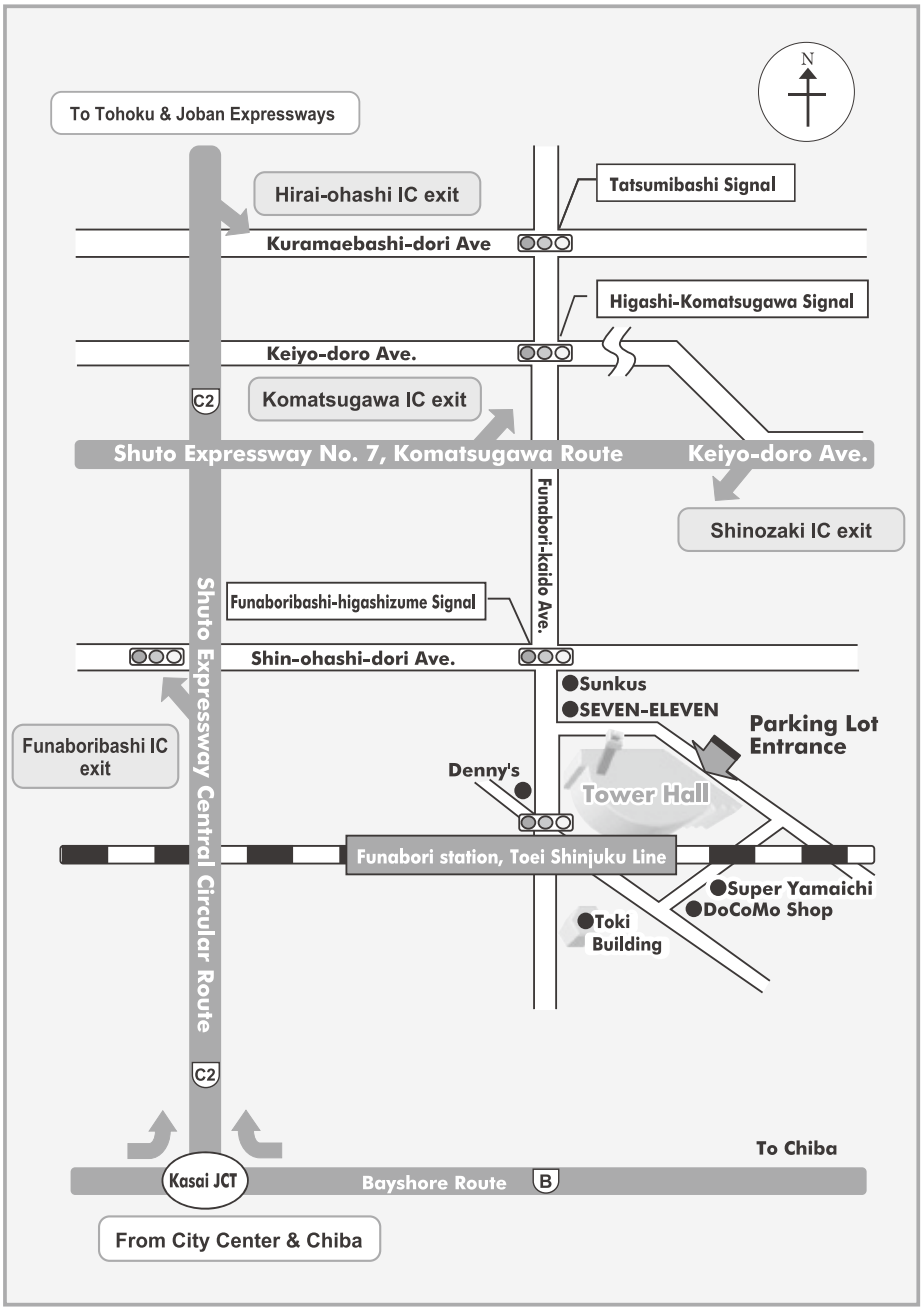
Sponsors

The Naito Foundation
The Company of Biologists
ELSEVIER
Grant-in-Aid for Scientific Research on Innovative Areas —
Platforms for Advanced Technologies and Research Resources
"Advanced Bioimaging Support (ABiS)"
Suntory Foundation for Life Sciences
WAKENBTECH CO, LTD.

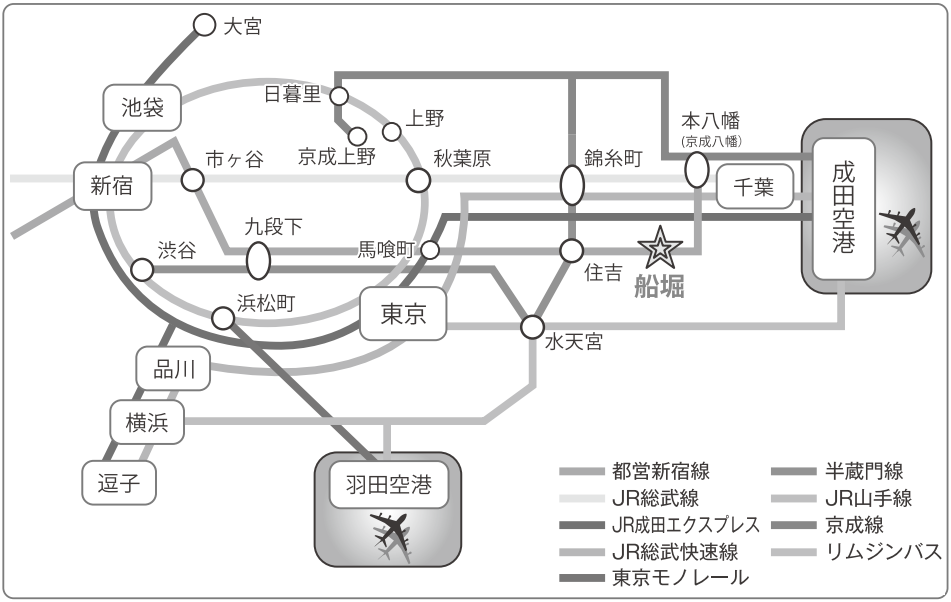
Organizing Committee

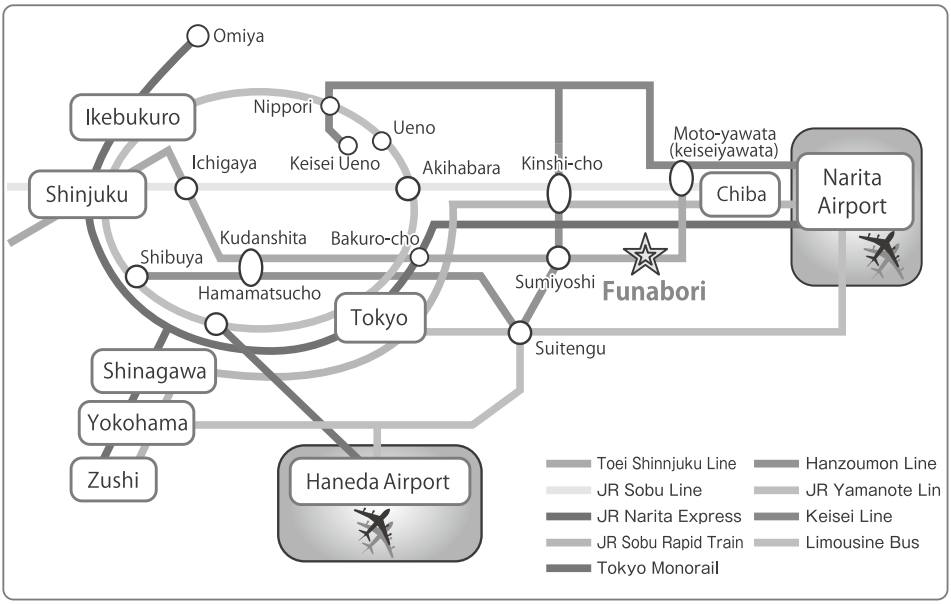
Chairperson:	
Naoto Ueno	NIBB, JSDB President
Members:	
Kiyokazu Agata	Gakushuin University
Shoen Kume	Tokyo Institute of Technology
Hitoshi Sawa	NIG
Hirokazu Tsukaya	University of Tokyo
Masayuki Miura	University of Tokyo
Toshihiko Fujimori	NIBB
Erina Kuranaga	Tohoku University
Jun Takeuchi	University of Tokyo
Naoki Irie	University of Tokyo

Access Guide to Tower Hall FUNABORI



Tokyo Rail and Bus Route Map





Transfer Information

* Estimates do not include waiting time between transfers.

From Tokyo Station

Tokyo — Sobu Line Rapid (5min.) — Bakurocho — Walk (Transfer) (2min.) — Bakuroyokoyama — Toei Shinjuku Line (15min.) — Funabori — *22min.*

From Hamamatsucho Station

Hamamatsucho — Walk (Transfer) (9min.) — Daimon — Toei Oedo Line (15min.) — Morishita — Toei Shinjuku Line (12min.) — Funabori — *36min.*

From Shinagawa Station

Shinagawa — Yokosuka Line (Sobu Line Rapid) (14min.) — Bakurocho — Walk (Transfer) (2min.) — Bakuroyokoyama — Toei Shinjuku Line (15min.) — Funabori — *31min.*

Haneda Airport

Haneda Airport — Tokyo Monorail (23min.) — Hamamatsucho — Walk (Transfer) (9min.) — Daimon — Toei Oedo Line (15min.) — Morishita — Toei Shinjuku Line (12min.) — Funabori — *59min.*

Keikyu Airport Limited Express (18min.) — Sengakuji — Toei Airport Limited Express (13min.) — Higashi Nihonbashi — Walk (Transfer) (3min.) — Bakuroyokoyama — Toei Shinjuku Line (15min.) — Funabori — *49min.*

Limousine Bus (40min.) — Ichinoe — Toei Shinjuku Line (2min.) — Funabori — *45min.*

Contact: Limousine Bus Reservation Center
03-3665-7220

From Yokohama Station

Yokohama — Yokosuka Line (Sobu Line Rapid) (35min.) — Bakurocho — Walk (Transfer) (2min.) — Bakuroyokoyama — Toei Shinjuku Line (15min.) — Funabori — *52min.*

From Shibuya Station

Shibuya — Hanzomon Line (13min.) — Jimbocho — Toei Shinjuku Line (22min.) — Funabori — *35min.*

From Shinjuku Station

Shinjuku — Toei Shinjuku Line (30min.) — Funabori — *30min.*

From Ikebukuro Station

Ikebukuro — Yurakucho Line (12min.) — Ichigaya — Toei Shinjuku Line (24min.) — Funabori — *36min.*

From Ueno Station

Ueno — Yamanote Line (3min.) — Akihabara — Walk (6min.) — Iwamotocho — Toei Shinjuku Line (16min.) — Funabori — *25min.*

Ginza Line (6min.) — Mitsukoshimae — Hanzomon Line (8min.) — Sumiyoshi — Toei Shinjuku Line (9min.) — Funabori — *23min.*

From Motoyawata Station

Motoyawata — Toei Shinjuku Line (11min.) — Funabori — *11min.*

From Chiba Station

Chiba — Sobu Line Local (28min.) — Motoyawata — Walk (Transfer) (4min.) — Toei Shinjuku Line (11min.) — Funabori — *43min.*

From Shinkoiwa Station

Shinkoiwa — Bus — Funabori — *20min.*

Shinkoiwa Route 21 (South exit to Nishikasai)
15 to 20 min.

From Kasai Station

Kasai — Bus — Funabori — *15min.*

Kasai Route 24 (to Funabori), Kinshicho Route 25 (to Kinshicho)

* Customers near Hirai station
If close to Keiyo-doro Avenue, take the Kinshicho to Kasai bus from Komatsugawa-sanchome on Keiyo-doro Avenue.
Get off at Funabori station.

From Nishikasai Station

Nishikasai — Bus — Funabori — *16min.*

Shinkoiwa Route 21 (to Shinkoiwa)

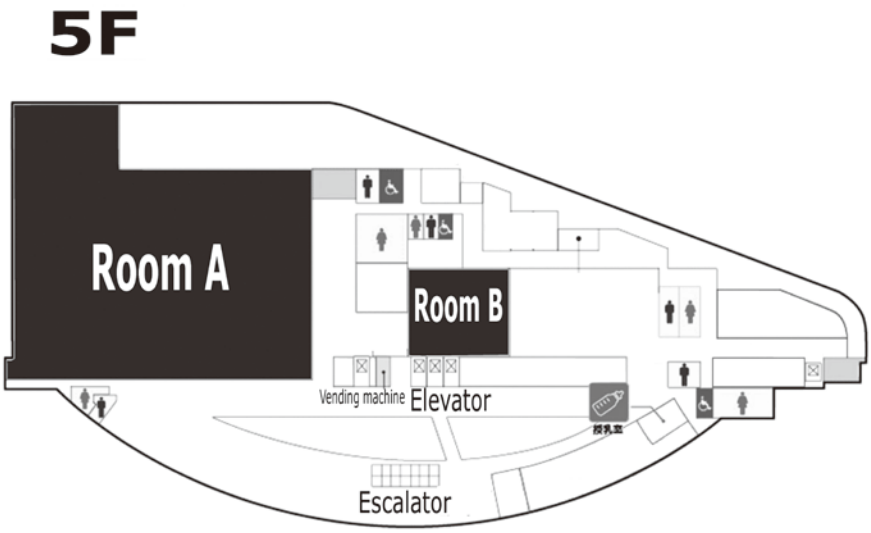
From Narita Airport

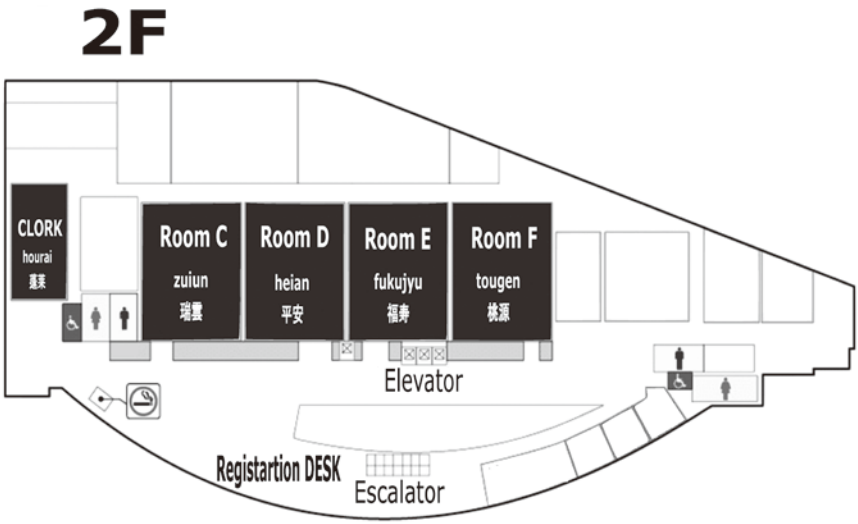
Narita Airport — Keisei Main Line Express (50min.) — Keiseiyawata — Walk (Transfer) (5min.) — Motoyawata — Toei Shinjuku Line (11min.) — Funabori — *66min.*

Keisei Bus (60min.) — Ichinoe — Toei Shinjuku Line (2min.) — Funabori — *65min.*

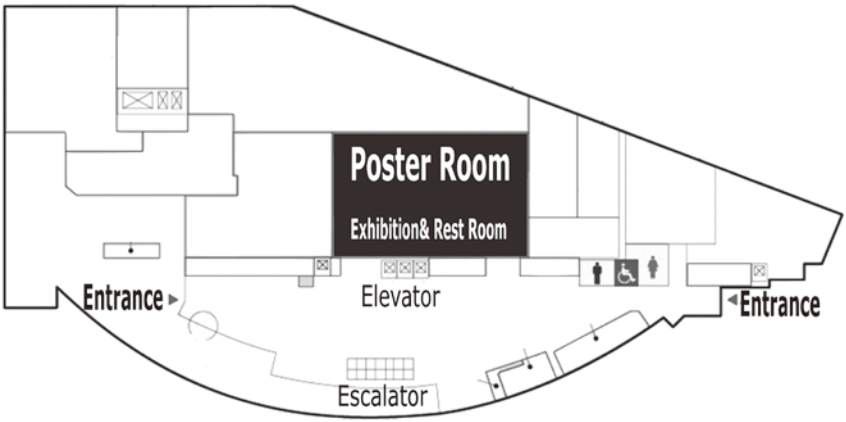
Contact: Keisei Bus Okudo Office
03-3691-0935

Floor Map


5F
Room A
Room B
Vending machine
Elevator
Escalator


2F
CLORK
hourai
蓬莱
Room C
zuiun
瑞雲
Room D
heian
平安
Room E
fukujyu
福寿
Room F
tougen
桃源
Elevator
Registartion DESK
Escalator

1F


Poster Room
Exhibition& Rest Room
Entrance
Elevator
Entrance
Escalator

Program at a Glance

May 10 (Wed)

	9:00 ～ 11:00	11:30 ～ 12:30	13:00 ～ 15:00	15:15 ～ 17:15	17:30 ～ 19:30
Room C	**Oral Presentation 01** Differentiation and Theoretical biology, Modeling, Imaging	Luncheon (Wiley) (in Japanese)	**Oral Presentation 04** Developmental Physiology & Mechanobiology and Environment, Nutrition, Metabolism		**Symposium 01** Early patterning
Room D	**Oral Presentation 02** Neural Development		**Workshop 01** Central Nervous System in Invertebrates: How Its Structure and Function Appeared and Evolved		**Symposium 02** Regeneration & Metamorphosis
Room E	**Oral Presentation 03** Patternning, Organogenesis 1		**Oral Presentation 05** Early development and Regeneration, Metamorphosis and Patternnng, Organogenesis 2		**Symposium 03** Evo Devo
Room F	**Day Zero Session** Satellite Workshop (in Japanese)		**Oral Presentation 06** Patternnng, Organogenesis 3		**Symposium 04** Technology (genome editing, big data)
Poster Room	Poster Mounting	Posters		**Poster Discussion 1**	Posters
	Exhibition (Equipment & Books) & Rest Room				

May 11 (Thu)

	9:00 ～ 11:00	11:30 ～ 12:30	13:00 ～ 15:00	15:15 ～ 17:15	17:30 ～ 18:00	18:00 ～ 18:30	18:30 ～ 20:30
Room A	**Plenary Lecture**						
Room C		Luncheon (Gender-equal society) (in Japanese)	**Oral Presentation 07** Technology (genome editing, bioinfomatics, big data) and Fertilization, gametogenesis, reproduction		**General Assembly** (in Japanese)	Travel Fellowship for Dr. Tokindo Okada Awards (in Japanese)	10 年目の見直し (in Japanese)
Room D			**Workshop 02** Gene Regulatory Network in Development and Evolution				
Room E			**Oral Presentation 08** Stem cell, Germ cell				
Room F			**Oral Presentation 09** Epigenetics, Genomics (comparative genomics) and Evolution (Eco-EvoDevo, EvoDevo)				
Poster Room	Posters			**Poster Discussion 2**	Posters		
	Exhibition (Equipment & Books) & Rest Room						

May 12 (Fri)

	9:00 ～ 11:00	11:30 ～ 12:30	13:00 ～ 15:00	15:30 ～ 17:30	18:00 ～ 20:00
Room A				**Plenary Lecture**	
Room C	**Symposium 05** Environment, Nutrition	Luncheon (Carl Zeiss Microscopy Co., Ltd.) (in Japanese)	**Symposium 09** Stem Cell		**Reception**
Room D	**Symposium 06** Theory & Modeling (imaging)		**Symposium 10** Germ Cell		
Room E	**Symposium 07** Organogenesis		**Symposium 11** Developmental Signals		
Room F	**Symposium 08** Neurogenesis		**Symposium 12** Fertilization		
Poster Room	Poster Removal				
	Exhibition (Equipment & Books) & Rest Room				

May 13 (Sat)

	9:00 ～ 16:00
National Museum of Nature and Science	**Public Events**

General Information for Attendance

Venue

Tower Hall Funabori

4-1-1 Funabori, Edogawa-ku, Tokyo 134-0091, Japan

Phone：+81-3-5676-2211　Fax：+81-03-5676-2501

URL：http://www.towerhall.jp/　(in Japanese)	Google map：https://goo.gl/maps/uFgJYMeyGm52

National Museum of Nature and Science

7-20 Ueno Park, Taito-ku, Tokyo 110-8718, Japan

Phone：+81-(0)3-5777-8600　*only available in Japanese

URL：https://www.kahaku.go.jp/english/	Google map：https://goo.gl/maps/bptkXSSCJ3N2

Official Language

English will be the official conference language, and no simultaneous translation will be provided.

The Satellite Workshop (May 10) will be held in Japanese.

Registrations

Advanced Registration is no longer available. Please register at the conference venue. (On-site registration is available throughout the conference period.)

Registration Fee (On-site) (JPY)

General JSDB/ISDB/APDBN members：¥10,000 (early ¥8,000)

Student JSDB/ISDB/APDBN members：¥5,000 (early ¥4,000)

General Non-members：¥10,000 (early ¥9,000)

Student Non-members：¥6,000 (early ¥5,000)

*Registration includes access to all scientific sessions and exhibits.
*Students should provide the name and affiliation of their supervisor.

JSDB General Assembly
May 11 (Thursday), 17:30-18:30, Room C

Payment
All payment must be made in Japanese yen, by credit card or by bank draft, payable to "The 50th Annual Meeting of the JSDB". Please send payment with the completed registration form to the secretariat. **No** checks or money orders will be accepted. All bank charges are to be borne by the remitter.

Name Tags
Name tags will be sent to advance registrants, or will be provided at the time of registration.
Participants are requested to wear their name tags at all times during the conference.

Lunch
May 10 (Wed) & May 11 (Thu) & May 12 (Fri): At the luncheon seminar, a limited number of free lunch boxes will be provided by sponsor.

Refreshments and Internet Access
Break corners associated with Poster Room and Rest Area.

DGD Editorial Meeting & JSDB Board Meeting
May 9 (Tue) 12:00-15:00
Tohoku University Tokyo office.

Reception
May 12 (Fri) 18:00-20:00
Tower Hall Funabori Room C & D

Reception fee (On-site) (JPY)

General JSDB/ISDB/APDBN members :	¥8,000	(early ¥7,000)
Student JSDB/ISDB/APDBN members :	¥4,000	(early ¥3,000)
General Non-members :	¥8,000	(early ¥7,000)
Student Non-members :	¥4,000	(early ¥3,000)

Registration Desk

Open Hour:

May 10	May 11	May 12
8:15-19:00	8:15-18:00	8:15-18:00

Location: Tower Hall Funabori 2F

Cloakroom

Cloakroom is available for your luggage. Please note that valuables and computers cannot be accepted.

We are not responsible for any damage or loss at the cloakroom.

