

47th Annual Meeting of the Japanese Society of Developmental Biologists



Co-sponsor: Asia-Pacific Developmental Biology Network



第47回日本発生生物学会

May 27 (Tue)–30 (Fri), 2014 WINC AICHI

Chair : Masahiko Hibi Bioscience and Biotechnology Center, Nagoya University

Program Book

Plenary Lecture

Prof. Alexander Schier (Harvard University)

Prof. Hans Clevers (Hubrecht Institute)

Workshops:

New Genome Technologies in Developmental Biology
Frontiers in Developmental Biology by Unique Approaches

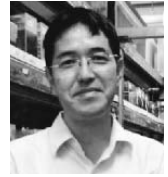
Symposia:

Spain-Japan Joint Symposium : Morphogenesis and Organogenesis
Decoding and Handling the Stem Cell System
Cellular Dynamics in Early Mammalian Embryogenesis
Asia-Pacific Developmental Biology Network Symposium
Integrated Approaches Toward Deeper Understanding of Morphogenesis
New Era of Developmental Biology on Plants
Theoretical and Experimental Investigation of Morphogen Gradient Formation
A Contact Point Between Pluripotency and Germness
Making Conceptual Breakthroughs in Regenerative Biology and Medicine

<http://www.jsdb.jp/kaisai/jsdb2014/>

Welcome to the 47th Annual meeting of JSDB in Nagoya !

Dear colleagues,



On behalf on the organizing committee, I would like to inform you that the 47th Annual Meeting for the Japanese Society of Developmental Biologists (JSDB) cosponsored by the Asia-Pacific Developmental Biology Network (APDBN) will be held in Nagoya from May 27th to 30th, 2014. Nagoya is located on the Pacific coast of central Honshu and can be conveniently accessed from within Japan and from abroad. The meeting venue, Winc Aichi, is situated close to Nagoya station (5-min walk) and downtown Nagoya. You can reach the venue from Chubu Centrair International Airport within an hour.

When creating the meeting program, we discussed the current trends and future directions of developmental biology and set up several symposiums that would attract the interest of many researchers and students. In this meeting, we also plan to have two special international symposiums: the APDBN symposium, and the Spanish Developmental Biology Society (SEBD)-JSDB exchange symposium. Furthermore, following the success of the 46th annual meeting in Matsue, we will continue to provide as many opportunities as possible for participants to give a talk, such as regular oral presentations or flash talks, in addition to poster presentations. The meeting will offer an international milieu for discussing your latest results in developmental biology. I hope that you will find the meeting program very attractive and exciting.

We look forward to seeing you in Nagoya in May.

Masahiko Hibi

Chairperson

Organizing Committee of the 47th Annual Meeting of the JSDB 2014

目次

ご挨拶	1
スポンサー	4
大会準備委員	4
会場への交通ご案内	5
会場内の見取り図	6
日程表	7
参加者へのご案内	11
DGD 編集委員会・JSDB 運営委員会	12
懇親会	12
ランチョン・セミナー	13
託児所	15
発表についてのご注意	16
iWAB (Web Abstract Book)	18
ポスター賞について	19
プログラム	
プレナリー・レクチャー	23
シンポジウム	24
ワークショップ	34
オーラルプレゼンテーション	37
フラッシュトーク	48
ポスター発表	59
テクニカルワークショップ (日本語)	79
若手ワークショップ (日本語)	80
市民公開講座 (日本語)	83
男女共同参画ワークショップ (日本語)	85
発表者氏名索引	87
展示企業一覧	
広告	
WEB 要旨集 閲覧方法	

Contents

Welcome Messages	1
Acknowledgement of Sponsorship	4
Organizing Committee	4
Access Guide to WINC AICHI	5
Floor Maps of WINC AICHI	6
Program at a Glance	7
General Information for Attendance	11
DGD Editorial Meeting & JSDB Board Meeting	12
Reception	12
Luncheon Seminars	13
Nursery	15
Instruction for Presentations	16
iWAB (Web Abstract Book)	18
Regarding Poster Awards	19
Scientific Programs	
Plenary Lectures	23
Symposia	24
Workshops	34
Oral Presentations	37
Flash Talks	48
Poster Sessions	59
Technical Workshop (in Japanese)	79
Satellite Workshops (in Japanese)	80
Public