Open Hour:

May 10	May 11	May 12
8:15-20:00	8:15-21:00	8:15-20:30

Location: Tower Hall Funabori 2F

日本発生生物学会　岡田節人基金
JSDB Dr. Tokindo Okada Foundation

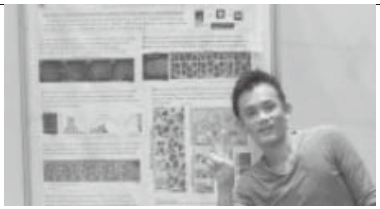
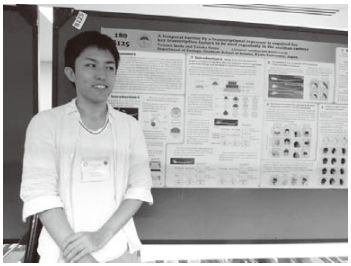
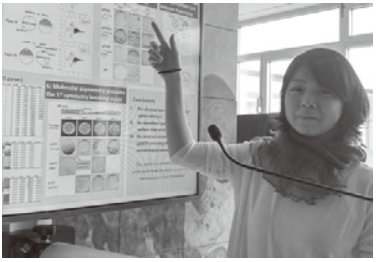
日本発生生物学会の設立メンバーの一人だった故・岡田節人博士は、我が国における発生生物学の立ち上げと同時に、グローバル化にもご尽力してこられました。博士は一線を退かれた後も、我が国の発生生物学の国際レベルでのさらなる躍進を期待され、国際交流助成のための「岡田節人基金」を設立されました。そこで、日本発生生物学会は、発生生物学の将来を担うグローバルな視野に富む研究者の育成を目的とし､海外で開催される発生生物学に関連する国際会議（学会･シンポジウム等）での発表、または海外で開催される発生生物学に関連するコースへの参加に要する経費の一部を助成します。加えて、若手研究者の国際的な討議・意見交換・講演等のスキルおよび国際的評価の向上を目的とし、発生生物学分野において優れた研究業績を有する海外在住の研究者を、国内で開催される発生生物学に関連する会議（学会・シンポジウム等）に招聘する場合に要する経費の一部を助成します。

岡田節人基金　若手研究者国際交流(派遣・招聘)助成　贈呈式
Travel Fellowship for Dr. Tokindo Okada Awards

日時 : 2017 年 5 月 11 日（木） 18 : 00 〜 18 : 30
場所 : Room C（タワーホール船堀）

第 50 回大会では、根岸剛史会員（基礎生物学研究所)、武藤玲子会員（京都大学)、池田達郎会員（京都大学)、岩﨑-横沢佐和会員（JT 生命誌研究館）の贈呈式を行う予定です。

【過去の受賞者】

	**2015 年　招聘助成** 西田宏記会員（大阪大学・理学研究科・生物科学専攻・教授） 対象学会：日本発生生物学会第 48 回大会 招聘者：Dr. Mike Shapiro (University of Utah)
	**2015 年　派遣助成** 根岸剛史会員（基礎生物学研究所・研究員） 対象学会：2015 年アジア太平洋発生生物学会議（台湾）
	**2016 年　派遣助成** 武藤玲子会員（京都大学大学院理学研究科・生物科学専攻・大学院生） 対象学会：Marine Biological Laboratory (MBL) Summer Course（アメリカ）
	**2016 年　派遣助成** 池田達郎会員（京都大学大学院理学研究科・生物科学専攻・大学院生） 対象学会：75th SDB with 19th ISD（アメリカ）
	**2017 年　派遣助成** 岩﨑-横沢佐和会員（JT 生命誌研究館・研究員） 対象学会：ドイツ-日本合同ミーティング（ドイツ）

第 50 会大会記念特別企画
「日本発生生物学会の歩みと将来」

日時 : 2017 年 5 月 11 日（木） 18 : 30 ～ 20 : 30
会場 : Room C（タワーホール船堀）
司会 : 阿形清和（学習院大学・教授）

【目的】

平成 29 年に本学会が創立 50 周年を迎えることを大きな節目として、学会員とともに日本の発生生物が歩んで来た道を振り返るとともに、関連分野の研究者も交え、外の立場から見た意見も踏まえて、本学会および発生生物学の将来を展望したいと思います。英語化、年会の形式、若手育成の諸々の企画、学会自体の見直しも含めて活発な議論をしたいと思います。弁当を準備していますので多くの会員が参加されることを期待します。なお、この議論をもって本学会の「10 年目の反省」とし、今後の学会運営や活動につなげたいと思います。

【参加者】

すべての日本発生生物学会会員
招待者 :

日本分子生物学会理事長	杉本亜沙子（東北大学）
日本細胞生物学会会長	吉森　保（大阪大学）
日本再生医療学会理事	岡野　栄之（慶應大学）
日本進化学会会長	田村浩一郎（首都大学東京）
日本動物学会会長	岡　良隆（東京大学）

Wiley　ランチョンセミナー

=Luncheon Seminar by Wiley=
May 10 (Wed) 11:30-12:30, Room C

「英語論文を投稿しよう！
ー 英文誌の投稿・出版プロセスを理解する」

講師：　岩崎　治郎

（ワイリー・ジャパン、シニア・マーケティング・マネージャー）

投稿先ジャーナルの選び方、英語の表現の改善法、出版倫理、カバーレターの書き方、査読コメントへの対応、出版された論文のインパクトを高める方法など、論文投稿・出版にかかわる幅広いトピックを取り上げ、著者として知っておきたい基本的な知識を解説します。英文誌での論文出版の経験が浅い若手研究者におすすめします。

WILEY

日本発生生物学会　第50回大会　ランチョンセミナー
カールツァイスマイクロスコピー株式会社

共焦点顕微鏡とX線顕微鏡による マルチモーダルイメージング

日　時　5月12日（金）　11:30～12:30

場　所　Room C

Imaging Drosophila Connectome

講演：Ann-Shyn Chiang 先生

National Tsing Hua University

座長：松野　健治 先生
大阪大学大学院 理学研究科生物科学専攻

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第 50 回日本発生生物学会年会　託児のご案内

利用をご希望の方は「託児利用規約」をお読みになり、理解・同意の上、お申込みください。

開設日時	2017 年 5 月 10 日（水）　8：00 ～ 20：00 5 月 11 日（木）　8：00 ～ 20：00 5 月 12 日（金）　8：00 ～ 20：30
託児人数	5 名程度／各日
対象年齢	生後 3 ヵ月～小学校 6 年生まで
場所	※セキュリティ確保のため、お申込者のみにご案内します。
委託先	（株）アルファコーポレーション 公益社団法人 全国保育サービス協会（ACSA）正会員 Something for Tomorrow
料金	有料　500 円（税込）／ 1 時間・お 1 人あたり・1 時間未満は切り上げとします ※オムツなど実費及び上記時間以外の延長料金は除きます。
申込方法	■ WEB 予約 https://cscs.alpha-co.com/event_yoyaku_kihon_form.jsp?E=672141*6DBtU お申込みの確認メールとともに 「託児申込書」をお送りします。 「託児申込書」はご記入の上、当日託児室までお持ちください。 ■電話での受付は　03-5797-7121（平日 9：30 ～ 17：30） 以下の項目をお伝え下さい。 1. 保護者氏名（よみがな）・連絡先（携帯電話番号含む）・所属・会員番号 2. 託児希望日時 3. お子様の名前（よみがな）・年齢・性別 4. 託児上の注意点（アレルギーなど）
申込締切	2017 年 5 月 1 日（月） ※定員になり次第、締め切らせていただきますのでお早目にお申込みください。
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大会発表についてのご注意

Oral presentation

1. Presentation time
   Oral presentation: **10min** for presentation and **2 min** for discussion.
2. Computer for oral presentation
   Basically, presentation shall be given with your own laptop. Please do not forget to bring your laptop.
   - ○ Make sure to bring any necessary electrical adaptors and connectors for your computer.
   - ○ The meeting venue will provide a Mini D-sub15 pin cable for connecting to PC switchers. Macintosh and certain kinds of Windows computers require an appropriate connector to fit a Mini D-sub15 pin plug.
   - ○ Electric power in Tokyo is provided at 100V, 50Hz.

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3. Presentation registration
   Please come to your session room at **20 min** prior to the beginning of the talk and connect your PC to a PC switcher.

Poster Presentations

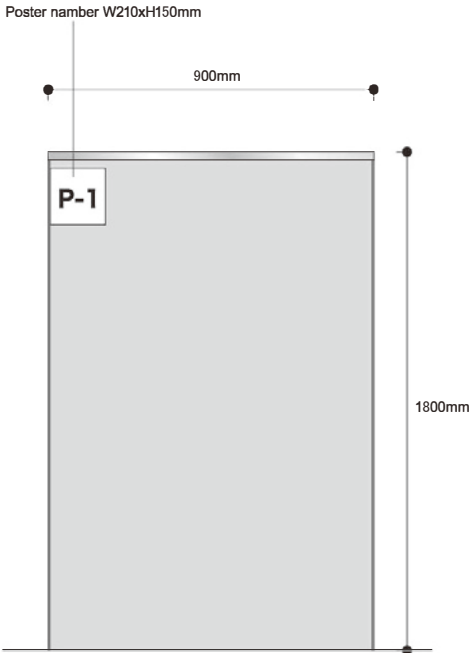
Poster board size: **900** mm (width) × **1800** mm (height)

- ✧ Please leave a 210 mm × 150 mm blank space at the top left corner for the organizing committee to indicate your poster number.
- ✧ Please stay (or stand) in the vicinity of your poster for explanation during your assigned discussion time. Be sure that every poster presenter is assigned to explain his/her poster on both Day 1 and Day 2.

Mounting:	**9:00-11:00 on Day 1 (May 10)**
Day 1 (May 10) Discussion:	15:15-16:15 for odd number posters 16:15-17:15 for even number posters
Day 2 (May 11) Discussion:	15:15-16:15 for odd number posters 16:15-17:15 for even number posters
Removal:	**9:00-12:00 on Day 3 (May 12)**

Poster Awards

Eligible participants are students or young research scientists (received Ph.D. within last five years) who wish to be considered for the poster awards. Organizing committee members, and day0 special presenters and the Dean of JSDB will vote. **The award ceremony will be held during the reception on Day3 (May 12).**



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【How to log-in】

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【事前参加登録済の場合】

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【当日参加の場合（事前登録を行ったが参加費未納の方を含む）】

参加登録時、受付にて ID とパスワードをお渡しいたします。

■提供開始時期

2017 年 4 月下旬よりご利用いただけます。

Scientific Programs

Plenary Lectures

May 11 (Thu) 9:00-11:00 Room A

Chairperson: Akira Nakamura (Kumamoto Univ.)

PL1-1 09:00-10:00 RNP Assembly for Intracellular transport in the *Drosophila* oocyte

○Anne Ephrussi (Developmental Biology Unit, European Molecular Biology Laboratory)

mRNA localization to specific subcellular sites within cells is a powerful and conserved phenomenon that allows precise spatial and temporal control of protein synthesis. A paradigm for the study of mRNA transport is *oskar* mRNA, whose localization at the posterior pole of the *Drosophila* oocyte is essential for proper patterning of the embryo. Assembly of transport competent *oskar* mRNPs begins in the nucleus and involves splicing of the first *oskar* intron and the four core proteins of the Exon Junction Complex (EJC). In the cytoplasm, *oskar* mRNPs associate with motor proteins that transport the mRNA to its destination at the posterior cortex of oocyte. The importance of splicing of intron 1 is due to its requirement for deposition of the EJC and assembly of a posterior targeting element, the Spliced *oskar* Localization Element (SOLE), from a bipartite sequence composed of exonic sequences flanking the intron. This element forms a stem-loop structure that is positioned immediately next to the EJC deposition site and is critical for efficient transport of *oskar* mRNA to the posterior pole. New findings will be presented concerning the central role of an RNA-binding atypical Tropomyosin-1 in the recruitment of kinesin-1 motor to *oskar* mRNA for its transport within the oocyte.

Chairperson: Toshihiko Fujimori (NIBB)

PL1-2 10:00-11:00 The blueprint of mouse development: Regionalization of cell Fates and molecular network activity for tissue patterning and morphogenesis

○Patrick Tam (Embryology Unit, Children's Medical Research Institute and School of Medical Sciences, Sydney Medical School, University of Sydney)

Gastrulation is a critical milestone of embryogenesis at which the primary germ layers are formed and the multipotent embryonic cells are allocated to the progenitors of tissue lineages within the germ layers. The tissue progenitors for major body parts are assembled into a basic body plan. Through the inductive interaction between tissues that modulates the functional output of molecular network, the concerted execution of developmental program empowers tissue morphogenesis, organogenesis and the building of embryonic architecture. Whole genome tran-

scription activity highlights the transition from cellular pluripotency to lineage specification before gastrulation is completed. Analysis of the expression pattern of lineage determinants and fate mapping of the mouse embryo have revealed a distinctive regionalization of cell fates in the germ layers and the correspondence of the spatial delineation of the precursor populations and lineage-related gene activity. Analysis of the spatial transcriptome of the epiblast revealed the developmental correlate of the epiblast cells fates with region/lineage-specific transcriptional profile and signalling activity. Analysis of the lineage propensity of epiblast stem cells showed the differentiation potency of the epiblast is progressively restricted under the influence of signalling activity, culminating in the generation of lineage-restricted progenitors for specific tissue types. In the gastrulating embryo, spatially delimited agonistic and antagonistic signalling activity in the germ layers underpins the pattering of embryonic tissue and the establishment of the body plan. During early organogenesis, functional intersection of the signalling pathways with the gene regulatory network continues to drive the morphogenesis of the embryonic structure such as the head and the craniofacial primordia. Our understanding of the molecular control of lineage allocation, tissue differentiation and morphogenesis, currently at a global level, may be refined by taking the single-cell analytics as well as the systems biology approach to elucidate the attributes of molecular network activity and the choreography of developmental process at cell and tissue resolution.

May 12 (Fri) 15:30-17:30 Room A

Chairperson: Hidehiko Inomata (RIKEN CDB)

PL2-1 15:30-16:30 Self-organizing morphogen gradients in *Xenopus*

○Eddy De Robertis, Yuki Moriyama (HHMI/UCLA)

Embryos have the remarkable ability of self-organization after experimental manipulations. The Spemann organizer secretes a cocktail of growth factor antagonists. A gradient of Chordin protein can be detected in a narrow region that separates the ectoderm from endomesoderm called Brachet's cleft in Xenopus. Chordin diffuses over long distances of up to 2 mm along this signaling highway, patterning the ectoderm and mesoderm coordinately via a single morphogen gradient as cells undergo morphogenetic movements. Studies on the scaling and regeneration of bisected embryos that test the self-organizing potential will be presented. After sagittal bisection the embryonic twins have a remarkable asymmetry in left-right pigmentation. The more asymmetric, the better the regeneration. This external appearance is caused by apposition of the ventral- and dorsal-most tissues after healing. Using a combination of lineage tracing and in situ hybridization we found that the organizer becomes displaced by about 90 degrees from its initial position in the embryo resulting in identical twins. Extensive RNA-seq studies reveal gene signatures that are coordinately regulated in dorsal or ventral halves. In regenerating sagittal halves the organizer gene network is not upregulated, but a marked increase in many ventral genes was noted. These ventral signals presumably displace the Spemann organizer. I will also present work on the Wnt gradient, which causes stabilization of many proteins (Wnt/STOP) through the sequestration of GSK3 and Lys48-polyubiquitinated proteins inside multivesicular bodies.

Chairperson: Naoto Ueno (NIBB)

PL2-2 16:30-17:30 Pattern Formation and Positional Information

○Lewis Wolpert (Cell and Developmental Biology, University College London)

There has been much progress in developmental biology which involves morphogenesis , evolution, gene regulation, in a variety of organisms, but pattern formation still needs to be fully understood. The concept of positional information proposes that cells acquire positional values as in a coordinate system, which they interpret by developing in particular ways to give rise to spatial patterns. Some of the best evidence for positional information comes from regeneration experiments, and the patterning of the leg and antenna in Drosophila, and the vertebrate limb. Central problems are how positional information is set up, how it is recorded, and then how it is interpreted by the cells. A number of models have been proposed for the setting

up of positional gradients, and most are based on diffusion of a morphogen and its interactions with extracellular molecules; however, diffusion may not be reliable mechanism. There are also mechanisms based on timing. There is no good evidence for the quantitative aspects of any of the proposed gradients and details how they are set up. The way in which a signaling gradient regulates differential gene expression in a concentration-dependent manner also raises several technical and quite difficult issues. If pattern formation was fully understood it would be possible to design many new animals.

Symposia

Symposium 1：Early patterning

DATE: May 10 (Wed) 17:30 〜 19:30 Room C
Chairpersons: Masahiko Hibi (Nagoya Univ.)
Toshihiko Fujimori (NIBB)

During development of animals and plants, the most drastic events occur at the beginning of embryogenesis. It is believed that part of body axis formation starts during oogenesis in some species. Various morphogen signals and transcriptional/post-transcriptional modules are involved in formation of embryonic axis, tissue patterning, and organ polarity. Signaling centers (organizers) have been though to play critical roles in these processes. In this symposium, we invite scientists who challenge old dogmas in this field. The speakers will present new findings and discuss novel mechanisms that control the early developmental processes.

17:30-17:35 Introduction

S01-1 17:36-17:57 Eccentric position of the germinal vesicle and cortical flow during oocyte maturation specify the animal-vegetal axis of ascidian embryos
卵母細胞内での卵核胞の偏りと卵成熟時の表層細胞質の流れによってホヤ胚の動植軸が決定される
Masumi Tokuhisa, Miyuki Muto, ○Hiroki Nishida (Dept. of Biol. Sci., Osaka Univ.)

S01-2 17:58-18:19 A Hedgehog signaling network regulates the initiation of segmental oscillations in the early spider embryo
クモ初期胚でヘッジホッグシグナルネットワークは体節形成の遺伝子発現振動の開始を制御する
○Yasuko Akiyama-Oda[1,2], Sawa Iwasaki-Yokozawa[1], Hiroki Oda[1] (JT Biohistory Res. Hall[1], Osaka Medical College[2])

S01-3 18:20-18:41 Interplay between transcriptional and post-transcriptional regulatory modules in the pattern formation of *Arabidopsis* embryos
シロイヌナズナの胚パターン形成における転写制御と転写後制御の相互作用
Shunsuke Miyashima[1], Toshikatsu Uchimura[1], Minami Honda[1], Kayo Hashimoto[1,2], ○Keiji Nakajima[1] (Grad. Sch. Biol. Sci., NAIST[1], Grad.

Sch. Humanities and Sci., Nara Women's Univ.[2])

S01-4 18:42-19:03 Embryonic region-dependent development and interactions of grafted Hensen's node with host tissues: reconsideration of the organizer model

宿主胚領域に依存した、ヘンゼン結節移植片の自己発生と宿主組織との相互作用

○Hisato Kondoh, Koya Yoshihi (Kyoto SU)

S01-5 19:04-19:25 Surface ectoderm specification of uncommitted ectodermal progenitors in the neural plate border is crucial for neural tube closure

神経板境界における未分化外胚葉の表皮化は、神経管閉鎖に必須である

Chiharu Kimura-Yoshida, ○Isao Matsuo (Osaka Medical Center and Research Institute for Maternal and Child Health)

19:25-19:30 General Discussion

Symposium 2：Regeneration & Metamorphosis

DATE: May 10 (Wed) 17:30 〜 19:30 Room D
Chairpersons: Toshinori Hayashi (Tottori Univ.)
Ken-ichi T Suzuki (Hiroshima Univ.)

The aim of this symposium is to elucidate the mechanisms of regeneration, metamorphosis, and reprogramming at the cellular and molecular levels. Regeneration and reprogramming involve massive cell dedifferentiation and proliferation accompanied by genome-wide changes in epigenetic modifications. Metamorphosis is regulated by unique intrinsic mechanisms and extrinsic stimuli. We will here introduce six interesting researches in various organisms. We hope that this symposium will provide an opportunity to consider the future directions of this research area in developmental biology.

Co-organized by : Development, Growth & Differentiation

S02-1 17:30-17:50 The neuronal mechanisms that coordinate metamorphic events of ascidian
ホヤの変態イベントを協調させる制御メカニズム
○Yasunori Sasakura (Shimoda Marine Res. Center, Univ. Tsukuba)

S02-2 17:50-18:10 Molecular basis of organ remodeling during amphibian metamorphosis
両生類メタモルフォーゼの分子基盤
○Ken-Ichi Suzuki (Hiroshima University)

S02-3 18:10-18:30 Epigenetic control of plant cell reprogramming
植物の細胞リプログラミングを制御するエピジェネティックな仕組み
○Keiko Sugimoto (RIKEN CSRS)

S02-4 18:30-18:45 Efficient nuclear reprogramming of somatic cells towards totipotency is supported by synergistic effects of small molecules
体細胞核の全能性獲得に向けた初期化は低分子物質の相乗効果によって促進される
○Kei Miyamoto[1,2], Yosuke Tajima[3], Koki Yoshida[3], Mami Oikawa[1,2], Rika Azuma[4], Miki Mori[1], Yuma Imasato[1], George Allen[2], Tomomi Tsujikawa[3], Tomomasa Tsukaguchi[1], Charles Bradshaw[2], Jerome Jullien[2], Kazuo Yamagata[1], Kazuya Matsumoto[1], Masayuki Anzai[4], Hiro-

shi Imai[3], John Gurdon[2], Masayasu Yamada[3] (BOST, Kindai University[1], Gurdon Institute, University of Cambridge[2], Graduate School of Agriculture, Kyoto University[3], Institute of Advanced Technology, Kindai University[4])

S02-5 18:45-19:00 Study of cardiac regeneration using new model newt *Pleurodeles waltl*

新しいモデルイモリによる心臓再生機構の研究

○Toshinori Hayashi, Ayumi Myouga, Eri Tsuchiya, Shouhei Azuma, Yukio Satoh, Takashi Takeuchi (Tottori University)

S02-6 19:00-19:30 Resolving Heart Regeneration by Replacement Histone Profiling

○Kenneth Poss[1], Joseph Goldman[1], Guray Kuzu[2], Nutishia Lee[1], Jaclyn Karasik[1], Matthew Gemberling[1], Matthew Foglia[1], Ravi Karra[1], Amy Dickson[1], Fei Sun[1], Michael Tolstorukov[2] (Duke University Medical Center[1], Massachusetts General Hospital[2])

Symposium 3：Evo Devo

DATE: May 10 (Wed) 17:30 ～ 19:30 Room E
Chairpersons: Hirokazu Tsukaya (Univ. of Tokyo)
Naoki Irie (Univ. of Tokyo)

What are the biggest questions in the filed of Evolutionary Developmental Biology? The aim of this symposium is to share and discuss over insights obtained from researches against deeply embedded problems, and newly emerged questions in the field of animal and plant evolution.

Co-organized by : Multidimensional Exploration of Logics of Plant Development (MEXT) Universal Biology Institute, University of Tokyo

S03-1 17:30-17:55 What are the potential mechanisms that made vertebrates' body plan conserved?
脊椎動物のボディプランを保存させた仕組みは何か？
○Naoki Irie[1], Haiyang Hu[2], Song Guo[2], Masahiro Uesaka[1], Kotaro Shimai[3], Tsai-Ming Lu[6], Fang Li[5], Satoko Fujimoto[4], Masato Ishikawa[1], Shiping Liu[5], Yohei Sasagawa[4], Guojie Zhang[5], Shigeru Kuratani[4], Jr-Kai Yu[6], Takehiro Kusakabe[3], Philipp Khaitovich[2] (Univ. of Tokyo[1], CAS-MPG Partner Institute, China[2], Konan Univ.[3], RIKEN, Japan[4], BGI, China[5], Taiwan Academia Sinica, Taiwan[6])

S03-2 17:55-18:20 The broad development potentials of plant meristems
○Yuval Eshed[1], Eliezer Lifschitz[2] (Dept. of Plant and Environmental Sciences, Weizmann Institute of Science[1], Dept. of Biology, Technion, Israel Institute of Technology Haifa[2])

S03-3 18:20-18:45 Mechanosensitivity of junctional beta-catenin : from mesoderm mechanotransductive evolutionary origins to tumorigenic mechanical induction
○Emmanuel Farge (INSERM & PCC, Institut Curie Paris)

S03-4 18:45-19:10 Does the ontogeny recapitulate phylogeny?
個体発生は系統発生を繰り返すのか？
○Shigeru Kuratani (RIKEN)

S03-5 19:10-19:30 A note on chordate origins and evolution
脊索動物の起源と進化に関する一考察
○Noriyuki Satoh (OIST)

Symposium 4：Technology (genome editing, big data)

DATE: May 10 (Wed) 17:30 ～ 19:30 Room F
Chairpersons: Atsuo Kawahara (Yamanashi Univ.)
Shuichi Onami (RIKEN Qbic)

Recent innovations of new technologies, such as genome editing, big data analysis and bioinformatics, contribute to uncover essentials of biological phenomena in various model organisms. In this symposium, we will provide frontier researches revealed by new technologies in developmental biology.

17:30-17:33 Introduction

S04-1 17:33-17:53 Data-driven modeling of embryogenesis enabled by bioimage informatics
バイオイメージ・インフォマティクスが可能にする胚発生のデータ駆動モデリング
○Shuichi Onami (RIKEN QBiC)

S04-2 17:53-18:13 Genome editing in cultured cells and organisms
培養細胞や個体でのゲノム編集
○Takashi Yamamoto (Dept. of Math. and Sci., Hiroshima Univ.)

S04-3 18:13-18:33 *Marchantia polymorpha*：a next-generation model for comparative developmental biology with a powerful platform of genome editing
ゼニゴケ：ゲノム編集を活用した比較発生生物学の次世代モデル
○Takayuki Kohchi (GSB, Kyoto Univ.)

S04-4 (P185) 18:33-18:48 In vivo targeted single-base editing in zebrafish
ゼブラフィッシュ生体内における標的化塩基の編集
○Shingo Tanaka[1], Hiroshi Hosokawa[2], Keiji Nishida[3], Shingo Maegawa[2] (Graduate school of Biostudies, Kyoto Univ.[1], Graduate School of Informatics, Kyoto Univ.[2], Graduate School of Science, Technology and Innovation, Kobe Univ.[3])

S04-5 18:48-19:08 Visualization of transcription dynamics in living Drosophila embryos
ショウジョウバエ初期胚における転写ダイナミクスの可視化
○Takashi Fukaya, Bomyi Lim, Michael Levine (LSI, Princeton Univ)

S04-6 19:08-19:28 DNA barcode technologies for high-throughput measurements of molecular and cellular dynamcis
分子・細胞動態計測を加速する DNA バーコード技術
○Nozomu Yachie (RCAST, Univ. Tokyo)

19:29-19:30 Closing remarks

Symposium 5：Environment, Nutrition

DATE: May 12 (Fri) 9:00-11:00 Room C
Chairperson: Masayuki Miura (Univ. of Tokyo)

Development is a robust biological process, however the organismal response to environment and nutrition status has been much paid attention to development. In this symposium, recent progress of molecular control of organismal responses including metabolic, biosynthetic and epigenetic regulation for development will be presented and discussed.

S05-1 09:00-09:24 Dietary nutrients and genes that regulate reactivation of quiescent progenitor cells in C. elegans
C. elegans において静止期前駆細胞の活性化を制御する食餌中の栄養分子と遺伝子の解明
○Masamitsu Fukuyama (Dept. of Physiological Chem, Grad. Sch. of Pharmaceutical Sci., Univ. of Tokyo)

S05-2 09:24-09:48 How mutations in ribosome-related genes affect leaf adaxial-abaxial patterning in *Arabidopsis thaliana*
リボソーム関連変異によるシロイヌナズナの葉の向背軸パターニング異常
○Gorou Horiguchi[1,2], Hirokazu Tsukaya[3,4] (Dept. Life Sci., Coll. Sci., Rikkyo Univ.[1], Res. Cent. Life Sci., Coll. Sci. Rikkyo Univ.[2], Grad. Sch. Sci., Univ. Tokyo[3], OIIB[4])

S05-3 09:48-10:12 The molecular basis of distinct responses to nutrient balances between generalist and specialist species
栄養バランス変化に適応し成長する分子機構の解明に向けて
○Yukako Hattori[1], Kaori Watanabe[1], Yuuki Takahashi[1], Yuki Furumizo[1], Yasutetsu Kanaoka[1], Hironobu Uchiyama[2], Shunsuke Yajima[2], Masayoshi Watada[3], Tadashi Uemura[1] (Grad. Sch. Biostudies, Kyoto Univ.[1], NGRC, Tokyo Univ. of Agri.[2], Grad. Sch. of Sci. and Eng., Ehime Univ.[3])

S05-4 10:12-10:36 Rewiring of Embryonic Energy Metabolism During Mouse Chorioallantoic Branching
Hidenobu Miyazawa[1], ○Yoshifumi Yamaguchi[1,2], Yuki Sugiura[3,4], Kurara Honda[3], Koki Kondo[1], Fumio Matsuda[5], Takehiro Yamamoto[3], Makoto Suematsu[2], Masayuki Miura[1,2] (Dept. Genet. Pharma. The

Univ. of Tokyo[1], AMED-CREST[2], PRESTO, JST[3], Dept. Biochem., Keio Univ.[4], Dept. Bioinfo. Engin., Osaka Univ.[5])

S05-5 10:36-11:00 Role of ATF2 family of transcription factors in epigenetic changes induced by environmental factors
環境要因によるエピジェネティック変化における ATF2 ファミリー転写因子の役割
○Shunsuke Ishii (RIKEN Tsukuba Inst.)

Symposium 6：Theory & Modeling (imaging)

DATE: May 12 (Fri) 9:00-11:00 Room D
Chairpersons: Yasuhiro Inoue (Kyoto Univ.)
Erina Kuranaga (Tohoku Univ.)

Bioimaging science has greatly contributed to the advancement of science fields and has already become one of major parts of biology. Theory and modeling bring new innovation for integrated understanding and control of dynamic biological systems. This symposium aims to bring together researchers in the field of theory, modeling and bioimaging. We believe that such a confluence of these fields will be a large source of progress in developmental biology.

Co-organized by: Grant-in-Aid for Scientific Research on Innovative Areas ― Platforms for Advanced Technologies and Research Resources “Advanced Bioimaging Support (ABiS)

09:00-09:02 Introduction

S06-1 09:02-09:24 Controlling gene network for cell differentiation based on the structural theory
細胞分化遺伝子ネットワークの構造理論に基づく制御
○Atsushi Mochizuki[1,4], Kenji Kobayashi[2,4], Kazuki Maeda[3,4], Miki Tokuoka[2,4], Yutaka Satou[2,4] (Theo. Biol. Lab., RIKEN[1], Dept. Zool., Grad. Sci., Kyoto Univ.[2], Math., Sci. Tech., Kwansei Gakuin Univ.[3], CREST, JST[4])

S06-2 09:24-09:46 Transmission of cytokinesis forces via E-Cadherin dilution and actomyosin flows
○Edouard Hannezo (University of Cambridge)

S06-3 09:46-10:08 Extracellular fluid dynamics and morphogenesis
細胞外体液の動態と形態形成
○Hidehiko Inomata, Kaori Niimi (CDB)

S06-4 10:08-10:30 Propagating wave of ERK activation orients collective cell migration
ERK 活性の細胞間伝搬による細胞集団運動の制御
○Kazuhiro Aoki (OIIB, NINS)

S06-5 10:30-10:45 Mechanical occupation of the losers’ lost territory by winners drives cell competition

細胞死で空いた領地をめぐる力学的な細胞競合

○Alice Tsuboi[1], Shizue Ohsawa[2], Yukari Sando[2], Tatsushi Igaki[2], Koichi Fujimoto[1] (Osaka Univ.[1], Kyoto Univ.[2])

S06-6 10:45-11:00 Mathematical Analysis for Dynamical Pattern Selection of Cellular Mosaic in Fish Retina

魚類錐体モザイクにおける動的パターン選択の数理的研究

○Noriaki Ogawa[1], Tetsuo Hatsuda[1,2,3], Atsushi Mochizuki[1,2,4], Masashi Tachikawa[1,4,5] (RIKEN iTHES[1], RIKEN iTHEMS[2], QHP Lab., RIKEN Nishina Center[3], TB Lab., RIKEN[4], CREST, JST[5])

Symposium 7：Organogenesis

DATE: May 12 (Fri) 9:00-11:00 Room E

Chairpersons: Yosuke Mukoyama (NIH-NHLBI, USA)
Jun Takeuchi (Tokyo Medical and Dental University)
Mitsuru Morimoto (RIKEN CDB)

Recent studies in organogenesis have been at the leading edge of Developmental Biology. The symposium "organogenesis" covers a wide variety of scientific investigations using different model organisms, including chick, fish, plant, and mouse. The speakers will overview current progress with their cutting-edge experimental approaches using advanced imaging, gene manipulations, genetic perturbations, and human iPS technology. These independent but thematically interrelated talks provide unique opportunities to advance our understanding of developmental mechanisms in organogenesis.

Co-organized by : Development, Growth & Differentiation

S07-1 09:00-09:20 Growth coordination between external body and internal tissues
○Yoshiko Takahashi (Grad. Sch. of Sci., Kyoto Univ.)

S07-2 09:20-09:40 Local Hypoxic Responses Trigger Neuro-Vascular Branching in the Skin
○Yoh-Suke Mukouyama (National Heart, Lung, and Blood Institute, National Institutes of Health)

S07-3 09:40-09:50 Endothelial actin dynamics during blood vessel lumen formation
○Li-Kun Phng[1], Veronique Gebala[2], Holger Gerhardt[2] (RIKEN CDB[1], MDC for Molecular Medicine[2])

S07-4 09:50-10:00 Direct cardiomyocyte specification and differentiation by the defined factors
○Jun Takeuchi (Tokyo Medical and Dental University)

S07-5 10:00-10:20 Epigenetic timer to coordinate growth and differentiation in plants
花発生をつかさどるエピジェネティックタイマー機構
○Toshiro Ito (NAIST)

S07-6 10:20-10:40 Regulating the patterning of human mesoderm during the

directed differentiation of pluripotent stem cells
多能性幹細胞分化におけるヒト中胚葉パターニングの制御
○Minoru Takasato (RIKEN CDB)

S07-7 10:40-11:00 Alternative cell fate selection and following directed cell migration coordinate epithelial pattern of branching airways
○Mitsuru Morimoto (RIKEN CDB)

Symposium 8：Neurogenesis

DATE: May 12 (Fri) 9:00-11:00 Room F

Chairpersons: Kenji Shimamura (Kumamoto Univ.)
Takeshi Imai (RIKEN CDB)

We introduce five speakers investigating new paradigms in neural development. These researches also employed cutting-edge approaches such as quantitative analyses, mathematical modeling, and optogenetic manipulations. Hopefully, these topics will provide new perspectives and insights not only in neural development but also in a broad range of subjects in developmental biology.

09:00-09:05 Introduction

S08-1 09:05-09:30 Dynamic transcriptional control of neural stem cells
神経幹細胞のダイナミックな転写制御
○Ryoichiro Kageyama (IFLMS, Kyoto Univ.)

S08-2 09:30-09:55 Production logistics in neurogenesis: Windkessel-like, elasticity-mediated nuclear migration in crowded neuroepithelia
Tomoyasu Shinoda, Arata Nagasaka, ○Takaki Miyata (Anat. & Cell Biol., Nagoya Univ. Grad. Sch. of Med.)

S08-3 09:55-10:15 Roles of extrinsic factors in the cortical expansion in primates.
霊長類脳の拡大化における外的因子の役割
○Jun Hatakeyama[1], Haruka Sato[1], Rika Matsushita[1], Mitinori Saitou[2], Hideaki Tsuchiya[3], Ryoichiro Kageyama[4], Kenji Shimamura[1] (IMEG, Kumamoto Univ.[1], Grad. Sch. of Med., Kyoto Univ.[2], RCALS, Shiga Univ.of Med.Sci.[3], IFLMS, Kyoto Univ.[4])

S08-4 10:15-10:40 Reaction diffusion, lateral inhibition and noise canceling orchestrate the wave of neural differentiation in the fly brain
ショウジョウバエの脳において反応拡散・側方抑制・ノイズキャンセルの協調作用が神経分化の波を制御する
○Makoto Sato[1], Tetsuo Yasugi[1], Yoshitaro Tanaka[2], Takashi Miura[3], Masaharu Nagayama[2], Shinichiro Ei[2] (Kanazawa Univ[1], Hokkaido Univ.[2], Kyushu Univ.[3])

S08-5 10:40-11:00 Spontaneous activity and formation of discrete connectivity in the olfactory bulb

自発神経活動による嗅球の特異的神経回路形成

Satoshi Fujimoto[1,2], Marcus Leiwe[1,2], Yuko Muroyama[3], Tetsuichiro Saito[3], ○Takeshi Imai[1,2,4] (RIKEN CDB[1], Grad Sch Medical Sciences, Kyushu Univ[2], Grad Sch Medicine, Chiba Univ[3], Grad Sch Biostudies, Kyoto Univ[4])

Symposium 9：Stem Cell

DATE: May 12 (Fri) 13:00 ～ 15:00 Room C

Chairpersons: Kunimasa Ohta (Kumamoto Univ.)
Shoen Kume (Tokyo Inst. of Tech.)

Although the irreversibility of cell fates in terminally differentiated somatic cells has been believed long time, the transformation of somatic cells into pluripotent stem cells can be achieved by the nuclear transplantation and the forcible expression of defined transcriptional factors. In this Symposium 9, we will show the surprising developmental plasticity in cells by the intrinsic and extrinsic materials/factors and introduce a new avenue how cells acquire stemness and cell fates by cell-cell and environmental communications.

Co-organized by : Development, Growth & Differentiation

S09-1 13:00-13:18 A bHLH complex regulates plant vascular stem cell proliferation in root apical meristem
bHLH 転写因子複合体による維管束幹細胞の分裂制御
○Kyoko Ohashi-Ito (Dept. Biol. Sci., Grad, Sch. Sci., The Univ. Tokyo)

S09-2 13:18-13:36 Ribosome incorporation into somatic cells promotes reprogramming towards multipotent cells
体細胞がリボソームを取り込むとリプログラミングが誘導され多能性を獲得する
○Kunimasa Ohta, Shah Adil Ishtiyaq Ahmad, Mohammad Badrul Anam, Naofumi Ito (Dept. of Dev. Neurobiol., Kumamoto Univ. Grad. Sch. of Life Scis.)

S09-3 13:36-13:54 Genome Maintenance Mechanism in Embryonic Stem Cells
胚性幹細胞（ES 細胞）におけるゲノム恒常性維持機構
Yasunao Kamikawa, Hideo Tsubouchi, ○Tomomi Tsubouchi (NIBB)

S09-4 13:54-14:12 Accelerated differentiation of human pluripotent stem cells by ectopic expression of histone demethylase
ヒストン脱メチル化酵素を用いたヒト多能性幹細胞の分化誘導促進
○Tomohiko Akiyama (SysMed, Keio Univ. Sch. Med.)

S09-5 14:12-14:30 Amino acids regulate pancreatic differentiation of human

pluripotent stem cells
アミノ酸はヒト多能性幹細胞の膵臓分化を制御する
○Nobuaki Shiraki (Sch Life Sci Tech, TITEC)

S09-6 14:30-15:00 Non-invasive detection of tissue-specific cell death using methylation patterns of circulating DNA
○Yuval Dor (Hebrew Uni. Hadassah Med)

Symposium 10：Germ Cell

DATE: May 12 (Fri) 13:00 ～ 15:00 Room D

Chairpersons: Satoru Kobayashi (Univ. of Tsukuba)
Katsuhiko Hayashi (Kyushu Univ.)

Sustainable production of germ cells is a fundamental event for perpetuating the species. The manner of germ cell production is apparently diverse between plants, invertebrate and vertebrate. The diversity is seemingly consequences of adaptation to the environment and competition within the species. Current studies, however, disclose molecules and/or phenocopies commonly observed across the diverged species, inspiring us to consider a possibility of a conserved mechanism underlying germ cell production. In this symposium, we would like to take a closer look at how to ensure the robustness of germ cell production in the representative species, which would provide a good opportunity to consider the conserved mechanism of germ cell development.

Co-organized by : Grant-in-Aid for Scientific Research on Innovative Areas: Mechanisms Regulating Gemte Formation in Animals (KAKENHI #25114001)

13:00-13:05 Introduction

S10-1 13:05-13:28 Molecular mechanisms regulating germline formation in *Drosophila*
ショウジョウバエにおける生殖系列形成機構
○Satoru Kobayashi (TARA, Univ. of Tsukuba)

S10-2 13:28-13:51 *Sex-lethal* homologues in the silkworm *Bombyx mori*: insight into a novel function in a unique sperm dimorphism
カイコ *Sex-lethal*：ユニークな精子二形性における新奇機能の洞察
○Teruyuki Niimi (NIBB)

S10-3 13:51-14:14 Male germline and gamete development in a basal land plant Marchantia polymorpha
基部陸上植物ゼニゴケにおける雄性生殖系列と雄性配偶子の発生
○Takashi Araki, Asuka Higo, Kan Kunimoto, Akito Yamamoto (Grad. Sch. Biostudies, Kyoto Univ.)

S10-4 14:14-14:37 Stem cell dynamics and its regulation underlying the persis-

tent mouse spermatogenesis

○Shosei Yoshida[1,2] (Div. Germ Cell Biol., Natl. Inst. Basic Biol., Natl. Inst. Natural Sci.[1], Depa of Basic Biol., Sch. of Life Scie., Graduate University for Advanced Studies (SOKENDAI) [2])

S10-5 14:37-15:00 Molecular mechanisms underlying differentiation from primordial germ cells to oocytes

マウス始原生殖細胞から卵母細胞への分化メカニズムの解明―体内と体外培養から―

○Katsuhiko Hayashi (Division of developmental stem cell biology, DFaculty of Medical Sciences, Kyushu University)

Symposium 11：Developmental Signals

DATE: May 12 (Fri) 13:00 ～ 15:00 Room E

Chairpersons: Hitoshi Sawa (NIG)
Tohru Ishitani (Kyushu Univ.)

To carry out certain tissue morphogenesis and homeostasis, cells must communicate each other. Through cell-cell communication, individual cells sense various information, including their fate to choose, their location in tissue, and their environmental fitness, and consequently behave collectively. During the last three decades, genetic studies using model animals have made clear that such cell-cell communication is mediated by a variety of molecular systems, such as Delta-Notch system, cadherin-based cell adhesion, and morphogen signaling. In addition, recent integrative studies using live-imaging, mathematical model, and molecular genetics also revealed new modes of cell-cell communication and their critical roles in animal and plant tissue morphogenesis and homeostasis. This symposium will provide a good opportunity to share the recent exciting studies and to discuss the future directions in this field.

Co-organized by：Cell Competition, Grant-in-Aid for Scientific Research on Innovative Areas, MEXT, Japan

13:00-13:02 Introduction

S11-1 13:02-13:21 Ultradian oscillations of Notch signaling in cell-cell interactions regulate dynamic gene expression networks and tissue morphogenesis
隣接細胞間における動的な Notch シグナル伝達によって制御される形態形成
○Hiromi Shimojo[1,2], Hiroshi Kori[3], Akihiro Isomura[2], Toshiyuki Ohtsuka[2], Hiroshi Miyachi[2], Ryoichiro Kageyama[1,2] (iCeMS, Kyoto Univ.[1], Institute for Frontier Life and Medical Sciences, Kyoto University[2], Department of Information Sciences, Ochanomizu University[3])

S11-2 13:21-13:40 The Difference in the amounts of the atypical cadherin Dachsous between migrating cells coordinates the direction of collective cell migration
移動する細胞間の非典型的カドヘリン Dachsous の量

差が細胞集団の一方向的な移動を導く
○Masaki Arata[1], Kaoru Sugimura[2], Tadashi Uemura[1] (Grad. Sch. Bio., Kyoto Univ.[1], WPI-iCeMS, Kyoto Univ.[2])

S11-3 13:40-13:59 Biased diffusivity shapes ANGUSTIFOLIA3 signaling gradient in growing leaf tissue
不均一な拡散性が葉原基における ANGUSTIFOLIA3 シグナルの発現勾配を形づくる
○Kensuke Kawade (OIIB)

S11-4 13:59-14:20 Role of cell competition in the regulation of cell fitness and the shaping of growth during early embryonic development
Sarah Bowling[1], Aida Di Gregorio[1], Jesus Gil[2], ○Tristan Rodriguez[1] (NHLI, Imperial College London[1], MRC Clinical Sciences Centre[2])

S11-5 14:20-14:39 Epithelial cell turnover ensures correct coordination of growth in Drosophila
細胞ターンオーバーによる組織成長制御の遺伝学的解析
○Tatsushi Igaki[1], Nanami Akai[1,2], Shizue Ohsawa[1] (Grad Sch of Biostudies, Kyoto Univ.[1], Grad Sch of Med, Kobe Univ.[2])

S11-6 14:39-14:58 Apoptosis-mediated elimination of “Wnt/β-catenin signaling noise” supports precise embryonic patterning.
アポトーシスを介した Wnt/β-catenin シグナルのノイズ除去は、正確な胚パターン形成を支える
Yuki Akieda, Hironobu Furuie, Shizuka Ishitani, ○Tohru Ishitani (Div. of Cell Reg. Sys., Med. Ins. of Bioreg., Kyushu Univ.)

14:58-15:00 Closing remarks

Symposium 12：Fertilization

DATE: May 12 (Fri) 13:00 ～ 15:00 Room F

Chairpersons: Hitoshi Sawada (Nagoya Univ.)
Tetsuya Higashiyama (Nagoya Univ.)

It has long been believed that sexual reproduction mechanisms are highly diverged among species, even within plants or animals. However, we recently found that the self-sterile mechanism in hermaphroditic ascidians is very similar to the self-incompatibility system in flowering plants. In addition, a sperm protein GCS1, which is essential for gamete fusion in flowering plants, is also present in animals. These findings led us to consider that the reproductive systems,in particular, gamete attaction or fusion, in animals and plants may be much more common than we previously thought. In this symposium, we selected recent topics about animal and plant fertilization and would like to discuss about the reproductive strategies shared by animals and plants.

13:00-13:10 Introduction

S12-1 13:10-13:30 Mechanism of oviductal sperm storage in birds
鳥類の輸卵管における精子貯蔵の分子機構
○Tomohiro Sasanami[1], Mei Matsuzaki[1], Shusei Mizushima[2] (Fac Agric, Shizuoka Univ[1], Fac Sci, Hokkaido Univ[2])

S12-2 13:30-13:50 Key molecules and in vivo dynamics of pollen tube guidance
花粉管ガイダンスの鍵分子と in vivo ダイナミクス
○Tetsuya Higashiyama (ITbM, Nagoya Univ)

S12-3 13:50-14:10 Reconsideration of mammalian fertilization from microexosomes and sperm factors
○Woojin Kang[1], Yuichirou Harada[2], Natsuko Kawano[3], Kenji Miyado[1] (Department of Reproductive Biology, National Research Institute for Child Health and Development[1], Department of Molecular Pathology, Tokyo Medical University[2], Department of Life Sciences, School of Agriculture, Meiji University[3])

S12-4 14:10-14:30 Novel insights into the molecular mechanism of sperm-egg fusion via IZUMO1
融合因子 IZUMO1 を介する新規配偶子融合機構
○Naokazu Inoue (Department of Cell Science, Fukushima Medical

Univ.)

S12-5 14:30-14:50 Fertilization in flowering plants; molecular players controlling interactions between male and female gametes during double fertilization

被子植物の受精；重複受精時の雌雄配偶子相互作用を制御する分子プレーヤー

○Tomoko Igawa[1], Taro Takahashi[1], Toshiyuki Mori[2] (Grad. Sch. Hort., Chiba Uviv.[1], Dept. Trop. Medicine Prasitol., Juntendo Univ.[2])

14:50-15:00 Discussion

Workshop

Workshop 1：Central Nervous System in Invertebrates: How Its Structure and Function Appeared and Evolved

DATE: May 10 (Wed)　13:00 ～ 15:00　Room D
Chairperson: Hiroshi Shimizu (KAUST)

In this workshop, scientists who (1) work on nervous system of invertebrates, (2) have interest in evolution of nervous system, and (3) have strict ideas and thoughts about how the Central Nervous System emerged, developed and evolved make presentations. Finally, general discussion will be made including the audience.

WS1-1 13:10-13:30 Origin and evolution of the central nervous system: the nerve ring of cnidarians
中枢神経系の起源と進化：刺胞動物の神経環
○Osamu Koizumi, Kayoko Hamaguchi-Hamada, Sumiko Minobe, Mami Kurumata-Shigeto, Shun Hamada (FWU)

WS1-2 13:30-13:50 Hydra peduncle nervous system has functional comparable to Central Nervous System (CNS)
ヒドラの柄部神経系は中枢神経系と比肩しうる機能を有している
○Hiroshi Shimizu, Yukihiko Noro, Katsuhiko Mineta, Takashi Gojobori (KAUST)

WS1-3 13:50-14:10 planarian provides a new insight into evolution of the brain
nou-darake 遺伝子の頭部特異的発現が集中神経系を進化させた？
○Kiyokazu Agata (Life Sci. Gakushuin Univ.)

WS1-4 14:10-14:30 Neurogenesis in sea urchin development
ウニ発生における神経形成
○Shunsuke Yaguchi (SMRC, Univ. Tsukuba)

WS1-5 14:30-14:50 Neuroblast-Lineage Dependent Development and Architecture of the Drosophila Central Brain
神経幹細胞系譜依存的なショウジョウバエ脳の構造と発生
○Takeshi Awasaki (Kyorin Univ. Sch. Med.)

Workshop 2：Gene Regulatory Network in Development and Evolution

DATE: May 11(Thu) 13:00 ～ 15:00　Room D
Chairpersons: Masanori Taira (Univ. of Tokyo)
Ken Chow (Univ. of California, Irvine)

Cell functions can be modified, and cells types can be interconverted, once we understand the mechanisms underlying the regulation of gene regulatory networks (GRNs). The major goal of GRN science is to discover causal explanations in biology. Elucidating the structure and functional logic of GRNs will provide a mechanistic system-level understanding of how information encoded in the genome is executed to control cell fate and cell function in development, stem cells, homeostasis and disease. Therefore, a researcher seeking to understand the mechanistic basis of a particular disease should be encouraged to not only catalog the gene expression differences between diseased and healthy cells, but also understand the GRN underlying these different conditions. We will discuss how researchers are trying to advance GRN science to address this essential, but complex biological question.

WS2-1 13:00-13:20 ChIP-seq analysis of transcription factors in the Xenopus gastrula
Xenopus 原腸胚における転写因子の ChIP-seq 解析
○Masanori Taira[1], Yuuri Yasoka[2] (Dept.of Biol.Scis., Grad.Sch.of Sci., Univ.of Tokyo[1], Marine Genomics Unit, OIST[2])

WS2-2 13:20-13:40 Evolutionary developmental transcriptomics in plant leaf shape
植物の葉の形における進化発生トランスクリプトーム解析
○Yasunori Ichihashi[1,2] (RIKEN CSRS[1], JST PRESTO Researcher[2])

WS2-3 13:40-14:05 Gene Regulatory Network Science: Integrating different genomic datatypes to build an endodermal GRN
○Ken Cho[1], Ira Blitz[1], Rebekah Charney[1], Kitt Paraiso[1], Jin Cho[1], Yuuri Yasuoka[2], Masanori Taira[3], Elmira Forouzmand[1], Xiaohui Xie[1] (Developmental and cell Biology, UC Irvine[1], Okinawa Institute of Science and Technology Graduate[2], Graduate School of Science, Hiroshima University[3])

WS2-4 14:05-14:30 Functional genomics in the human and mammalian genomes

○Ali Mortazavi (Developmental and Cell UC, Irvine)

WS2-5 14:30-14:55 Control of the gene regulatory network of the ascidian embryo by experimental manipulation

○Yutaka Satou (Dept.of Zool., Grad.Sch.of Sci., Kyoto Univ.)

Oral Presentations

Oral presentation 1：Differentiation and Theoretical biology, Modeling, Imaging

DATE: May 10 (Wed) 9:00 〜 11:00 Room C
Chairpersons: Atsuko Sehara-Fujisawa (Kyoto Univ.)
Yuji Yokouchi (FMU)

OP01-01 (P019) 09:00-09:12

HIF1α Initiates Zebrafish Primitive Erythroid Differentiation by Switching On GATA1a Expression

○Bo-An Lin[1], Yi-Xuan Lin[1], Hsin-Yu Chung[1], Jyuan-Kai Chiu[1], Kun-Tong Chiu[1], Shih-Han Wen[1], Wen-Shyong Tzou[1,2], Chin-Hwa Hu[1,2] (Dep. Biosci. Biotechnol, Natl. Taiwan Ocean Univ.[1], Center of Excellence for the Oceans, Natl. Taiwan Ocean Univ.[2])

OP01-02 (P027) 09:12-09:24

Involvement of Adam19 in the fate decision of cardiac neural crest cells

心臓神経堤の運命決定における Adam19 の役割

○Hiroyuki Arai[1], Fuminori Sato[1], Takuya Yamamoto[2], Hiroshi Kiyonari[3], Atsuko Sehara-Fujisawa[1] (IFMS, Kyoto U[1], CiRA, Kyoto U[2], LARGE, RIKEN CDB[3])

OP01-03 (P015) 09:24-09:36

Intrinsic lens potential of neural retina inhibited by Notch signaling as the cause of “lens transdifferentiation”

神経性網膜に内在する水晶体分化能を抑制する Notch シグナル：その破綻が水晶体への「分化転換」をもたらす

○Hideaki Iida[1], Yasuo Ishii[2], Hisato Kondoh[1,2] (DBGSE, Kyoto Sangyo Univ.[1], FLS, Kyoto Sangyo Univ.[2])

OP01-04 09:36-09:48

Development a protocol to differentiate human iPS cells into Thyroidal C-cells

ヒト iPS 細胞より甲状腺 C 細胞を分化させるための手法の開発

○Yuji Yokouchi[1], Satomi Noguchi[1], Jun Ogawa[1], Izumi Nakamura[1], Shinichi Suzuki[2], Seiichi Takenoshita[1,3,4], Takumi Era[1,5] (Dept. Stem Cell Res. FMU[1], Dept.Thyroid and Endocrinol., FMU[2], Dept. Adv. Nuc. Med., FMU[3], Dept. Biofunction. Image., FMU[4], Dept. Cell Modulation, IMEG, Kumamoto

Univ.[5])

OP01-05 (P024) 09:48-10:00 A novel 3D spheroid culture system for generating functional pancreatic β cells derived from human induced pluripotent stem cells
ヒト iPS 細胞を用いた膵臓分化誘導 3 次元培養系の構築
○Zixuan Erinn Sim, Saeko Momma, Nobuaki Shiraki, Shoen Kume (Titech Life Science)

Chairpersons: Kazuhiro Aoki (NIBB)
Koichiro Uriu (Kanazawa Univ.)

OP01-06 (P187) 10:00-10:12 Effects of sizes of self-organized patterns composed by vascular endothelial cells on vasculogenesis
脈管形成において血管内皮細胞が自律的に形成するパターンサイズの影響
○Akiko Nakamasu[1], Masamune Nakayama[2], Naoto Shingu[3], Hirofumi Izuhara[4], Yuji Nashimoto[2], Itsuki Kunita[5], Yuichiro Arima[5], Yoshimi Yamaguchi[1], Koichi Nishiyama[5], Ryuji Yokokawa[2], Takashi Miura[1] (Grad. Sch. Med. Sci., Kyushu Univ.[1], Dept. Mic. Engine., Kyoto Univ.[2], Facul. Med., Kyushu Univ.[3], Facul. Engine., Miyazaki Univ.[4], IRCMS, Kumamoto Univ.[5])

OP01-07 10:12-10:24 Modeling autonomous folding of epithelial sheets
○Fulai Wen[1], Yuchiun Wang[2], Tatsuo Shibata[1] (RIKEN QBiC[1], RIKEN CDB[2])

OP01-08 10:24-10:36 Fine structural analyses of nuclear body paraspeckle using super-resolution microscope
超解像顕微鏡を用いた核内構造体パラスペックルの微細構造観察
○Shinichi Nakagawa (Hokkaido Univ.)

OP01-09 (P137) 10:36-10:48 Determination of mechanism for vascular remodeling from endothelial cellular behavior by fluid and solid mechanics
連続体力学を用いて血管リモデリングにおける内皮細胞の振る舞いを理解する
○Kenichi Nakazato[1], Yuta Takase[2], Yoshiko Takahashi[2], Hiroshi Kokubu[3], Atsushi Mochizuki[1] (Theoretical Biology Laboratory, RIKEN[1], dept of zoology, grad school of science, Kyoto-univ[2],

dept of math, Kyoto-univ[3])

OP01-10 (P193) 10:48-11:00 Imaging of the kinetics of transcription factors in pluripotent stem cells
幹細胞核内におけるコア転写因子の一分子イメージング
○Kazuko Okamto[1], Kohei Yamamura[2], Hiroki Ura[3], Yasushi Okada[2], Kuniya Abe[3], Tomonobu Watanabe[1] (RIKEN QBiC Comprehensive Bioimaging Laboratory[1], RIKEN QBiC, Lab for Cell Polarity Regulation[2], RIKEN BRC, Mammalian Genome Dynamics Team[3])

Oral presentation 2：Neural Development

DATE: May 10 (Wed) 9:00 〜 11:00 Room D
Chairpersons: Hideki Enomoto (Kobe Univ.)
Satoko Hakeda-Suzuki (Tokyo Inst. Tech.)

OP02-01 09:00-09:12 Temporal control of cortico-thalamic neuron specification by regulation of Neurogenin activity and Polycomb repressive complexes
皮質視床投射ニューロンの時期特異的な産生は転写因子 Neurogenin と Polycomb 抑制複合体によって制御される
○Koji Oishi[1,2], Kazunori Nakajima[1], Francois Guillemot[2] (Dept. Anat., Keio Univ. Sch. Med.[1], The Francis Crick Institute[2])

OP02-02 09:12-09:24 Plasticity in Schwann cell precursor-derived neurogenesis
シュワン細胞前駆細胞由来神経形成の可塑性
○Hideki Enomoto (Kobe Univ Grad Sch Med)

OP02-03 09:24-09:36 Two receptor tyrosine phosphatases dictate the depth of final axonal stabilizing layer in the *Drosophila* visual system
2 種のチロシン脱リン酸化酵素によるショウジョウバエの視神経軸索の最終安定化層の決定機構
○Satoko Hakeda-Suzuki, Hiroki Takechi, Takashi Suzuki (Tokyo Inst. Tech., Grad. Sch. of Life Sci. & Tech.)

OP02-04 (P089) 09:36-09:48 Disruption of Tsukushi leads to hydrocephalus by aberrant neurogenesis

Tsukushi の欠損は神経発生の異常による水頭症を発症させる

○Naofumi Ito[1], Mohammad Riyadh[1], Ayako Ito[1], Shah Ishtiyaq[1], Mohammad Anam[1], Yohei Shinmyo[2], Athary Felemban[1], Jun Hatakeyama[3], Kenji Shimamura[3], Kazunobu Sawamoto[4], Kunimasa Ohta[1] (Kumamoto University, Dev. neurobiol.[1], Kanazawa Univ.[2], Kumamoto Univ.[3], Nagoya City Univ.[4])

OP02-05 09:48-10:00 Shh enhances intracellular calcium fluctuation in the neural progenitor cells during mouse cortical development

○Jun Motoyama[1], Yoshiaki Nishimura[2] (Grad. School of Brain Science, Doshisha Univ.[1], Faculty of Medicine, Tohoku Med. & Pharm. Univ.[2])

OP02-06 10:00-10:12 Different functional mode of Brn factors in temporally coordinated production of neocortical cell diversity

Brn 転写因子は 2 つの異なる作用様式を介して大脳新皮質の細胞多様性を形成する。

○Yoshinobu Sugitani[1,2], Reiko Sugitani-Yoshida[2], Shigeyasu Nakai[1], Mishio Fusejima[1], Osamu Minowa[1], Masaharu Ogawa[2], Tetsuo Noda[1] (Dept. of Cell Biol., JFCR-Cancer Inst.[1], BSI Riken[2])

OP02-07 10:12-10:24 GLYAT regulates APP-induced Alzheimer's disease in drosophila

○Pu Ren (SLST, Tongji Univ)

OP02-08 10:24-10:36 Scrambling movement of tangential neuronal migration in superficial layers of the developing chick optic tectum

ニワトリ胚視蓋浅層での接線方向への神経細胞移動

○Yuji Watanabe, Chie Sakuma, Hiroyuki Yaginuma (Dept. Anatomy, Fac. Medicine, Fukushima Medical Univ.)

OP02-09 10:36-10:48 Zebrafish habenula neurogenesis requires ngn1 cell-autonomously

Bo-Tsung Wu[1,2], Shih-Hsien Wen[1,2], Yasuhiro Kamei[3], Atsuko Shimada[4], Hiroyuki Takeda[4], Eiji Kimura[5], ○Yung-Shu Kuan[1,2,6] (IBS-NTU[1], IBC-AS[2], NIBB[3], DeptBioSci-UT[4], DeptAna-IMU[5], NPAS-AS[6])

OP02-10 10:48-11:00 Ca^{2+}-imaging and photo-manipulation of the simple gut of zebrafish larvae *in vivo*

ゼブラフィッシュ幼生の単純な腸の生体内カルシウムイメージングと光操作

Shin-Ichi Okamoto, ○Kohei Hatta (Life Sci, U of Hyogo)

Oral presentation 3：Patternning, Organogenesis 1

DATE: May 10 (Wed) 9:00 〜 11:00 Room E

Chairpersons: Yusuke Watanabe (NCVC)

Rieko Ajima (NIG)

OP03-01 09:00-09:12 Numb/NumbL promote cell-cycle withdrawal by transitioning ErbB2 to late endosomes

Numb/NumbL は、ErbB2 の早期エンドソームから後期エンドソームへの移行を促進することにより、発生期心臓の trabeculae を細胞周期の休止期に導く

○Maretoshi Hirai[1], Sylvia M Evans[2] (KMU, Dept of Pharm[1], SSPPS, UCSD[2])

OP03-02 09:12-09:24 SELECTIVELY INDUCED URETERIC BUD AND NEPHRON PROGENITORS ASSEMBLE AND RECONSTRUCT SUPERSTRUCTURE OF THE EMBRYONIC KIDNEY

尿管芽とネフロン前駆細胞の選択的誘導・会合法の確立による胎仔腎臓高次構造の再構築

○Atsuhiro Taguchi, Ryuichi Nishinakamura (IMEG, Kumamoto Univ.)

OP03-03 (P136) 09:24-09:36 Blood flow and vascular remodeling: analyses of individual endothelial cell behaviors by in vivo live-imaging and mathematical approach

生体内血管リモデリング：ライブイメージングと数理解析からみる血管内皮細胞の挙動と血流の関係

○Yuta Takase[1], Kenichi Nakazato[2], Ryo Kudo[1], Ryosuke Tadokoro[1], Hiroshi Kokubu[3], Atsushi Mochizuki[2], Yoshiko Takahashi[1] (Dept. of Zoology, Grad. Sch. of Sci. Kyoto Univ.[1], Theoretical Biology Laboratory, RIKEN[2], Dept. Math, Grad. Sch. of Sci. Kyoto Univ.[3])

OP03-04 09:36-09:48 Lineage segregation of post-implantion mouse embryo revealed by spatial and single cell transcriptome

○Guangdun Peng[1], Shengbao Suo[2], Guizhong Cui[1], Fang Yu[1], Guoyu Chen[2], Zhiwen Liu[1], Jingdong Han[2], Patrick Tam[3], Naihe Jing[1] (SIBCB, CAS[1], CAS-MPG Partner Institute of Computational Biology[2], CMRI[3])

OP03-05 09:48-10:00 Modeling the segmentation clock with pluripotent stem cells

Mitsuhiro Matsuda[2], Maya Uemura[1], Yoshihiro Yamanaka[1], Mitsujiro Osawa[1], Megumu Saito[1], Makoto Ikeya[1], Hiroyuki Yoshitomi[1], Junya Toguchida[1], Takuya Yamamoto[1], Knut Woltjen[1], Miki Ebisuya[2], ○Cantas Alev[1,2] (CiRA, Kyoto University[1], RIKEN QBiC[2])

OP03-06 (P122) 10:00-10:12 Oriented mesenchymal cells drive tracheal tubulogenesis

気管の管腔形成における間充織極性化の重要性

○Keishi Kishimoto, Mitsuru Morimoto (RIKEN CDB)

OP03-07 (P112) 10:12-10:24 How to encounter endothelial cells in deep tissues-mechanical interaction between endothelial cells and epithelial tube

組織深部で血管内皮細胞が出会うためには～血管内皮と上皮管の力学的相互作用

○Tsuyoshi Hirashima (Inst Front Life Med Sci, Kyoto Univ)

OP03-08 10:24-10:36 Quantitative analysis of tissue and cellular dynamics during chick forebrain morphogenesis

ニワトリ前脳発生過程における組織・細胞動態の定量解析

○Yoshihiro Morishita, Daisuke Ohtsuka (RIKEN QBiC)

OP03-09 (P129) 10:36-10:48 Wnt signal is required for proper rearrangement and morphological change of roof plate cells in the formation of median septum of mouse spinal cord

Wnt シグナルは脊髄神経管中隔形成に必要である

○Takuma Shinozuka[1,2], Ritsuko Takada[2], Shinji Takada[1,2] (Dept. Basic Biology, SOKENDAI[1], OIIB[2])

OP03-10 10:48-11:00 Foxa2 and Hif1ab regulate maturation of intestinal goblet cells by modulating agr2 expression in zebrafish embryos

○Sheng-Ping Hwang[1], Yun-Ren Lai[2], Yu-Fen Lu[1], Huang-Wei Lien[3], Chang-Jen Huang[3] (ICOB, Academia Sinica[1], Dept Bioscience & Biotech., National Taiwan Ocean Univ.[2], IBC, Academia Sinica[3])

Oral presentation 4：Developmental Physiology & Mechanobiology and Environment, Nutrition, Metabolism

DATE: May 10 (Wed) 13:00 〜 15:00 Room C
Chairpersons: Keiko Nonomura (NIBB)
Erina Kuranaga (Tohoku Univ.)

OP04-01 (P011) 13:00-13:12 Tension-dependent dynamics of adherens junction components during cell junction oscillation in Drosophila epithelium
上皮組織における細胞間張力のゆらぎと張力依存的な細胞接着分子の応答
○Yusuke Hara[1,2], Murat Shagirov[1], Kok Hwee Lim[1,2], Yusuke Toyama[1,2,3] (MBI, Singapore[1], TLL, Singapore[2], DBS, NUS, Singapore[3])

OP04-02 (P001) 13:12-13:24 Cadherin-2 mediates spatiotemporal control of actomyosin contractility during zippering and neural tube closure in a simple chordate
ホヤ神経管閉鎖のジッパリングにおけるアクトミオシン収縮はカドヘリンによって時空間的に制御される
○Hidehiko Hashimoto, Edwin Munro (University of Chicago)

OP04-03 (P005) 13:24-13:36 Mechanotransducer channel Piezo2 regulates respiration at birth and in the adult
機械刺激受容体チャネル Piezo2 は出生時と成体の呼吸を制御する
○Keiko Nonomura[1,2], Seung-Hyun Woo[2], Rui Chang[3], Astrid Gillich[4], Zhaozhu Qiu[2], Allain Francisco[2], Sanjeev Ranade[2], Stephen Liberles[3], Ardem Patapoutian[2] (NIBB[1], TSRI[2], Harvard Medical School[3], Stanford University[4])

OP04-04 13:36-13:48 Cortical forces and CDC-42 control clustering of PAR proteins for C. elegans embryonic polarization

Shyi-Chyi Wang[1], Tricia Low[1], Yukako Nishimura[2], Laurent Gole[4], Weimiao Yu[4], ○Fumio Motegi[1,2,3] (TLL[1], MBI[2], National Univ. of Singapore[3], IMCB, A*STAR[4])

OP04-05 (P010) 13:48-14:00

Involvement of cell shape and tension with neural-epidermal ectoderm patterning in Xenopus embryo
ツメガエル胚における、細胞張力と細胞形状の神経ー表皮外胚葉パターニングへの関与
○Tatsuo Michiue, Satoshi Yamashita, Nanako Ishinabe, Takahiro Ide, Sayuki Hirano (Grad. School of Arts and Sciences, Univ. Tokyo)

OP04-06 (P013) 14:00-14:12

Phosphoproteomic analysis of mechanotransduction during *Xenopus* embryogenesis
アフリカツメガエル胚発生におけるメカノトランスダクションのリン酸化プロテオーム解析
○Noriyuki Kinoshita[1], Yutaka Hashimoto[1,2], Naoto Ueno[1] (Div. of Morphogenesis NIBB[1], Dept. of Mol. Biol. Princeton Univ.[2])

OP04-07 (P014) 14:12-14:24

Collective durotaxis of cranial neural crest cells in Xenopus
アフリカツメガエル頭部神経堤細胞の弾性勾配応答
○Sei Kuriyama (Akita University)

OP04-08 (P055) 14:24-14:36

Anaerobic glucose metabolism regulates neural tube formation
嫌気的解糖系による神経管閉鎖制御
○Daisuke Sakai (Doshisha University)

OP04-09 (P108) 14:36-14:48

The role of methionine metabolism during germline development in Drosophila melanogaster.
ショウジョウバエ生殖系列におけるメチオニン代謝の役割
○Yoshiki Hayashi[1], Chiyo Noda[2], Satoru Kobayashi[1] (TARA center, Univ. of Tsukuba[1], NIBB[2])

OP04-10 (P012) 14:48-15:00

Thyroid hormone coordinates pancreatic islet maturation during the zebrafish larval to juvenile transition to maintain glucose homeostasis
ゼブラフィッシュ膵島成熟化とグルコースホメオスタシスにおける甲状腺ホルモンの役割

○Hiroki Matsuda[1,2], Sri Teja Mullapudi[2], Yuxi Zhang[3], Daniel Hesselson[3], Didier Stainier[2] (Tohoku Univ[1], MPI-BN[2], Garvan Institute[3]).

Oral presentation 5 : Early development and Regeneration, Metamorphosis and Patternnng, Organogenesis 2

DATE: May 10 (Wed) 13:00 〜 15:00 Room E

Chairpersons: Atsushi Suzuki (Hiroshima Univ.)
Gaku Kumano (Tohoku Univ.)

OP05-01 13:00-13:12

Phosphorylation of Otx2 modulates its role in cell proliferation and differentiation in Xenopus eye development

Otx2 のリン酸化修飾は Xenopus の発生において細胞増殖と分化における役割を調節する

○Yumeko Satou[1], Kohei Minami[1], Erina Hosono[1], Hajime Okada[1], Yuuri Yasuoka[1,2], Takashi Shibano[1], Masanori Taira[1] (Dept. of Biol. Sci, Grad. Sch. of Sci., Univ. of Tokyo[1], OIST[2])

OP05-02 (P050) 13:12-13:24

Membrane invagination-mediated posterior ciliary positioning is involved in the neurula rotation related to establish left-right asymmetry in ascidian embryo

膜構造を介した後方に偏った繊毛がホヤ左右軸決定に重要な神経胚回転に関わる

○Takefumi Negishi[1], Naoto Ueno[1,2] (NIBB[1], SOKENDAI[2])

OP05-03 (P046) 13:24-13:36

Spatial regulation of Wnt proteins and planar cell polarity in Xenopus early embryogenesis.

アフリカツメガエル初期発生における Wnt 蛋白質の空間的制御と平面細胞極性

○Yusuke Mii[1,2,3], Ritsuko Takada[1,2], Makoto Matsuyama[4], Shinji Takada[1,2,3] (NIBB[1], OIIB[2], SOKENDAI[3], Shigei Medical Research Institute[4])

OP05-04 13:36-13:48

Asymmetric Distribution of Hypoxia-Inducible Factor α Regulates Dorsal-Ventral Axial Patterning in the Early Embryo of the Sea Urchin Strongylocentrotus purpuratus

Wei-Lun Chang[1,2], Yi-Cheng Chang[1], Kuan-Ting Lin[1], Han-Ru

Li[1], Chin-Yu Pai[1], Jen-Hal Chen[1], ○Yi-Hsien Su[1,2] (ICOB, Academia Sinica, Taipei, Taiwan[1], Graduate Institute of Life Sciences, National Defense Medical Center, Taipei, Taiwan[2])

OP05-05 13:48-14:00 *Diaphanous* gene determines chirality in snails
ディアファノス遺伝子は巻貝の巻型を決定する
○Reiko Kuroda[1,2,3], Masanori Abe[1,3], Kohei Fujikura[2,3] (RIST, Tokyo Univ. Sci.[1], Dept. Life Sci., Tokyo Univ.[2], SORST, JST[3])

OP05-06 (P051) 14:00-14:12 *Mesp1* is a canonical Wnt target gene during early mesoderm formation
*Mesp1*の発現は初期中胚葉形成において古典的 Wnt シグナルによって制御される
○Rieko Ajima, Yumiko Saga (NIG)

Chairperson: Hitoshi Yokoyama (Hirosaki Univ.)

OP05-07 (P161) 14:12-14:24 Scaling of critical weight for metamorphosis in the genus *Drosophila*
ショウジョウバエ属における変態のための臨界重量のスケーリング
○Ken-Ichi Hironaka[1,2], Koichi Fujimoto[1], Takashi Nishimura[2] (Dept. of Biol. Sci., Osaka Univ.[1], RIKEN CDB[2])

OP05-08 (P158) 14:24-14:36 Loss-of-function and rescue analyses of immune T cells involved in *Xenopus* tail degeneration via Ouro antigens
ツメガエル尾の退縮に Ouro 抗原タンパク質を介して関わる免疫 T 細胞の機能阻害実験と回復実験
○Haruka Kobayashi, Yumi Izutsu (Dept. Biol., Fac. Sci., Niigata Univ.)

OP05-09 14:36-14:48 Physical control of whole body shape by Obstructor-E, a component of the exoskeletal ECM, in *Drosophila melanogaster*
ECM 分子による物理的な体型制御：ショウジョウバエ外骨格分子 Obstructor-E の機能解析
○Reiko Tajiri, Haruhiko Fujiwara, Tetsuya Kojima (Grad. Sch. Frontier Sci., Univ. Tokyo)

OP05-10 (P109) 14:48-15:00 Tail reduction process during human embryonic development

ヒト胚発生過程における尾部短縮過程の解明
○Sayaka Tojima[1], Haruyuki Makishima[2], Shigehito Yamada[2] (Grad. Sch. of Med., Osaka City Univ.[1], Grad. Sch. of Med., Kyoto Univ.[2])

Oral presentation 6：Patternnng, Organogenesis 3

DATE: May 10 (Wed) 13:00 〜 15:00 Room F
Chairpersons: Takayuki Suzuki (Nagoya Univ.)
Atsuhiro Taguchi (Kumamoto Univ.)

OP06-01 13:00-13:12 Multipotency and cell survival governed by Hox genes during branching morphogenesis of the Drosophila airways
○Ryo Matsuda[1], Chie Hosono[1], Kaoru Saigo[2], Christos Samakovlis[1] (MBW, Stockholm Univ.[1], Univ. Tokyo[2])

OP06-02 (P148) 13:12-13:24 The mechanism about the cell autonomous generation of collagen crystal involved with fin skeletal development
魚類ヒレ骨形成において機能するコラーゲン結晶の自律的合成メカニズム
○Junpei Kuroda, Shigeru Kondo (FBS, Osaka univ)

OP06-03 (P116) 13:24-13:36 Temporal Control of Tissue Maturation with Proliferation Reduction in developing trachea
気管発生時にみられる、増殖低下を伴う組織成熟の経時的変化とその制御機構の解明
○Hirofumi Kiyokawa, Keishi Kishimoto, Mitsuru Morimoto (CDB)

OP06-04 (P128) 13:36-13:48 The role of diphthamide biosynthesis enzyme DPH1 in mouse cardiac development
○Chun-Ming Chen[1], Yi- Ru Yu[1], Li-Ru You[2] (DLSIGS, National Yang-Ming University[1], IBMB, National Yang-Ming University[2])

OP06-05 13:48-14:00 Physical modeling of oscillator resynchronization after perturbation of Delta-Notch signaling in zebrafish presomitic mesoderm
Delta-Notch シグナル阻害後のゼブラフィッシュ分節時計再同期過程の数理モデリング

○Koichiro Uriu (Graduate School of Natural Science and Technology, Kanazawa University)

OP06-06 14:00-14:12 Cardiac looping is caused by asymmetric cell proliferation and chiral cell behavior
初期胚心臓ループは細胞増殖の非対称分布と細胞のキラル行動によって形成される
○Hisao Honda[1,2], Takaya Abe[3], Toshihiko Fujimori[3,4] (Kobe Univ. Graduate School of Medicine[1], RIKEN CDB[2], RIKEN Center for Life Science Tech.[3], NIBB[4])

OP06-07 (P120) 14:12-14:24 Cellular and molecular mechanisms for the establishment of the dorsal and ventral compartments in the teleost somite
真骨魚類体節の背腹コンパートメント形成における細胞・分子メカニズム
○Kota Abe[1], Sayaka Tayama[1], Sachiko Tsuda[2], Atsuko Shimada[1], Hiroyuki Takeda[1] (Laboratory of Embryology, University of Tokyo[1], Laboratory of Developmental Biology, Saitama University[2])

OP06-08 (P124) 14:24-14:36 Establishment of polarity of cilia orientation and cell elongation during the mouse oviduct development
マウス卵管の発生における繊毛と細胞伸長の極性形成
○Fumiko Usami[1,2], Dongbo Shi[2,3], Kagayaki Kato[4], Toshihiko Fujimori[1,2] (Dept. of Basic Biol., School of Life Sci., SOKENDAI[1], Div. of Embryology, NIBB[2], COS, Heidelberg Univ[3], Imaging Science, CNSI[4])

OP06-09 (P139) 14:36-14:48 Molecular mechanism to convert the segmentation clock into the segmental pattern of somites in the zebrafish
分節時計によるゼブラフィッシュ体節分節境界形成の制御機構
○Taijiro Yabe, Shinji Takada (NIBB)

OP06-10 (P111) 14:48-15:00 Non-muscle Myosin II Deletion in the Developing Kidney Causes Ureter-bladder Misconnection and Apical Extrusion of the Nephric Duct Lineage Epithelia
○Fahim Haque, Yusuke Kaku, Ryuichi Nishinakamura (Dept.

of Kidney Development, IMEG, Kumamoto Univ.)

Oral presentation 7：Technology (genome editing, bioinfomatics, big data) and Fertilization, gametogenesis, reproduction

DATE: May 11 (Wed) 13:00 〜 15:00 Room C
Chairperson: Yasunori Sasakura (Univ. of Tsukuba)

OP07-01 (P184) 13:00-13:12

Regulatory sequence evolution during the fin-to-limb transformation
鰭から四肢への形態変化における遺伝子制御配列の進化
○Koh Onimaru[1], Fumio Motone[1,2], Itsuki Kiyatake[3], Kiyonori Nishida[3], Shigehiro Kuraku[1] (CLST[1], Graduate School of Science and Technology, Kwansei Gakuin University[2], Osaka Aquarium Kaiyukan[3])

OP07-02 13:12-13:24

CRISPR/Cas9-mediated eGFP reporter integration into zebrafish genome for functional visualization and disruption of target genes
ゼブラフィッシュにおける CRISPR/Cas9 法を用いた eGFP レポーターの挿入による標的遺伝子の発現可視化と機能破壊
○Kiyohito Taimatsu[1], Satoshi Ota[2], Shin-Ichi Higashijima[3], Atsuo Kawahara[1] (Univ. of Yamanashi[1], Bioengineering Lab[2], NIBB[3])

OP07-03 (P183) 13:24-13:36

Integrative analysis of transcription factor occupancy at tissue-specific enhancers and disease risk loci in non-coding genomic regions
Non-coding ゲノム領域における組織特異的エンハンサーおよび疾患関連 SNP に結合する転写因子の統合的解析
○Shinya Oki[1], Tazro Ohta[2], Go Shioi[3], Hideki Hatanaka[4], Osamu Ogasawara[5], Yoshihiro Okuda[5], Hideya Kawaji[6], Ryo Nakaki[7], Jun Sese[8], Chikara Meno[1] (Grad. Sch Med. Sci., Kyushu Univ.[1], DBCLS, ROIS[2], RIKEN CLST[3], NBDC, JST[4], DDBJ center, NIG[5], RIKEN ACCC[6], RCAST, the Univ of Tokyo[7], AIRC, AIST[8])

Chairpersons: Shosei Yoshida (NIBB)
Yoshiyuki Seki (Kwansei-Gakuin Univ.)

OP07-04 (P086) 13:36-13:48 Homing efficiency and behavior of mouse seprmatogenic stem cells following transplantation
マウス精子幹細胞のホーミング効率と振舞い
○Yoshiaki Nakamura[1,2], Yayoi Kon[1], Shosei Yoshida[1] (Div. Germ Cell Biology, NIBB[1], JSPS research fellow[2])

OP07-05 (P087) 13:48-14:00 Requirement of DDX6-mediated P-body formation in male germ cell development
雄性生殖細胞発生における DDX6 を介した P-body の必要性
○Ryuki Shimada[1], Yumiko Saga[1,2] (SOKENDAI[1], Division of Mammalian Development, National Institute of Genetics[2])

OP07-06 (P079) 14:00-14:12 Significance of Cav3.2 and TRPV4 in the adaptation of intracellular signaling for motility regulation to various reproductive environments in amphibian sperm
両生類精子運動調節の細胞内信号伝達の生殖環境に対する適応における Cav3.2 と TRPV4 の重要性
Tae Sato[1], Maako Kawamura[1], Eriko Takayama-Watanabe[2], ○Akihiko Watanabe[1] (Fac. of Sci., Yamagata Univ.[1], Inst. of Arts & Sic., Yamagata Univ.[2])

OP07-07 (P077) 14:12-14:24 Testing the possible impact of maternal cells on development, case of the neonatal liver disorder biliary atresia
○Flore Castellan, Naoki Irie (Dept. of Biol. Sciences, University of Tokyo)

OP07-08 (P080) 14:24-14:36 Dullard deficiency causes hemorrhage in the adult ovarian follicles
Dullard 欠損は、成体の卵巣濾胞において、出血性嚢胞を引き起こす
○Tadayoshi Hayata[1,2], Masahiko Chiga[3,4], Yoichi Ezura[2], Makoto Asashima[5], Hidetaka Katabuchi[4], Ryuichi Nishinakamura[3], Masaki Noda[2,6] (Dept. of Biol. SIg. Reg., Faculty of Med. Univ. of Tsukuba[1], Dept. of Mol. Pharmacol., Med. Res. Inst., TMDU[2], Dept. of Kidney Dev., IMEG, Kumamoto Univ.[3], Dept. of OB-GYN, Faculty of Life Sci., Kumamoto Univ.[4], Tokyo Univ. of Sci.[5], Yokohama City Minato Red Cross Hospi-

tal[6])

OP07-09 (P085) 14:36-14:48 Morphological diversity of seminal receptacles of species among genus Drosophila
ショウジョウバエ属に見られる管状受精嚢の形態的多様性
○Tatsuhiko Noguchi (NDMC, Biology)

OP07-10 (P081) 14:48-15:00 Induction of spermatogenesis in explanted fetal mouse testis tissues by organ culture method
胎仔マウス精巣を用いた器官培養法による精子形成の誘導
○Kazuaki Kojima[1], Takuya Sato[1], Yuta Naruse[1], Takehiko Ogawa[1,2] (Graduate school of medical life science, Yokohama city university[1], Institute of Molecular Medicine and Life Science, YCU[2], Department of Urology, YCU[3])

Oral presentation 8：Stem cell, Germ cell

DATE: May 11 (Wed) 13:00 〜 15:00 Room E
Chairpersons: Kunimasa Ohta (Kumamoto Univ.)
Shoen Kume (Tokyo Inst. Tech.)

OP08-01 (P172) 13:00-13:12 Six1 and Six4 regulate germ and gonadal somatic progenitor cell formation in mice
転写因子 Six1 と Six4 によるマウス生殖細胞と生殖腺体細胞の前駆細胞形成の制御機構について
○Satomi Tanaka[1], Yasuka Yamauchi[2], Kiyoshi Kawakami[3], Ryuichi Nishinakamura[4] (Kumamoto Health Sci. Univ.[1], Kumamoto Univ.[2], Jichi Med. Univ.[3], IMEG, Kumamoto Univ.[4])

OP08-02 (P179) 13:12-13:24 Hdac3 recruitment on somatic developmental genes by Blimp1 and their repression is essential for mouse primordial germ cell fate determination
Blimp1 による Hdac3 の体細胞発生遺伝子群へのリクルートメントとそれらの発現抑制は、マウス始原生殖細胞の運命決定に必須である
○Kentaro Mochizuki[1,4], Hisato Kobayashi[2,4], Yumi Matsuoka[1], Tomohiro Kono[3,4], Yasuhisa Matsui[1,4] (IDAC, Tohoku Univ.[1], NGRC, NODAI[2], Dept. of BioSci, NODAI[3], AMED-CREST[4])

OP08-03 13:24-13:36

The transcription factor BONOBO controls sexual organ development in the basal land plant *Marchantia polymorpha*

基部陸上植物ゼニゴケにおいて転写因子BONOBOは生殖器官形成を統御する

○Shohei Yamaoka[1], Keisuke Inoue[1], Ryuichi Nishihama[1], Katsushi Yamaguchi[2], Shuji Shigenobu[2], Kimitsune Ishizaki[3], Katsuyuki T. Yamato[4], Takayuki Kohchi[1] (Grad. Sch. Biostudies, Kyoto Univ,[1], Funct. Genomics Fac., NIBB[2], Grad. Sch. Sci., Kobe Univ.[3], BOST, Kindai Univ.[4])

OP08-04 (P167) 13:36-13:48

Post-transcriptional suppression of *Dazl* in follicular oocytes plays a crucial role in pre-implantation embryonic development

卵胞における*Dazl*転写後抑制は着床前胚の発生において重要な役割を持つ

○Kurumi Fukuda[1], Takuma Naka[2], Atsushi Suzuki[2], Yumiko Saga[1,3], Yuzuru Kato[1,3] (Lab. of mammdev, Dept. of genet, Div. Sci. of life sci, SOKENDAI[1], Div. of Mat. Sci. and Chem. Eng, Fac. of Eng, Yokohama univ[2], Div. of mammdev, NIG[3])

OP08-05 13:48-14:00

Inhibition of apoptosis overcomes stage-related compatibility barriers to chimera formation

細胞死阻害を利用した異なる発生段階の細胞によるキメラ形成

○Hideki Masaki[1], Tomoyuki Yamaguchi[1], Hiromitsu Nakauchi[1,2] (IMSUT, Tokyo Univ.[1], ISCBRM, Stanford Univ.[2])

OP08-06 (P178) 14:00-14:12

Regulatory mechanism of retinal cell differentiation from ocular tissue stem cells

トリ虹彩のユニークな組織幹細胞と網膜分化の調節機構

○Masasuke Araki[1], Tamami Ishikawa[2], JöRg Steinfeld[3] (Dept of Biol., Nara Med. Univ.[1], Nara Women's University, Nara 630-8506, Japan[2], Darmstadt University of Technology, D-64287 Germany[3])

OP08-07 (P181) 14:12-14:24

New categorization of planarian stem cell population based on possible stem cell niche

予想される幹細胞ニッチをもとにしたプラナリア幹細胞集団の新しい区分

○Yuki Sato[1,2], Norito Shibata[2,3], Kiyokazu Agata[1,2] (Grad. School of Science, Gakushuin Univ.[1], Dep. of Biophys, Grad school of Science, Kyoto Univ.[2], National Institute of Tech., Tsuyama College[3])

OP08-08 (P170) 14:24-14:36 Density homeostasis of spermatogenic stem cells through competition for FGFs
精子幹細胞の密度は精細管の周囲の体細胞から発現する一定量の FGFs を精子幹細胞が奪い合うことで決められている
○Yu Kitadate[1,2], Shosei Yoshida[1,2] (NIBB[1], Sokendai[2])

OP08-09 (P175) 14:36-14:48 Identification of genes regulating PGC reprogramming into pluripotent stem cells
多能性獲得に関与する始原生殖細胞リプログラミングの分子機構解明
○Kei Otsuka[1], Asuka Takehara[1], Yasuhisa Matsui[1,2,3] (IDAC, Tohoku Univ[1], Graduate School of life sciences, Tohoku University, 2-1-1 Katahira, Aoba-ku, Sendai, Miyagi 980-8577, Japan[2], AMED-CREST[3])

OP08-10 (P176) 14:48-15:00 The endocytic regulation of the yolk protein receptor Yolkless is required for the polarity establishment and germ plasm assembly in the *Drosophila* oocyte
ショウジョウバエにおいて卵黄タンパク受容体 Yolkless のエンドサイトーシス制御は卵母細胞の極性形成と生殖質形成に必要である
○Tsubasa Tanaka[1,2], Sachiko Otsu[1], Naoki Tani[3], Akira Nakamura[1,2] (IMEG, Kumamoto Univ.[1], Grad Sch Pharm Sci, Kumamoto Univ[2], LILA, IMEG, Kumamoto Univ[3])

Oral presentation 9：Epigenetics, Genomics (comparative genomics) and Evolution (EcoEvoDevo, EvoDevo)

DATE: May 11 (Wed) 13:00 〜 15:00 Room F
Chairperson: Yuuri Yasuoka (OIST)

OP09-01 13:00-13:12 A novel CRE positively and negatively influences the expression of *Shh* and its bystander genes
新規シス因子がもたらす *Shh* 遺伝子座への正と負

の影響
○Takanori Amano, Toshihiko Shiroishi (NIG)

OP09-02 13:12-13:24 A new *cis*-regulatory element acquired by inter-chromosomal translocation changes mouse limb morphology
染色体転座によるシス調整配列の獲得はマウスの四肢形態変化を引き起こす
○Kousuke Mouri, Tomoko Sagai, Takanori Amano, Toshihiko Shiroishi (NIG)

Chairpersons: Juan Pascual Anaya (RIKEN CDB)
Mikiko Tanaka (Tokyo Inst. Tech.)

OP09-03 (P060) 13:24-13:36 Independent subfunctionalization of brachyury paralogs in vertebrate lineages
脊椎動物各系統における brachyury パラログの独立した機能分化
○Yuuri Yasuoka, Noriyuki Satoh (OIST)

OP09-04 13:36-13:48 Asymmetric β-catenin nuclearization determines mesendoderm formation during early development of amphioxus
Cheng-Yi Chen, Hui-Ju Wu, ○Jr-Kai Yu (ICOB, Academia Sinica, Taiwan)

OP09-05 13:48-14:00 Hox genes and clusters from the hagfish: insights into the vertebrate ancestor
○Juan Pascual-Anaya[1], Iori Sato[1], Fumiaki Sugahara[2], Wataru Takagi[1], Shinnosuke Higuchi[1], Shigeru Kuratani[1] (RIKEN[1], Divition of Biology, Hyogo College of Medicine, Nishinomiya, Hyogo, Japan.[2])

OP09-06 14:00-14:12 Analysis of the Hox gene cluster of the ascidian, *Halocynthia roretzi*, suggests multiple steps of the cluster disintegration during the course of ascidian evolution
マボヤの Hox 遺伝子の解析から示唆されるホヤの進化における Hox 遺伝子クラスター崩壊過程
Yuka Sekigami[1], Takuya Kobayashi[1], Ai Omi[1], Kouki Nishitsuji[2], Noriyuki Satoh[2], Asao Fujiyama[3], ○Hidetoshi Saiga[1] (Dept. of Biol. Scis., Grad. Sch. of Sci., Tokyo Metropolitan Univ.[1], MGU, OIST[2], NIG[3])

OP09-07 14:12-14:24 Metamerism in cephalochordates and the problem of the vertebrate head
頭索類分節性と脊椎動物頭部問題
○Takayuki Onai, Shigeru Kuratani (Evolutionary Morphology Lab, RIKEN)

OP09-08 14:24-14:36 Mechanisms that produce the phenotypic developmental plasticity of sponges
棲息環境に合わせたカイメンの形態可変性を可能にするメカニズム
○Noriko Funayama (Dept. of Biophys., Graduate School of Science, Kyoto Univ.)

OP09-09 (P065) 14:36-14:48 The evolution of acetabular morphogenesis on the line to extant birds.
鳥類の系統における寛骨臼の形態形成の進化
○Shiro Egawa[1], Gembu Abe[1], Daisuke Saito[1,2], Koji Tamura[1] (Grad. Sch. of Life Sci, Tohoku Univ.[1], FRIS, Tohoku Univ.[2])

OP09-10 (P068) 14:48-15:00 Integration of distinct developmental systems in the vertebrate pharyngeal arch segmentation and evolution
脊椎動物咽頭弓の分節形成と進化における異なる発生システムの統合
○Kazunori Okada[1,2], Shinji Takada[1,2] (NIBB[1], OIIB[2])

Poster Sessions

PXXX is Poster Award candidate.

May 10 (Wed) 11:00-May 12 (Fri) 12:30
Discussion 1: May 10 (Wed) 15:15-16:15 for odd number posters
16:15-17:15 for even number posters
Discussion 2: May 11 (Thu) 15:15-16:15 for odd number posters
16:15-17:15 for even number posters

P001 (OP04-02) Cadherin-2 mediates spatiotemporal control of actomyosin contractility during zippering and neural tube closure in a simple chordate
ホヤ神経管閉鎖のジッパリングにおけるアクトミオシン収縮はカドヘリンによって時空間的に制御される
○Hidehiko Hashimoto, Edwin Munro (University of Chicago)

P002 Theoretical inference of cell mechanics which explains 3-dimensional morphological diversity
細胞の力学の理論的な推定とそれに基づいた 3 次元的な形態の多様性の理解
○Hiroshi Koyama, Toshihiko Fujimori (Div. Embryology, NIBB)

P003 The movement without nerves or muscles : The twisting movement of plant leaves toward light
神経や筋によらない運動：光の方向に向く葉のねじれ運動
○Yuta Otsuka[1], Hirokazu Tsukaya[1,2] (Grad. Sch. Sci., Univ. Tokyo[1], OIIB, NINS[2])

P004 Modeling vascular scaling law formation in retina vasculature
網膜血管網におけるスケーリング則の形成メカニズム
Shotaro Kawamura[2], Atsushi Tero[3], Hiroshi Kori[4], Akiyoshi Uemura[5], ○Takashi Miura[1] (Dept.of Anat.& Cell Biol., Kyushu Univ. Grad. Sch.of Med.[1], Kyushu Univ Sch Med[2], IMI, Kyushu Univ.[3], Nagoya City Univ Grad Sch Med Sci[4], Ochanomizu Univ[5])

P005 (OP04-03) Mechanotransducer channel Piezo2 regulates respiration at birth and in the adult
機械刺激受容体チャネル Piezo2 は出生時と成体の呼吸を制御

する

○Keiko Nonomura[1,2], Seung-Hyun Woo[2], Rui Chang[3], Astrid Gillich[4], Zhaozhu Qiu[2], Allain Francisco[2], Sanjeev Ranade[2], Stephen Liberles[3], Ardem Patapoutian[2] (NIBB[1], TSRI[2], Harvard Medical School[3], Stanford University[4])

P006 Iberian ribbed newt's external gill; finely controlled distribution of the ciliated cells in the respiratory epithelium makes constant fluid flow pattern that realizes countercurrent blood flow

イベリアトゲイモリ幼生の外鰓の呼吸上皮の繊毛細胞の分布は前方から後方への一定の水流パターンを生成し、血流の対向流を実現している

○Reico Ichikawa, Ryuji Toyoizumi (Dept. of Biol. Sci., Fac. of Sci., Kanagawa Univ.)

P007 Epithelial barrier homeostasis by cell competition

上皮バリアの恒常性の維持における細胞競合の役割

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

P008 Essential patterning of metachronal ciliary movement and resultant fluid flow is conserved in both urodelan and anuran amphibians

有尾両生類と無尾両生類の間で、同調的繊毛運動によって生成される脳脊髄液流と嗅窩の液流パターンは保存されている

Kazue Mogi, Kotomi Imura, Kento Suzuki, ○Ryuji Toyoizumi (Dept. of Biol. Sci., Fac. of Sci., Kanagawa Univ.)

P009 3D analysis of functional development of cerebellar circuitry in zebrafish

ゼブラフィッシュを用いた小脳の機能的神経回路形成の 3 次元的解析

○Kanae Hiyoshi[1], Hiroaki Miyazawa[2], Kazuhiro Maruyama[1], Kyo Yamasu[2], Sachiko Tsuda[2,3] (Faculty of Sci., Saitama Univ.[1], Grad. Sch. of Sci. and Eng., Saitama Univ.[2], R&D Bureau, Saitama Univ.[3])

P010 (OP04-05) Involvement of cell shape and tension with neural-epidermal ectoderm patterning in Xenopus embryo

ツメガエル胚における、細胞張力と細胞形状の神経－表皮外胚葉パターニングへの関与

○Tatsuo Michiue, Satoshi Yamashita, Nanako Ishinabe, Takahiro Ide, Sayuki Hirano (Grad. School of Arts and Sciences, Univ. Tokyo)

P011 (OP04-01) Tension-dependent dynamics of adherens junction components during cell junction oscillation in Drosophila epithelium
上皮組織における細胞間張力のゆらぎと張力依存的な細胞接着分子の応答
○Yusuke Hara[1,2], Murat Shagirov[1], Kok Hwee Lim[1,2], Yusuke Toyama[1,2,3] (MBI, Singapore[1], TLL, Singapore[2], DBS, NUS, Singapore[3])

P012 (OP04-10) Thyroid hormone coordinates pancreatic islet maturation during the zebrafish larval to juvenile transition to maintain glucose homeostasis
ゼブラフィッシュ膵島成熟化とグルコースホメオスタシスにおける甲状腺ホルモンの役割
○Hiroki Matsuda[1,2], Sri Teja Mullapudi[2], Yuxi Zhang[3], Daniel Hesselson[3], Didier Stainier[2] (Tohoku Univ[1], MPI-BN[2], Garvan Institute[3])

P013 (OP04-06) Phosphoproteomic analysis of mechanotransduction during *Xenopus* embryogenesis
アフリカツメガエル胚発生におけるメカノトランスダクションのリン酸化プロテオーム解析
○Noriyuki Kinoshita[1], Yutaka Hashimoto[1,2], Naoto Ueno[1] (Div. of Morphogenesis NIBB[1], Dept. of Mol. Biol. Princeton Univ.[2])

P014 (OP04-07) Collective durotaxis of cranial neural crest cells in Xenopus
アフリカツメガエル頭部神経堤細胞の弾性勾配応答
○Sei Kuriyama (Akita University)

P015 (OP01-03) Intrinsic lens potential of neural retina inhibited by Notch signaling as the cause of “lens transdifferentiation”
神経性網膜に内在する水晶体分化能を抑制する Notch シグナル：その破綻が水晶体への「分化転換」をもたらす
○Hideaki Iida[1], Yasuo Ishii[2], Hisato Kondoh[1,2] (DBGSE, Kyoto Sangyo Univ.[1], FLS, Kyoto Sangyo Univ.[2])

P016 Establishment and use of a new epiblast stem cell line marking Foxa2 expression with GFP
Foxa2 とともに nEGFP を発現するエピブラスト幹細胞を用い

た、初期発生過程の研究
○Sachiko Inamori, Yasuo Ishii, Hisato Kondoh (FLS, Kyoto Sangyo Univ.)

P017 Cytoplasmic PIWI is indispensable for transposon silencing conducted by nuclear PIWI in planarian pluripotent stem cell system
細胞質局在型 PIWI はプラナリア全能性幹細胞システムにおける核局在型 PIWI による転移因子の抑制に不可欠である
○Makoto Kashima[1,2], Kiyokazu Agata[2,3], Norito Shibata[2,4] (RIFA, Ryukoku Uni.[1], DB, GSS, Kyoto Univ.[2], DLS, FS, Gakushuin Univ.[3], DIST, Tsuyama Coll.[4])

P018 Degradation Mechanism of Tbx6 during Mouse Somitogenesis
○Wei Zhao[1], Masayuki Oginuma[5], Rieko Ajima[2,3], Makoto Kiso[2], Yumiko Saga[2,3,4] (CDB[1], NIG[2], SOKENDAI[3], uTokyo[4], BWH[5])

P019 (OP01-01) HIF1α Initiates Zebrafish Primitive Erythroid Differentiation by Switching On GATA1a Expression
○Bo-An Lin[1], Yi-Xuan Lin[1], Hsin-Yu Chung[1], Jyuan-Kai Chiu[1], Kun-Tong Chiu[1], Shih-Han Wen[1], Wen-Shyong Tzou[1,2], Chin-Hwa Hu[1,2] (Dep. Biosci. Biotechnol, Natl. Taiwan Ocean Univ.[1], Center of Excellence for the Oceans, Natl. Taiwan Ocean Univ.[2])

P020 Sox5 modulates Sox10 function in pigment cell fate specification in medaka and zebrafish
メダカおよびゼブラフィッシュの色素細胞の運命決定において Sox5 は Sox10 の機能を修飾する
Yusuke Nagao[1,2], Hiroyuki Takada[3], Motohiro Miyadai[3], Ryoko Seki[1], Yasuhiro Kamei[4], Ikuyo Hara[5], Yoshihito Taniguchi[6], Kiyoshi Naruse[5], Masahiko Hibi[1], Robert Kelsh[2], ○Hisashi Hashimoto[1] (Biosci. Biotechnol. Ctr., Nagoya Univ.[1], Dept. Biol. Biochem., Univ. Bath.[2], Grad. Sch. Sci., Nagoya Univ[3], Spectrography Bioimaging Facility, NIBB[4], Lab. Biores., NIBB[5], Dept. Preventive Med. Pub. Health, Sch. Med., Kyorin Univ.[6])

P021 Analysis of lncRNA *dutA* repressing terminal differentiation via *Dictyostelium* organizer
細胞性粘菌のオーガナイザーを介した最終分化抑制に関わる lncRNA *dutA*の解析
○Yukika Saga[1], Kohei Kitsutaka[1], Saki Tamukai[1], Naoya Kurihara[1], Naoki Morikawa[1], Nao Shimada[1,2], Tetsuya Muramoto[1], Takefumi Kawata[1] (Toho

Univ.[1], Univ. of Tokyo[2])

P022 Analysis of the mouse embryos in diapause
マウスの発生休止胚の解析
○Chizuru Kamemizu[1,2], Toshihiko Fujimori[1,2] (Dept. of Basic Biol., School of Life Sci., SOKENDAI[1], Div. of Embryology, NIBB[2])

P023 Pax3 and Pax7 differentially regulate fate choice of pigment cells in zebrafish
Pax3 と Pax7 はゼブラフィッシュの色素細胞の運命選択において異なる機能を持つ
○Motohiro Miyadai[1], Hiroyuki Takada[1], Robert Kelsh[3], Masahiko Hibi[1,3], Hisashi Hashimoto[1,3] (Grad. Sch. Sci., Nagoya Univ.[1], Biosci. Biotech. Ctr., Nagoya Univ.[2], Dept. Biol. Biochem., Univ. Bath.[3])

P024 (OP01-05) A novel 3D spheroid culture system for generating functional pancreatic β cells derived from human induced pluripotent stem cells
ヒト iPS 細胞を用いた膵臓分化誘導 3 次元培養系の構築
○Zixuan Erinn Sim, Saeko Momma, Nobuaki Shiraki, Shoen Kume (Titech Life Science)

P025 Caspase signaling's new function about cell fate determination in mechanoreceptor formation of drosophila
○Yajie Zhu[1], Shiping Zhang[1], Lei Xue[1,2,3] (SLST, Tongji Univ.[1], Institute of Intervention Vessel, Shanghai 10th People's Hospital[2], Shanghai Key Laboratory of Signaling and Disease Research[3])

P026 Generation and Characterization of an INSULIN promotor driven mCherry Reporter Human iPS Cell Lines Using CRISPR/Cas9 system
CRISPR/Cas9 を用いたインスリンレポーター ヒト iPS 細胞の作製と解析
○Hiraku Tokuma, Zixuan Erinn Sim, Fumiya Uefune, Daisuke Sakano, Nobuaki Shiraki, Shoen Kume (School of Life Science and Technology, Tokyo Tech)

P027 (OP01-02) Involvement of Adam19 in the fate decision of cardiac neural crest cells
心臓神経堤の運命決定における Adam19 の役割
○Hiroyuki Arai[1], Fuminori Sato[1], Takuya Yamamoto[2], Hiroshi Kiyonari[3], Atsuko Sehara-Fujisawa[1] (IFMS, Kyoto U[1], CiRA, Kyoto U[2], LARGE, RIKEN CDB[3])

P028 Sox2-dependent regulation of stem cell-like precursors during secondary neurulation
尾側神経管形成 Secondary neurulation における Sox2 依存的な幹細胞様前駆細胞の制御
○Teruaki Kawachi[1], Eisuke Shimokita[2], Yoshiko Takahashi[1] (Kyoto univ.[1], NAIST[2])

P029 Cooperative activation of Sall4 and Sox8 transcription factors in the regulation of the chicken *Sox3* gene during inner ear development
内耳発生におけるニワトリ *Sox3*遺伝子の Sall4 と Sox8 による協調的な活性化機構
Yu Okamoto[1], Naoko Nishimura[1], Kazunari Matsuda[1], Deshani Ranawakage[2], Yusuke Kamachi[2], Hisato Kondoh[1,3], ○Masanori Uchikawa[1] (Grad. Sch. of Frontier Bioscis., Osaka Univ.[1], Sch. of Environ. Sci and Eng., Kochi Univ. of Technol.[2], Fac. of Life Sci., Kyoto Sangyo Univ.[3])

P030 new function of caspase
○Hongui Wu[1], Lei Xue[1], Shiping Zhang[1] (SKLSDR[1], Institute of Intervention Vessel, Shanghai 10th People's Hospital[2], School of Life Science and Technology, Tongji University[3])

P031 Histone demethylase LSD1/Kdm1a plays a crucial role in zebrafish definitive hematopoiesis
ヒストン脱メチル化酵素 LSD1/Kdm1a はゼブラフィッシュ二次造血において重要な働きを持つ
○Junya Tamaoki[1], Miki Takeuchi[1], Yiou Cai[1], Isao Kobayashi[2], Makoto Kobayashi[1] (Department of Molecular and Developmental Biology, Faculty of Medicine, University of Tsukuba[1], a Faculty of Natural System, Institute of Science and Engineering, Kanazawa University[2])

P032 Roles of a transcription factor 19A in the ossification of sternum
胸骨の骨化における転写因子 19A の機能

○Mao Kuriki, Atsuko Sehara-Fujisawa, Fuminori Sato (IFMLS, Kyoto University)

P033 Role of monoamines in insulin secretion
インスリン分泌におけるモノアミンの役割
○Fumiya Uefune[1], Yuki Sonoda[1], Daisuke Sakano[1], Toru Aonishi[2], Shoen Kume[1] (Life Science and Technology, Tokyo Tech[1], Computing, Tokyo Tech[2])

P034 (SW-1) The mechanism of Nodal1's signaling range regulation by Derrière, a Xenopus ortholog of mouse GDF1
アフリカツメガエルにおけるマウス GDF1 オルソログ Derrière による Nodal1 のシグナル活性化範囲制御機構
○Takafumi Ikeda, Takayoshi Yamamoto, Masanori Taira (Lab. of Mol. Biol., Dept. of Biol. Scis., Grad. Sch. of Sci., Univ. of Tokyo)

P035 *Xenopus* JunB regulates tail elongation and formation of tailbud stem-zone via integration of multiple morphogen signals
JunB は複数のモルフォゲンシグナルを統合することによりツメガエルの尾部伸長と尾芽幹細胞領域を制御する
○Hitoshi Yoshida[1], Makoto Nakamura[1], Kimiko Takebayashi-Suzuki[1], Naoto Ueno[2], Atsushi Suzuki[1] (Amphibian Research Center, Grad. Sch. Sci., Hiroshima Univ.[1], Div. Morphogenesis, Natl. Inst. Basic Biol.[2])

P036 Zranb1b and Mib regulate the Ryk-mediated non-canonical Wnt signaling pathway during zebrafish convergent extension
○Li-Chuan Tseng, Chun-Mei Cheng, Ying-Chiu Tsai, May-Su You, Yun-Jin Jiang (IMGM, NHRI,TW)

P037 Live Imaging Analysis of Cell Behavior and Morphological Change in a Mouse Embryo during the A-P Axis Formation
マウス胚の前後軸形成期における細胞挙動・形態のライブイメージング解析
○Go Shioi[1], Hideharu Hoshino[2], Takaya Abe[1], Hiroshi Kiyonari[1,3], Kazuki Nakao[4], Yasuhide Furuta[1,3], Toshihiko Fujimori[5], Shinichi Aizawa[2] (Genetic EngineeringTeam, RIKEN CLST[1], Lab. for Vertebrate Body Plan, RIKEN CDB[2], Animal Resource Development Unit, RIKEN CLST[3], Lab. of Animal Resources, CDBIM, Univ. of Tokyo[4], Div. of Embryology, NIBB[5])

P038 Modulation of BMP4 distribution and signaling with heparosan, heparan sulfate, and cerberus
ヘパロサン・ヘパラン硫酸・Cerberus による BMP4 の分布・活性制御
○Takayoshi Yamamoto, Masanori Taira (Lab. of Mol. Biol., Dept. of Biol. Scis., Grad. Sch. of Sci., Univ. of Tokyo)

P039 GSK3β regulates cleavage pattern in early development of *Lymnaea stagnalis*
淡水産巻貝 *Lymnaea stagnalis* の初期発生において GSK3β は卵割パターンに関与する
○Hiromi Takahashi[1], Masanori Abe[2], Reiko Kuroda[1,2] (Dept. of Appl. Biol. Sci., Grad. Sch. of Sci. & Tech., Tokyo Univ. of Science[1], RIST, Tokyo Univ. of Science[2])

P040 Ubiquitin C-terminal hydrolase 37 regulates Wnt/ß-catenin pathway during Xenopus gastrulation
○Wonhee Han, Hyeyoon Lee, Jin-Kwan Han (Department of Life Sciences, POSTECH, South Korea)

P041 Self-organization of twinning in Xenopus half-embryos
Self-organization によるアフリカツメガエル半胚 Twin 形成メカニズム
○Yuki Moriyama, Edward De Robertis (UCLA/hhmi)

P042 Searching for molecules expressed in the trophectoderm of the mouse peri-implantation embryo
マウス着床前後の栄養外胚葉における発現分子の探索
○Tomoaki Ito[1,2], Yasufumi Sato[1,3], Toshihiko Fujimori[1,2] (NIBB[1], SOKENDAI[2], KMU[3])

P043 Whole-mount in situ hybridization and immunohistochemistry procedures without removal of the vitelline membrane of embryos in the appendicularian, Oikopleura dioica
ワカレオタマボヤ Oikopleura dioica の胚におけるホールマウント in situ hybridization および免疫染色を卵膜除去せずに行う方法
○Takeshi Onuma, Masaki Matsuo, Hiroki Nishida (Dep. Biol. Sci., Osaka Univ.)

P044 Role of the GARP complex during early mouse development
マウス初期発生過程における GARP complex の役割
○Michihiko Sugimoto, Mayumi Muta, Kumiko Murakami, Yoko Mine, Kimi Araki (IRDA, Kumamoto Univ.)

P045 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 と Wnt シグナル伝達における細胞型特異的な機能
○Tomoko Yamakawa, Kenji Matsuno (Dept. of Biol. Sci., Grad. school of Sci., Osaka Univ.)

P046 (OP05-03) Spatial regulation of Wnt proteins and planar cell polarity in Xenopus early embryogenesis
アフリカツメガエル初期発生における Wnt 蛋白質の空間的制御と平面細胞極性
○Yusuke Mii[1,2,3], Ritsuko Takada[1,2], Makoto Matsuyama[4], Shinji Takada[1,2,3] (NIBB[1], OIIB[2], SOKENDAI[3], Shigei Medical Research Institute[4])

P047 Functional screening of maternal factors and analysis of metaphase arrest of meiosis in the appendicularian, *Oikopleura dioica*
ワカレオタマボヤを用いた母性因子の機能的スクリーニングおよび減数分裂停止機構の解析
○Masaki Matsuo, Tatsuya Omotezako, Takeshi Onuma, Hiroki Nishida (Lab of Developmental Biology, Osaka Univ.)

P048 What is the factors which function during early dorsal determination in zebrafish?
ゼブラフィッシュ初期背腹軸形成に機能する因子は何か？
○Hiromu Hino[1,2], Tsubasa Aoki[1,2], Akiko Nakanishi[2], Ryoko Seki[2], Atsuo Kawahara[3], Takashi Shimizu[1,2], Masahiko Hibi[1,2] (Grad. Sch. Sci., Nagoya Univ.[1], BBC[2], Grad. Sch. Med. Yamanashi Univ.[3])

P049 Expression and Function of Murine *Sox17* and *Sox7* Genes in Extra-embryonic Endoderm from Early to Late Organogenetic Stages.
早期から後期の器官形成期におけるマウス *Sox17* および *Sox7* の胚体外内胚葉での発現と機能
○Hitomi Igarashi[1], Yoshikazu Hirate[2], Mami Uemura[2], Hiroki Higashi-yama[1], Ryuto Hiramatsu[1], Saki Segami[1], Masamichi Kurohmaru[1], Masami

Kanai-Azuma[2], Yoshiakira Kanai[1] (Dept Vet Anat, Univ Tokyo[1], Cent for Exp Anim, TMDU[2])

P050 (OP05-02) Membrane invagination-mediated posterior ciliary positioning is involved in the neurula rotation related to establish left-right asymmetry in ascidian embryo
膜構造を介した後方に偏った繊毛がホヤ左右軸決定に重要な神経胚回転に関わる
○Takefumi Negishi[1], Naoto Ueno[1,2] (NIBB[1], SOKENDAI[2])

P051 (OP05-06) *Mesp1* is a canonical Wnt target gene during early mesoderm formation
*Mesp1*の発現は初期中胚葉形成において古典的 Wnt シグナルによって制御される
○Rieko Ajima, Yumiko Saga (NIG)

P052 Involvement of Tmem150b during Xenopus convergent extension
○Byeong-Rak Keum, Inchul Yeo, Lee Hyeyoon, Jin-Kwan Han (POSTECH)

P053 Ripply2-mediated Xbra inhibition is required for proper head development
○Inchul Yeo, Jin-Kwan Han (POSTECH)

P054 Study of the molecular pathology of the human peroxisomal biogenesis disorder using zebrafish
ゼブラフィッシュを用いたペルオキシソーム形成異常症発症機構の解明
○Shoko Takemoto[1], Kayoko Toyoshi[1], Haruka Fujita[2], Akiko Ohba[1], Kentaro Oh-Hashi[2], Yoko Hirata[2], Nobuyuki Shimozawa[1], Shigeo Takashima[1] (Div Gen Res, Life Sci Res Ctr, Gifu Univ[1], Dept Chem Biomol Sci, F Eng, Gifu Univ[2])

P055 (OP04-08) Anaerobic glucose metabolism regulates neural tube formation
嫌気的解糖系による神経管閉鎖制御
○Daisuke Sakai (Doshisha University)

P056 Vitamin A absorption and metabolism in lamprey
ヤツメウナギにおけるビタミン A の吸収と代謝
○Yoshihiro Mezaki, Takahiro Masaki, Tomokazu Matsuura (Dep. Lab.

Med., Jikei Univ.)

P057 RNA Polymerase II stalls at transcription start sites before zygotic genome activation in the ascidian embryo
ホヤ胚において胚性のゲノム活性化以前では RNA ポリメラーゼ II が転写開始点付近で停止している
○Tatsuro Ikeda[1,2], Yutaka Satou[1] (Dept. Zool., Grad. Sch. Sci., Kyoto Univ.[1], Present affiliation: NIBB[2])

P058 DNA methylation in Aeolosoma viride regeneration
○Hung-Wen Kuo[1,2], Fei-Man Hsu[2], Chung-Yen Lin[3], Liuh-Yow Chen[4], Jiun-Hong Chen[1], Pao-Yang Chen[2] (Department of Life Science, NTU[1], IPMB, AS[2], IIS, AS[3], IMB, AS[4])

P059 Plant-parasitic nematodes activate the procambium genes in the feeding site on infection
植物寄生性線虫は寄生領域で前形成層遺伝子を活性化する
○Yasuka Yamaguchi[1], Reira Suzuki[1], Javier Cabrera[2], Tomomi Sagara[1], Satoru Nakagami[1], Chika Ejima[1], Ryousuke Sano[3], Yuichi Aoki[4], Tetsuya Kurata[5], Takeshi Obayashi[4], Taku Demura[3], Carolina Escobar[2], Takashi Ishida[1], Shinichiro Sawa[1] (FAST, Kumamoto Univ.[1], Facultad de Ciencias del Medio Ambiene, Univ. de Castilla-La Mancha, Spain[2], Graduate school of biological science, NAIST[3], Graduate School of Information Sciences, Tohoku Univ.[4], Plant Global Education Project, NAIST[5])

P060 (OP09-03) Independent subfunctionalization of brachyury paralogs in vertebrate lineages
脊椎動物各系統における brachyury パラログの独立した機能分化
○Yuuri Yasuoka, Noriyuki Satoh (OIST)

P061 Expression patterns of netrins and netrin receptors in early embryonic development of the leech
○Jun-Ru Lee, Dian-Han Kuo (Department of Life Sci. College of Life Sci. NTU)

P062 Evolution and function of sterol sensing domain protein patched-related (PTR)
ステロールセンシングドメイン蛋白 patched-related (PTR) の進化と機能

○Yoshiro Nakano[1], Naoto Juni[2], Masato Umeda[2] (Dept. of Genet., Hyogo Coll. of Med.[1], Dept. Synth. Chem. and Biol. Chem., Grad. Sch. of Eng., Kyoto Univ.[2])

P063 Homeobox code in the jaw primordia of marsupial opossum (Monodelphis domestica) may represent the prototypical state for the heterodont dentition of mammals
有袋類ハイイロジネズミオポッサムの顎原基におけるホメオボックスコードの発現は哺乳類の異形歯性の原型を示す
○Yoshio Wakamatsu[1], Shiro Egawa[2], Yukari Terashita[3], Noriko Osumi[1], Hiroshi Kawasaki[3], Koji Tamura[2], Kunihiro Suzuki[4] (Dept. Dev. Neurosci., Tohoku Univ., Grad. Sch. Med.[1], Dept. Dev. Biol. Neurosci., Tohoku Univ., Grad. Sch. Life Sci.[2], Dept. Med. Neurosci., Kanazawa Univ., Grad. Sch. Med.[3], Dept. Biol., Nihon Univ., Sch. Dent. Matsudo[4])

P064 Toward understanding the mechanisms underlying phenotypic plasticity of sponges-1:Approach by single-spicule mechanical wobbling in *E.fluviatilis*
カイメンの表現型可塑性はどのような機構で成り立っているか？
1:*E.fluviatilis*を用いた 1 本の骨片を機械的に揺らす実験系によるアプローチ
○Sota Takagi[1], Masashi Tanimoto[2], Noriko Funayama[1] (Dep. Biophysics, Grad. School of Science, Kyoto Univ.[1], DIv.Biological Science, Grad. School of Science, Nagoya Univ.[2])

P065 (OP09-09) The evolution of acetabular morphogenesis on the line to extant birds
鳥類の系統における寛骨臼の形態形成の進化
○Shiro Egawa[1], Gembu Abe[1], Daisuke Saito[1,2], Koji Tamura[1] (Grad. Sch. of Life Sci, Tohoku Univ.[1], FRIS, Tohoku Univ.[2])

P066 (SW-7) Importance of frogs as an experimental model for evo-devo study of interdigital cell death and webbing formation
指間細胞死と水かき形成の進化発生学的研究のためのモデル実験系としてのカエル類の重要性
○Akio Nishikawa[1], Sairi Miyata[1], Tomoe Kawakami[1], Yuuto Hikiji[1], Ichiro Tazawa[2], Shigenobu Tone[3] (Dept.of Biol.Sci., Fac.of Life & Environ.Sci., Shimane Univ.[1], Amphibian Res. Center, Hiroshima Univ.[2], Lab. Mol. Dev. Biol., Grad. Sch. of Sci. and Eng, Tokyo Denki Univ.[3])

P067 Differing contributions of the first and second pharyngeal arches to tympanic membrane formation in the mouse and chick
マウスとニワトリの鼓膜形成では異なる咽頭弓の発生プログラムが関与する
○Masaki Takechi[1], Toshiko Furutera[1], Taro Kitazawa[2,3], Junko Takei[1], Takahiko Yamada[1], Filippo Rijli[3], Hiroki Kurihara[2], Shigeru Kuratani[4], Sachiko Iseki[1] (Grad Sch Med Dent Sci, TMDU[1], Grad Sch Med, Univ of Tokyo[2], FMI, Switzerland[3], Evol Morph Lab, RIKEN[4])

P068 (OP09-10) Integration of distinct developmental systems in the vertebrate pharyngeal arch segmentation and evolution
脊椎動物咽頭弓の分節形成と進化における異なる発生システムの統合
○Kazunori Okada[1,2], Shinji Takada[1,2] (NIBB[1], OIIB[2])

P069 Enhancer activities of Amphioxus two *Brachyury* genes
ナメクジウオの二つの *Brachyury*遺伝子のエンハンサー機能解析
○Hitoshi Tominaga[1], Noriyuki Satoh[2], Naoto Ueno[3], Hiroki Takahashi[4] (SOKENDAI[1], OIST[2], NIBB, SOKENDAI[3], NIBB, SOKENDAI[4])

P070 Toward understanding the mechanisms underlying phenotypic plasticity of sponges-2:Approach using original system to observe skeleton construction under constant water flow
カイメンの表現型可塑性はどのような機構で成り立っているか？
2: 一定水流下におけるカイメン骨片骨格形成過程のライブイメージングによるアプローチ
○Goshi Ogita[1], Akihiro Itoigawa[1], Yasutetsu Kanaoka[1], Takeo Matsumoto[2], Noriko Funayama[1] (Dep. Biophysics, Grad. School of Science, Kyoto Univ.[1], Dept of Mech Sci & Eng, Grad Sch of Eng, Nagoya Univ[2])

P071 Functional analysis of a Hox gene, *abdominal-A*, in the cricket *Gryllus bimaculatus* using a CRISPR/Cas9-mediated gene knock-in system
CRISPR-Cas9 ノックインシステムを用いたフタホシコオロギにおける Hox 遺伝子 *abdominal-A*の機能解析
○Mayuko Matsuda[1], Yuji Matsuoka[2], Yoshiyasu Ishimaru[1], Sayuri Tomonari[1], Takahito Watanabe[1], Sumihare Noji[3], Taro Mito[1] (Inst. Tech.

and Sci., Tokushima Univ.[1], Dept. Biol. Sci., National University of Singapore[2], Tokushima Univ.[3])

P072 *even-skipped* is required for segmentation and elongation of embryos in the cricket *Gryllus bimaculatusas* revealed by CRISPR/Cas9-based gene knock-out
フタホシコオロギにおいて *even-skipped*は胚の体節構造の形成と伸長に必要である
○Yu-Ki Nakamura[1], Kohei Kawamoto[1], Sayuri Tomonari[1], Mayuko Matsuda[1], Takahito Watanabe[1], Yoshiyasu Ishimaru[1], Natsuki Uemura[1], Sumihare Noji[2], Taro Mito[1] (Inst. Tech. and Sci.,Tokushima Univ.[1], Tokushima Univ[2])

P073 Identify germ granule-enriched transcripts in amphioxus by single cell transcriptome profiling
○Che-Yi Lin[1], Mei-Yeh Lu[2], Jia-Xing Yue[3], Kun-Lung Li[1], Yann Le Petillon[1], Luok Wen Yong[1], Fu-Yu Tsai[4], Yu-Fen Lu[1], Sheng-Ping Hwang[1], Yi-Hsien Su[1], Jr-Kai Yu[1] (ICOB, Academia Sinica, Taiwan[1], BRC, Academia Sinica, Taiwan[2], IRCAN, France[3], LS, National Taiwan University, Taiwan[4])

P074 Analysis of developmental sequence heterochronies in teleost fishes
真骨魚類における発生シークエンスのヘテロクリニー解析
○Fumihiro Ito (SOKENDAI)

P075 How did the weakly electric mormyrid fish *Gnathonemus petersii* evolve a large and foliated cerebellum?
弱電気魚モルミルス *Gnathonemus petersii*はどのようにして、巨大で葉状構造を持つ小脳へと進化させてきたのか？
○Koji Matsuda[1,2], Yoshimasa Sakakibara[2], Yuichiro Hara[3], Shigehiro Kuraku[3], Takashi Shimizu[1,2], Masahiko Hibi[1,2] (BBC., Nagoya Univ.[1], Grad. Sch. Sci., Nagoya Univ.[2], RIKEN CLST[3])

P076 Identification of the counterpart of *Xenopus* dicalcin in the mouse reproductive tract
マウス卵丘細胞膜に存在する受精調節因子の同定
○Naofumi Miwa, Mayu Hanaue, Ken Takamatsu (Toho Univ., Dept. Physiol.)

P077 (OP07-07) Testing the possible impact of maternal cells on development, case of

the neonatal liver disorder biliary atresia
○Flore Castellan, Naoki Irie (Dept. of Biol. Sciences, University of Tokyo)

P078 Ovarian structure and germ plasm components of Forcipomyia taiwana (Shiraki) (Diptera: Ceratopogonidae)
Szu-Chieh Wang[1], Preethi Krishnaraj[1], Anna Radhakrishnan[1,2], Guan-Yu Chen[3], ○Ming-Der Lin[1,3] (MBHG, Tzu-Chi Univ. Taiwan[1], GE, SRM Univ. India[2], LS, Tzu-Chi Univ. Taiwan[3])

P079 (OP07-06) Significance of Cav3.2 and TRPV4 in the adaptation of intracellular signaling for motility regulation to various reproductive environments in amphibian sperm
両生類精子運動調節の細胞内信号伝達の生殖環境に対する適応における Cav3.2 と TRPV4 の重要性
Tae Sato[1], Maako Kawamura[1], Eriko Takayama-Watanabe[2], ○Akihiko Watanabe[1] (Fac. of Sci., Yamagata Univ.[1], Inst. of Arts & Sic., Yamagata Univ.[2])

P080 (OP07-08) Dullard deficiency causes hemorrhage in the adult ovarian follicles
Dullard 欠損は、成体の卵巣濾胞において、出血性嚢胞を引き起こす
○Tadayoshi Hayata[1,2], Masahiko Chiga[3,4], Yoichi Ezura[2], Makoto Asashima[5], Hidetaka Katabuchi[4], Ryuichi Nishinakamura[3], Masaki Noda[2,6] (Dept. of Biol. SIg. Reg., Faculty of Med. Univ. of Tsukuba[1], Dept. of Mol. Pharmacol., Med. Res. Inst., TMDU[2], Dept. of Kidney Dev., IMEG, Kumamoto Univ.[3], Dept. of OB-GYN, Faculty of Life Sci., Kumamoto Univ.[4], Tokyo Univ. of Sci.[5], Yokohama City Minato Red Cross Hospital[6])

P081 (OP07-10) Induction of spermatogenesis in explanted fetal mouse testis tissues by organ culture method
胎仔マウス精巣を用いた器官培養法による精子形成の誘導
○Kazuaki Kojima[1], Takuya Sato[1], Yuta Naruse[1], Takehiko Ogawa[1,2] (Graduate school of medical life science, Yokohama city university[1], Institute of Molecular Medicine and Life Science, YCU[2], Department of Urology, YCU[3])

P082 The establishment of quail primordial germ cell culture system
トランスジェニックウズラ作製に向けた始原生殖細胞培養法の開発

○Daisuke Saito (FRIS, Tohoku univ.)

P083 Testicular organ culture reveals multiple temperature thresholds in mouse spermatogenesis
器官培養が明らかにしたマウス精子形成の分化過程に存在する多段階温度閾値
○Kodai Hirano[1,2], Yuta Nonami[1,2], Takuya Sato[3,4], Takehiko Ogawa[3,4], Shosei Yoshida[1,2] (Department of Basic Biology, SOKENDAI[1], Division of Germ Cell Biology, NIBB[2], Laboratory of Proteomics, Institute of Molecular Medicine and Life Science, Yokohama City University Association of Medical Science[3], Department of Urology, Yokohama City University Graduate School of Medicine[4])

P084 Screening for extracellular matrix factors that may concern in mouse male fertility
マウス雄妊孕性に関わる細胞外マトリックス関連因子の探索
○Daiji Kiyozumi, Tomohiro Tobita, Ryo Yamaguchi, Masaru Okabe, Masahito Ikawa (RIMD, Osaka Univ.)

P085 (OP07-09) Morphological diversity of seminal receptacles of species among genus Drosophila
ショウジョウバエ属に見られる管状受精嚢の形態的多様性
○Tatsuhiko Noguchi (NDMC, Biology)

P086 (OP07-04) Homing efficiency and behavior of mouse seprmatogenic stem cells following transplantation
マウス精子幹細胞のホーミング効率と振舞い
○Yoshiaki Nakamura[1,2], Yayoi Kon[1], Shosei Yoshida[1] (Div. Germ Cell Biology, NIBB[1], JSPS research fellow[2])

P087 (OP07-05) Requirement of DDX6-mediated P-body formation in male germ cell development
雄性生殖細胞発生における DDX6 を介した P-body の必要性
○Ryuki Shimada[1], Yumiko Saga[1,2] (SOKENDAI[1], Division of Mammalian Development, National Institute of Genetics[2])

P088 Zebrafish model revealed the functional time window of POLR1C on facial development
Jeff Ch Ho[2], Ernest Ml Kwong[2], ○William Kf Tse[1] (Agr, Kyushu Univ[1], Dept. Biol, HKBU[2])

P089 (OP02-04) Disruption of Tsukushi leads to hydrocephalus by aberrant neurogenesis

Tsukushi の欠損は神経発生の異常による水頭症を発症させる

○Naofumi Ito[1], Mohammad Riyadh[1], Ayako Ito[1], Shah Ishtiyaq[1], Mohammad Anam[1], Yohei Shinmyo[2], Athary Felemban[1], Jun Hatakeyama[3], Kenji Shimamura[3], Kazunobu Sawamoto[4], Kunimasa Ohta[1] (Kumamoto University, Dev. neurobiol.[1], Kanazawa Univ.[2], Kumamoto Univ.[3], Nagoya City Univ.[4])

P090 Reelin signaling is involved in layer and neural circuit formation in the cerebellum and the optic tectum in zebrafish

Reelin シグナルはゼブラフィッシュ小脳および視蓋の層形成に関与する

○Takayuki Nimura[1], Vincenzo Di Donato[2], Takuto Hayashi[1], Miki Takeuchi[3], Takashi Shimizu[1,3], Filippo Del Bene[2], Masahiko Hibi[1,3] (Graduate School of Science, Nagoya Univ.[1], Université Pierre et Marie Curie[2], Bioscience and Biotechnology Center, Nagoya Univ.[3])

P091 Neural specific kinase promotes early neural development in *Xenopus* embryos

○Nusrat Jahan[1], Regina Putri Virgirinia[1], Kimiko Takebayashi-Suzuki[1], Maya Okada[1], Hitoshi Yoshida[1], Hajime Akao[1], Fatchiyah Fatchiyah[2], Naoto Ueno[3], Atsushi Suzuki[1] (Amphibian Research Center, Grad. Sch. Sci., Hiroshima Univ.[1], Faculty Sci., Brawijaya Univ.[2], Div. Morphogenesis, Natl. Inst. Basic Biol.[3])

P092 Gene expression profiling of zebrafish cerebellar neurons reveals possible mechanisms controlling neural circuit formation

ゼブラフィッシュ小脳ニューロンの遺伝子プロファイリングから明らかになる神経回路形成の分子メカニズム

○Miki Takeuchi[1], Shingo Yamaguchi[2], Yoshimasa Sakakibara[2], Takuto Hayashi[2], Koji Matsuda[2], Yuichiro Hara[3], Tetsutaro Hayashi[3], Shigehiro Kuraku[3], Takashi Shimizu[1,2], Masahiko Hibi[1,2] (BBC, Nagoya Univ.[1], Grad. Sch. Sci., Nagoya Univ.[2], RIKEN CLST[3])

P093 Lineage analysis of Ripply3 expressing cells in the mouse development

マウス胚発生における Ripply3 発現細胞の系譜解析

○Tadashi Okubo[1], Keiko Hara[1], Masaya Kano[1], Shinji Takada[2] (Lab. Ani-

mal Sci. Kitasato Univ. School of Medicine[1], Okazaki Inst. Integ. Biosci, NINS[2])

P094 Roles of Ptf1a and Gsx2 in development of inferior olive nucleus neurons in zebrafish
ゼブラフィッシュの下オリーブ核ニューロンの発生を制御する Ptf1a および Gsx2 の機能解析
○Tsubasa Ito[1], Miki Takeuchi[1,2], Marina Sakagami[1], Kazuhide Asakawa[3], Koichi Kawakami[3], Takashi Shimizu[1,2], Masahiko Hibi[1,2] (Grad. School of Science, Nagoya Univ.[1], Bioscience and Biotechnology Center, Nagoya Univ.[2], National Institute of Genetics[3])

P095 Foxp1-expressing motor neurons undergo apoptosis dependently on the Hox expression pattern in the cervical spinal cord of chick embryo
ニワトリ胚頸髄において Foxp1 陽性細胞は Hox の発現パターンに依存してアポトーシスを起こす
○Katsuki Mukaigasa, Chie Sakuma, Hiroyuki Yaginuma (Fukushima Med. Univ.)

P096 Coordinated regulation between survivin and epo expression promotes neuronal differentiation
○Hsin-Yu Chung[1], Chin-Hwa Hu[1,2] (Dep, Biosci. Biotech., Natl Taiwan Ocean Univ.[1], CEO, Natl Taiwan Ocean Univ.[2])

P097 Visualization of the parasympathetic nervous system in the lung of chicken embryos
肺における副交感神経ネットワーク形成過程の可視化
○Tadayoshi Watanabe[1], Takahiro Kiyomoto[1], Ryosuke Tadokoro[1], Yuta Takase[1], Etsuo A. Susaki[2,3,4], Hiroki R. Ueda[2,3], Yoshiko Takahashi[1] (Department of Zoology, Graduate School of Science, Kyoto University[1], Department of Systems Pharmacology, Graduate School of Medicine, The University of Tokyo[2], Laboratory for Synthetic Biology, RIKEN Quantitative Biology Center (QBiC) [3], PRESTO, Japan Science and Technology Agency[4])

P098 Antero-posterior positional information is maintained in sacral-level neural crest cells when they form parasympathetic Remak's ganglia in chicken embryos
副交感 Remak 神経節形成時における細胞の前後軸に沿った位

置情報の維持

○Yuuki Shikaya[1], Tadayoshi Watanabe[1], Ryosuke Tadokoro[1], Yuta Takase[1], Etsuo A Susaki[2,3,4], Hiroki R Ueda[2,3], Yoshiko Takahashi[1] (Department of Zoology, Graduate School of Science, Kyoto University[1], Department of Systems Pharmacology, Graduate School of Medicine, The University of Tokyo[2], Laboratory for Synthetic Biology, RIKEN Quantitative Biology Center (QBiC) [3], PRESTO, Japan Science and Technology Agency[4])

P099 The cerebellar granule cells control recovery from classical conditioned fear responses in zebrafish

ゼブラフィッシュ恐怖条件付け学習における小脳の役割

○Takashi Shimizu[1,2], Koji Matsuda[1,2], Koichi Kawakami[3], Masayuki Yoshida[4], Masahiko Hibi[1,2] (BBC, Nagoya Univ.[1], Grad. Sch. Sci., Nagoya Univ.[2], NIG[3], Hiroshima Univ.[4])

P100 Establishment of the apico-basal polarity of neural tube-forming cells during mesenchymal-to-epithelial transition (MET) in secondary neurulation.

Secondary neurulation の間充織―上皮転換 (MET) における頂端―基底極性の確立

○Ryo Kudo, Teruaki Kawachi, Ryosuke Tadokoro, Yoshiko Takahashi (Kyoto university)

P101 Molecular mechanism of the layer-, 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・カラム特異的投射の分子機構

○Hiroki Takechi, Satoko Hakeda-Suzuki, Takashi Suzuki (Suzuki Lab, Titech)

P102 Adult glial architectures are established by a plastic and robust developmental strategy in Drosophila

ショウジョウバエ成虫グリア網は可塑的な発生プログラムによって形成される

○Kentaro Kato, Masami Tomura, Takeshi Awasaki (Kyorin Univ Schl of Med)

P103 Critical role of En1-positive neurons for silencing slow-component neurons during fast swimming in zebrafish

En1 ニューロンは、速い運動の際に、遅い運動に関与するニューロンの活動を止めるのに必須の役割を果たす
○Shin-Ichi Higashijima, Yukiko Kimura (OIBB, NIBB, NINS)

P104 Lobe-less, a long noncoding RNA that regulates *Drosophila* mushroom body morphogenesis
長鎖 noncoding RNA Lobe-less はショウジョウバエ中枢神経系において、キノコ体の軸索投射に寄与している
○Sachi Inagaki[1], Natsuki Nakamura[2], Masanao Sato[3], Satoru Kobayashi[4], Mitsutaka Kadota[5], Sean Keeley[5], Shigehiro Kuraku[5], Yuji Kageyama[1,2] (Biosignal Res. Ctr., Kobe University[1], Dept. Biology, Kobe University[2], Hokkaido University[3], TARA[4], CDB[5])

P105 Near-infrared upconversion nanoparticles for optogenetics
近赤外光をアップコンバージョンするナノ粒子の光遺伝学への利用
Keiko Umeda, ○Wataru Shoji (FRIS, Tohoku Univ.)

P106 Characterization of RNA-binding protein NonO during retinal development in zebrafish
ゼブラフィッシュ網膜形成における RNA 結合タンパク質 NonO の機能解析
○Chisa Usami, Hiroshi Sakamoto, Kunio Inoue (Dept. Biol., Grad. Sch. Sci., Kobe Univ.)

P107 Visualization of Neuregulin 1 ectodomain shedding in motor neurons in zebrafish
ゼブラフィッシュを用いた運動神経におけるニューレグリン 1 の切断の可視化
○Mai Tabuchi[1,2], Aosa Kamezaki[2], Fuminori Sato[2], Kazuhiro Aoki[3], Kazuhide Asakawa[4], Koichi Kawakami[4], Atsuko Sehara-Fujisawa[2] (GSB, Kyoto Univ.[1], IFMS, Kyoto Univ.[2], NIBB[3], NIG[4], MPIHLR, Germany[5])

P108 (OP04-09) The role of methionine metabolism during germline development in Drosophila melanogaster
ショウジョウバエ生殖系列におけるメチオニン代謝の役割
○Yoshiki Hayashi[1], Chiyo Noda[2], Satoru Kobayashi[1] (TARA center, Univ. of Tsukuba[1], NIBB[2])

P109 (OP05-10) Tail reduction process during human embryonic development
ヒト胚発生過程における尾部短縮過程の解明
○Sayaka Tojima[1], Haruyuki Makishima[2], Shigehito Yamada[2] (Grad. Sch. of Med., Osaka City Univ.[1], Grad. Sch. of Med., Kyoto Univ.[2])

P110 Valproic acid induces aberrant pattern of corticostriatal pathway in an animal model of autism spectrum disorder
Kuo Hsiao-Ying, ○Liu Fu-Chin (INS, NYMU)

P111 (OP06-10) Non-muscle Myosin II Deletion in the Developing Kidney Causes Ureter-bladder Misconnection and Apical Extrusion of the Nephric Duct Lineage Epithelia
○Fahim Haque, Yusuke Kaku, Ryuichi Nishinakamura (Dept. of Kidney Development, IMEG, Kumamoto Univ.)

P112 (OP03-07) How to encounter endothelial cells in deep tissues–mechanical interaction between endothelial cells and epithelial tube
組織深部で血管内皮細胞が出会うためには～血管内皮と上皮管の力学的相互作用
○Tsuyoshi Hirashima (Inst Front Life Med Sci, Kyoto Univ)

P113 Regulation of neuro-sensory and non-sensory fate determination by Sox2 during otic development
○Alexis Kok Ting Tam, Michael Wai Hung Kwong, Keith Kai Hung Leung, Kathryn Song Eng Cheah (SBMS, HKU)

P114 SOX2-dependent determination of tissue identity in the foregut
SOX2 による消化管前部における領域性の決定機構
○Machiko Teramoto[1], Ryo Sugawara[1], Yasuo Ishii[2], Atsushi Kuroiwa[3], Hisato Kondoh[1] (KSU[1], TWMU[2], Nagoya Univ.[3])

P115 Embryonic region-dependent development and interactions of grafted Hensen's node with host tissues
宿主胚領域に依存した、ヘンゼン結節移植片の自己発生と宿主組織との相互作用
○Koya Yoshihi, Yasuo Ishii, Hisato Kondoh (Kyoto Sangyo Univ)

P116 (OP06-03) Temporal Control of Tissue Maturation with Proliferation Reduction in developing trachea
気管発生時にみられる、増殖低下を伴う組織成熟の経時的変

化とその制御機構の解明
○Hirofumi Kiyokawa, Keishi Kishimoto, Mitsuru Morimoto (CDB)

P117 (SW-4) Feather bud formation on limited domain of reassembled artificial skin
再構成した皮膚の限定された領域における羽毛原基形成
○Kentaro Ishida, Toshiyuki Mitsui (Dept. of Phys. & Math., Coll. of Sci. & Eng., Aoyama Gakuin Univ.)

P118 Zebrafish VCAP1X2 is essential for the proliferation and contractility of ventricular cardiomyocytes and proper epicardium development
○Fang-Chi Hsieh[1,4], Yu-Fen Lu[4], Chao-Min Cheng[2], Chung-Der Hsiao[3], Sheng-Ping L. Hwang[4] (GILS, National Defense Medical Center[1], INM, National Tsing Hua Univ.[2], DBT, Chung Yuan Christian Univ.[3], ICOB, Academia Sinica[4])

P119 VEGF-A misexpression in the epicardium of the avian heart results in connective tissue hyperplasia and ectopic vascular development
鳥類胚心臓心外膜での VEGF-A 強制発現は結合組織の過形成および異所性血管形成を引き起こす
○Yasuo Ishii[1], Hirosato Konishi[2] (Dept. Biol., School Med., Tokyo Women's Med. Univ.[1], Fac. Life Sci., Kyoto Sangyo Univ.[2])

P120 (OP06-07) Cellular and molecular mechanisms for the establishment of the dorsal and ventral compartments in the teleost somite
真骨魚類体節の背腹コンパートメント形成における細胞・分子メカニズム
○Kota Abe[1], Sayaka Tayama[1], Sachiko Tsuda[2], Atsuko Shimada[1], Hiroyuki Takeda[1] (Laboratory of Embryology, University of Tokyo[1], Laboratory of Developmental Biology, Saitama University[2])

P121 Quantitative analysis of chondrogenic pattern in cultured limb mesenchymal cells
肢芽間充織培養系を用いた軟骨パターンの定量解析
○Keiichi Kitajima[1], Naofumi Kawahira[2], Gembu Abe[1], Yoshihiro Morishita[3], Koji Tamura[1] (Grad. Sch. of Life Sci., Tohoku Univ.[1], Kyoto Univ.[2], RIKEN QBiC[3])

P122 (OP03-06) Oriented mesenchymal cells drive tracheal tubulogenesis
気管の管腔形成における間充織極性化の重要性

○Keishi Kishimoto, Mitsuru Morimoto (RIKEN CDB)

P123 The development of a novel tool to analyze cranial placode development
感覚器プラコードの発生を解析するための新たなツールの開発
○Shigeru Sato[1], Yauhide Fruta[2], Kiyoshi Kawakami[1] (Div. of Biol., Jichi Med. Univ.[1], CLST RIKEN[2])

P124 (OP06-08) Establishment of polarity of cilia orientation and cell elongation during the mouse oviduct development
マウス卵管の発生における繊毛と細胞伸長の極性形成
○Fumiko Usami[1,2], Dongbo Shi[2,3], Kagayaki Kato[4], Toshihiko Fujimori[1,2] (Dept. of Basic Biol., School of Life Sci., SOKENDAI[1], Div. of Embryology, NIBB[2], COS, Heidelberg Univ[3], Imaging Science, CNSI[4])

P125 Genetic interactions between Ripply and Tbx6 in the somite segmentation and myogenesis in zebrafish embryos
Hirofumi Kinoshita[1], Yuuri Fujino[1], Nanae Ohgane[1], Taijiro Yabe[2], Daisuke Yokota[1], Hioroki Ovara[1], Ayaka Izuka[1], Hiroyuki Ban[1], Daichi Kage[1], Kyo Yamsu[1], Shinji Takada[2], ○Akinori Kawamura[1] (Grad. Sch. Eng., Saitama Univ.[1], NIBB[2])

P126 Towards understanding the mechanisms that orchestrate directional migration and the following subsequent invasive migration between epithelial cells in sponge
芽球骨片運搬を担う細胞の「方向性を持った遊走」と「上皮細胞間への入り込み」が、形成中の芽球の殻への芽球骨片の順序だった埋め込みを実現する
○Kanji Nakagawa, Kiyoka Kinjyo, Noriko Funayama (Dept. Biophys. Grad. Sch. Sci., Kyoto Univ.)

P127 Expression analysis of Lhx1-downstream genes in the chick embryonic eye
Lhx1 下流遺伝子のニワトリ胚眼における発現解析
○Toshiki Kinuhata, Tetsuya Bando, Keita Sato, Yusuke Daido, Yoshimasa Hamada, Junji Inoue, Hideyo Ohuchi (Dept. Cyto. & Histo., Okayama Univ. Grad. Sch. Med. Dent. & Pharm.)

P128 (OP06-04) The role of diphthamide biosynthesis enzyme DPH1 in mouse car-

diac development
○Chun-Ming Chen[1], Yi- Ru Yu[1], Li-Ru You[2] (DLSIGS, National Yang-Ming University[1], IBMB, National Yang-Ming University[2])

P129 (OP03-09) Wnt signal is required for proper rearrangement and morphological change of roof plate cells in the formation of median septum of mouse spinal cord
Wnt シグナルは脊髄神経管中隔形成に必要である
○Takuma Shinozuka[1,2], Ritsuko Takada[2], Shinji Takada[1,2] (Dept. Basic Biology, SOKENDAI[1], OIIB[2])

P130 Comparison of cell proliferation control between leaves and flower organs in Arabidopsis
シロイヌナズナにおける葉と花器官の分裂制御の比較
○Ayaka Kinoshita[1], Hirokazu Tsukaya[1,2] (Grad. Sch. Sci., Univ. Tokyo[1], OIIB, NINS[2])

P131 *Six1* regulates growth of dental papilla and lingual-labial asymmetry in the developing mandibular incisor
*Six1*は下顎切歯の発生において歯乳頭の成長と舌唇側上皮の非対称性形成を制御する
○Masanori Takahashi, Kiyoshi Kawakami (Div. of Biol. Cent. for Mol. Med. Jichi Med. Univ.)

P132 Reconstruction of tissue deformation dynamics for Xenopus laevis limb development from positional data of cells labeled by IR-LEGO system
アフリカツメガエルの四肢発生過程における組織変形動態の定量解析
○Aiko Kawasumi[1], Koji Tamura[2], Yasuhiro Kamei[3], Yoshihiro Morishita[1] (RIKEN QBiC[1], Grad. Sch. Life Sci., Tohoku Univ.[2], NIBB[3])

P133 Ddx3x, an X-linked member of DEAD box RNA helicase family, is required for craniofacial development
○Li-Ru You[1], Ting-Chun Chan[1], Chieh-Hsiang Chan[1], Chun-Ming Chen[2] (IBMB, National Yang-Ming University[1], DLS & IGS, National Yang-Ming University[2])

P134 Patterning of the Cylindrical Unifacial Leaf Plant *Juncus torreyi* (Juncaceae)

○Xiaofeng Yin[1], Hirokazu Tsukaya[1,2] (Dept. Biol. Sci., Grad. Sch. Sci., Univ. Tokyo[1], OIIB, NINS[2])

P135 A small part of the endoblast contributes to the gut endoderm in the chicken embryo.
ニワトリ胚ではエンドブラストの一部が消化管内胚葉に寄与する
Marina Ikeno[1], Federica Bertocchini[2], ○Kimiko Fukuda[1] (Dept., Biol., Tokyo Metropol. Univ.[1], IBBTEC[2])

P136 (OP03-03) Blood flow and vascular remodeling: analyses of individual endothelial cell behaviors by in vivo live-imaging and mathematical approach
生体内血管リモデリング：ライブイメージングと数理解析からみる血管内皮細胞の挙動と血流の関係
○Yuta Takase[1], Kenichi Nakazato[2], Ryo Kudo[1], Ryosuke Tadokoro[1], Hiroshi Kokubu[3], Atsushi Mochizuki[2], Yoshiko Takahashi[1] (Dept. of Zoology, Grad. Sch. of Sci. Kyoto Univ.[1], Theoretical Biology Laboratory, RIKEN[2], Dept. Math, Grad. Sch. of Sci. Kyoto Univ.[3])

P137 (OP01-09) Determination of mechanism for vascular remodeling from endothelial cellular behavior by fluid and solid mechanics
連続体力学を用いて血管リモデリングにおける内皮細胞の振る舞いを理解する
○Kenichi Nakazato[1], Yuta Takase[2], Yoshiko Takahashi[2], Hiroshi Kokubu[3], Atsushi Mochizuki[1] (Theoretical Biology Laboratory, RIKEN[1], dept of zoology, grad school of science, Kyoto-univ[2], dept of math, Kyoto-univ[3])

P138 Functional analyses of a novel vesicular membrane protein, TMEM141 affecting the survival rate during the growth stage in medaka (*Oryzias latipes*) larvae
メダカ稚魚の成長過程に関わる新規小胞膜分子 TMEM141 の機能解析
○Yasuhiro Tonoyama[1], Tamami Adachi[1], Atsushi Shimizu[2], Atsushi Takayanagi[3] (Adv. Res. Ctr. GSP., Keio Univ.[1], Div. Biomed. Info. Anal., Iwate Tohoku Med. Megabank. Org., Iwate Med. Univ.[2], Lab. Gene Med., Keio Univ. Sch. Med.[3])

P139 (OP06-09) Molecular mechanism to convert the segmentation clock into the seg-

mental pattern of somites in the zebrafish
分節時計によるゼブラフィッシュ体節分節境界形成の制御機構
○Taijiro Yabe, Shinji Takada (NIBB)

P140 (SW-3) *polished rice* is essential for tip cell specification and tubular fusion of dorsal branches in *Drosophila* tracheal system
ショウジョウバエ *polishe rice*遺伝子は背側気管支の先端細胞の分化および融合に必須である
○Yuki Taira[1], Housei Wada[3], Shigeo Hayashi[3], Yuji Kageyama[1,2] (Kobe University[1], Kobe University[2], RIKEN, CDB[3])

P141 Identification of Hox target genes involved in regulating the autopod-specific patterning and growth of cartilage
自脚骨形成に関与する Hox 標的遺伝子の同定
○Shiori Yamamoto[1], Nayuta Yakushiji-Kaminatsui[2], Yo-Ichi Shiraishi[1], Atsushi Kuroiwa[1] (Div. of Biol. Sci., Grad. Sch. of Sci., Nagoya Univ.[1], Sch. of Life Sci., EPFL[2])

P142 Anatomical integration of the sacral-hindlimb unit coordinated by GDF11 enables the evolutionary diversification of hindlimb positioning in tetrapods
GDF11 による仙椎―後肢ユニットの位置の解剖学的統合が四肢動物における後肢の位置の多様性を生み出す
Yoshiyuki Matsubara[1], Tatsuya Hirasawa[2], Shiro Egawa[3], Ayumi Hattori[4], Takaya Suganuma[1], Yuhei Kohara[1], Tatsuya Nagai[1], Koji Tamura[3], Shigeru Kuratani[2], Atsushi Kuroiwa[1], ○Takayuki Suzuki[1] (Div. of Biol. Sci., Nagoya Univ.[1], RIKEN[2], Grad. Sch. of Life Sci., Tohoku University[3], IDAC, Tohoku University[4])

P143 3-dimensional visualization of morphogenesis reveals novel contribution of visceral muscles to the left-right asymmetric development in Drosophila
○Dongsun Shin[1], Yoshitaka Morishita[1], Mototsugu Eiraku[2], Kenji Matsuno[1] (Department of Biological Science, Graduate School of Science, Osaka University[1], RIKEN Center for Developmental Biology[2])

P144 Functional verification of each Msx homology domain of Msx1 gene for tooth morphogenesis using CRISPR/Cas system

CRISPR/Cas システムを用いた Msx1 遺伝子各ドメインの歯の発生における機能検証

○Akihiro Yasue[1], Daishi Arai[1], Silvia Mitsui[1], Seiichi Oyadomari[2], Eiji Tanaka[1] (Dept. of Orthod., Inst. of Health Biosci., Tokushima Univ[1], Div. of Mol. Biol., Institute of Adv. Enzyme Res., Tokushima Univ.[2])

P145 (SW-2) Functional analysis of the limb mesenchyme specific enhancer of *Fgf10*

*Fgf10*肢芽間充織特異的エンハンサーの機能の解明

○Tomohiro Takenaka[1], Tatsuya Takemoto[2], Yo-Ichi Shiraish[1], Chisa Andoh[1], Shiori Yamamoto[1], Atsushi Kuroiwa[1] (Div. of Biol. Sci., Sch. of Sci., Nagoya Univ[1], IAMS, Tokushima Univ[2])

P146 Identification of early progenitors for the cardiac conduction system in murine heart development

マウス胚心臓原基上における刺激伝導系前駆細胞の同定

○Akane Sakaguchi[1], Hiroki Kokubo[2], Yumiko Saga[1,3] (SOKENDAI[1], Department of Cardiovascular Physiology and Medicine, Hiroshima University[2], Division of Mammalian Development, National Institute of Genetics[3])

P147 The planarian *Dugesia japonica* as a new model animal to understand molecular mechanisms underlying stable body proportioning

プラナリア（ナミウズムシ）を用いた体のプロポーションを保つ分子機構の解析

○Kazutaka Hosoda[1], Takuya Kunimoto[2], Osamu Nishimura[2], Byulnim Hwang[2], Minako Motoishi[1], Shigenobu Yazawa[2], Makoto Mochii[1], Kiyokazu Agata[2,3], Yoshihiko Umesono[1] (Grad. Sch. of Life Sci., Univ. of Hyogo[1], Dept. of Biophys., Grad. Sch. of Sci., Kyoto Univ.[2], Dept. of Life Sci., Fac. of Sci., Grad. Crse. in Life Sci., Grad. Sch. of Sci., Gakushuin Univ.[3])

P148 (OP06-02) The mechanism about the cell autonomous generation of collagen crystal involved with fin skeletal development

魚類ヒレ骨形成において機能するコラーゲン結晶の自律的合成メカニズム

○Junpei Kuroda, Shigeru Kondo (FBS, Osaka univ)

P149 Epidermal reprogramming during limb regeneration of Xenopus froglet

アフリカツメガエル四肢再生における上皮細胞の脱分化
○Akira Satoh (research Core for interdisciplinary Sciences (RCIS))

P150 Erythropoietin Produced by Genetic-modified NIH/3T3 Fibroblasts Facilitate Neurogenesis in a Rat Stroke Model
○Pin-Chun Chou[1], Li-Kai Tsai[2], Chung-Liang Chien[1] (Graduate Institute of Anatomy and Cell Biology, College of Medicine, National Taiwan University, Taipei, Taiwan[1], Department of Neurology and Stroke Center, National Taiwan University Hospital and National Taiwan University College of Medicine, Taipei, Taiwan[2])

P151 Visualization of cell-based positional information in connective tissue
結合組織における細胞ベースの位置情報の可視化
○Takayoshi Otsuka, David Gardiner (UC Irvine)

P152 Positional memory during zebrafish fin regeneration
ゼブラフィッシュひれ再生中の位置情報の解析
○Eri Shibata, Atsushi Kawakami (LST, Titech)

P153 Caudal fin morphology regenerates by recognizing amputated fin-ray length in zebrafish
ゼブラフィッシュの尾鰭は切除された長さを認識することで元通りの形態を再生する
○Toshiaki Uemoto, Gembu Abe, Koji Tamura (Grad Sch of Life Sci, Tohoku Univ)

P154 Avi-caspase X Expression in Anterior Regeneration of Aeolosoma viride Is Regulated by the Wnt/β-Catenin Signaling Pathway
○Sheridan Fok, Wei-Ting Yueh, Yi-Hua Chiang, Jiun-Hong Chen (Department of Life Science, NTU)

P155 Cloning, Identification and Characterization of Two MyD88s during Anterior Regeneration in Aeolosoma viride
○Chiao-Ping Chen, Jiun Hong Chen (LS, NTU)

P156 Implicated role of hyaluronan signaling in adult epithelial development during intestinal remodeling in Xenopus leavis
アフリカツメガエルの小腸再構築におけるヒアルロン酸シグナルの役割

○Kenta Fujimoto[1], Takashi Hasebe[1], Mitsuko Kajita[2], Atsuko Ishizuya-Oka[1] (Dept. of Biol., Nippon Med. Sch.[1], Dept. of Mol. Biol., Inst. for Adv. Med. Sci., Nippon Med. Sch.[2])

P157 (SW-5) Leg regeneration is regulated by epigenetics depending on photoperiodism in the cricket *Modicogryllus siamensis*
光周性依存的なエピジェネティクスはタンボコオロギの脚再生を制御する
○Yoshimasa Hamada[1], Tetsuya Bando[1], Kenji Tomioka[2], Hideyo Ohuchi[1] (OKAYAMA UNIV., Grad. Sch. of Med. Dent. and Phar. Sci.[1], OKAYAMA UNIV., Grad. Sch. of Nat. Sci. and Tech.[2])

P158 (OP05-08) Loss-of-function and rescue analyses of immune T cells involved in *Xenopus* tail degeneration via Ouro antigens
ツメガエル尾の退縮に Ouro 抗原タンパク質を介して関わる免疫 T 細胞の機能阻害実験と回復実験
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P159 Hyper innervation stimulate improvement of *Xenopus laevis* limb regeneration
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P160 Small-scale culture system of bamboo sole (*Heteromycteris japonica*), a small-sized species of the Pleuronectiformes, and its metamorphic external asymmetry and pectoral fin loss
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○Tohru Suzuki[1], Quiran Chen[1], Susumu Uji[2], Hayato Yokoi[1] (Grad. Sch. of Agric. Sci., Tohoku Univ.[1], Natl. Res. Inst. Aquaculture[2])

P161 (OP05-07) Scaling of critical weight for metamorphosis in the genus *Drosophila*
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P162 Expression profiling of Japanese flounder abnormal pigmentation

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P163 The formation of the presumptive pylorus region before gut metamorphosis in *Xenopus*
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P165 Modeling of human somite patterning using hiPSC
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○Taiki Nakajima[1], Mitsuaki Shibata[1], Cantas Alev[1], Makoto Fukuta[1], Hidetoshi Sakurai[1], Junya Toguchida[1,2,3], Makoto Ikeya[1] (CiRA, Kyoto Univ.[1], Department of Tissue Regeneration, Institute for Frontier Medical Sciences, Kyoto Univ.[2], Department of Orthopedic Surgery, Graduate School of Medicine, Kyoto Univ.[3])

P166 Establishment of neural progenitor cell lines with defined regional specificiteis from EpiSCs.
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○Kurumi Fukuda[1], Takuma Naka[2], Atsushi Suzuki[2], Yumiko Saga[1,3],

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P168 Osteoblast precursor cells are the committed stem cells involved in bone maintenance and regeneration of zebrafish
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P169 Zebrafish *pou2*, a *Oct4*-type class-V POU gene, is involved in neurogenesis in the tail bud.
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P170 (OP08-08) Density homeostasis of spermatogenic stem cells through competition for FGFs
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P174 Chromodomain protein MRG-1 is required for global repression of Pol II-dependent transcription in the primordial germ cells in *C. elegans*
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P181 (OP08-07) New categorization of planarian stem cell population based on possible stem cell niche
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○Shingo Tanaka[1], Hiroshi Hosokawa[2], Keiji Nishida[3], Shingo Maegawa[2] (Graduate school of Biostudies, Kyoto Univ.[1], Graduate School of Informatics, Kyoto Univ.[2], Graduate School of Science, Technology and Innovation, Kobe Univ.[3])

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Effects of sizes of self-organized patterns composed by vascular endothelial cells on vasculogenesis
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○Akiko Nakamasu[1], Masamune Nakayama[2], Naoto Shingu[3], Hirofumi Izuhara[4], Yuji Nashimoto[2], Itsuki Kunita[5], Yuichiro Arima[5], Yoshimi Yamaguchi[1], Koichi Nishiyama[5], Ryuji Yokokawa[2], Takashi Miura[1] (Grad. Sch. Med. Sci., Kyushu Univ.[1], Dept. Mic. Engine., Kyoto Univ.[2], Facul.

Med., Kyushu Univ.[3], Facul. Engine., Miyazaki Univ.[4], IRCMS, Kumamoto Univ.[5])

P188 Inference of Gene Regulatory Networks from Expression Data
○Prabhat Shankar[1], Hitoshi Niwa[2], Tatsuo Shibata[1] (RIKEN QBiC[1], Kumamoto Univ.[2])

P189 Mathematical Modeling for Meshwork Formation of Endothelial Cells in Fibrin Gels
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P191 Mathematical model of epithelial buckling for single- and multi-step processes of the intestinal villus formation
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P192 3D analysis of zebrafish somite morphogenesis
ゼブラフィッシュ体節形態形成の 3 次元解析
○Yue Tong, Kyouhei Kunifuji, Haruka Iritani, Harunobu Kametani, Atsuko Shimada, Hiroyuki Takeda (Dept. of Biol. Sci., Univ. Tokyo)

P193 (OP01-10) Imaging of the kinetics of transcription factors in pluripotent stem cells
幹細胞核内におけるコア転写因子の一分子イメージング
○Kazuko Okamto[1], Kohei Yamamura[2], Hiroki Ura[3], Yasushi Okada[2], Kuniya Abe[3], Tomonobu Watanabe[1] (RIKEN QBiC Comprehensive Bioimaging Laboratory[1], RIKEN QBiC, Lab for Cell Polarity Regulation[2], RIKEN BRC, Mammalian Genome Dynamics Team[3])

SW：Satellite Workshop (in Japanese)

DATE: May 10 (Wed) 9:00 ～ 10:24 Room F
Chairpersons: Yoshifumi Yamaguchi (Univ. of Tokyo)
Asako Shindo (Nagoya Univ.)

SW-1 (P034) 09:00-09:12 The mechanism of Nodal1's signaling range regulation by Derrière, a Xenopus ortholog of mouse GDF1
アフリカツメガエルにおけるマウス GDF1 オルソログ Derrière による Nodal1 のシグナル活性化範囲制御機構
○Takafumi Ikeda, Takayoshi Yamamoto, Masanori Taira(Lab. of Mol. Biol., Dept. of Biol. Scis., Grad. Sch. of Sci., Univ. of Tokyo)

SW-2 (P145) 09:12-09:24 Functional analysis of the limb mesenchyme specific enhancer of *Fgf10*
*Fgf10*肢芽間充織特異的エンハンサーの機能の解明
○Tomohiro Takenaka[1], Tatsuya Takemoto[2], Yo-Ichi Shiraish[1], Chisa Andoh[1], Shiori Yamamoto[1], Atsushi Kuroiwa[1](Div. of Biol. Sci., Sch. of Sci., Nagoya Univ[1], IAMS, Tokushima Univ[2])

SW-3 (P140) 09:24-09:36 *polished rice* is essential for tip cell specification and tubular fusion of dorsal branches in *Drosophila* tracheal system.
ショウジョウバエ *polishe rice*遺伝子は背側気管支の先端細胞の分化および融合に必須である。
○Yuki Taira[1], Housei Wada[3], Shigeo Hayashi[3], Yuji Kageyama[1,2](Kobe University[1], Kobe University[2], RIKEN, CDB[3])

SW-4 (P117) 09:36-09:48 Feather bud formation on limited domain of reassembled artificial skin
再構成した皮膚の限定された領域における羽毛原基形成
○Kentaro Ishida, Toshiyuki Mitsui(Dept. of Phys. & Math., Coll. of Sci. & Eng., Aoyama Gakuin Univ.)

SW-5 (P157) 09:48-10:00 Leg regeneration is regulated by epigenetics depending on photoperiodism in the cricket *Modicogryllus siamensis*
光周性依存的なエピジェネティクスはタンボコオロギの脚再生を制御する
○Yoshimasa Hamada[1], Tetsuya Bando[1], Kenji Tomioka[2], Hideyo Ohuchi[1](OKAYAMA UNIV., Grad. Sch. of Med. Dent. and Phar. Sci.[1], OKAYAMA UNIV., Grad. Sch. of Nat. Sci. and Tech.[2])

SW-6 (P182) 10:00-10:12 Harnessing the CRISPR/Cas9 system in mouse genetic engineering @ LARGE, RIKEN-Kobe

神戸 RIKEN LARGE での CIRSPR/Cas9 システムを用いた遺伝子改変マウス作製の試み

○Takaya Abe[1], Ken-Ichi Inoue[2], Hiroshi Kiyonari[1,2], Yasuhide Furuta[1,2](GET, RIKEN CLST[1], ARDU, RIKEN CLST[2])

SW-7 (P066) 10:12-10:24 Importance of frogs as an experimental model for evo-devo study of interdigital cell death and webbing formation

指間細胞死と水かき形成の進化発生学的研究のためのモデル実験系としてのカエル類の重要性

○Akio Nishikawa[1], Sairi Miyata[1], Tomoe Kawakami[1], Yuuto Hikiji[1], Ichiro Tazawa[2], Shigenobu Tone[3](Dept.of Biol.Sci., Fac.of Life & Environ.Sci., Shimane Univ.[1], Amphibian Res. Center, Hiroshima Univ.[2], Lab. Mol. Dev. Biol., Grad. Sch. of Sci. and Eng, Tokyo Denki Univ.[3])

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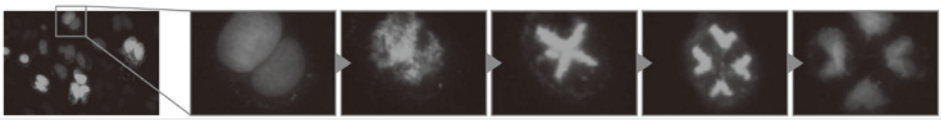

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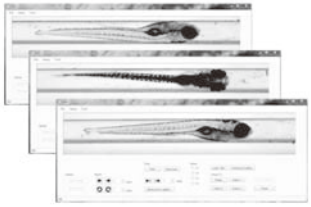

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50th annual meeting organizing committee

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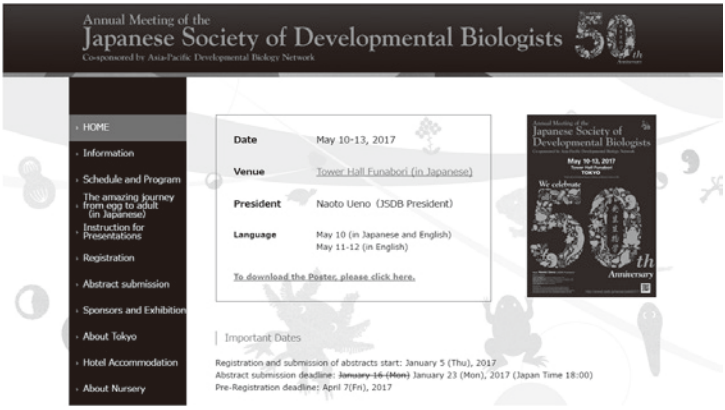

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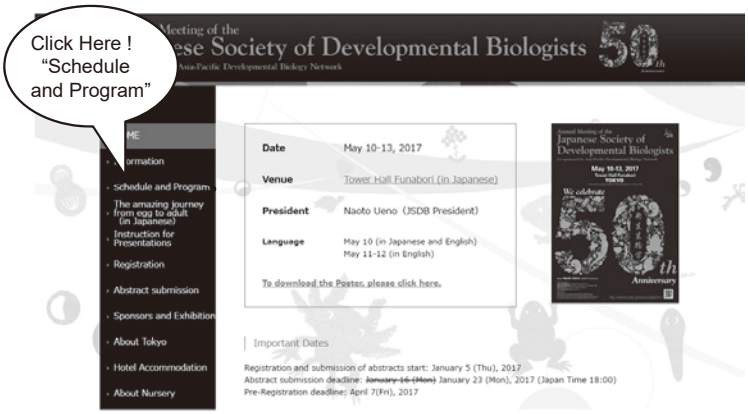

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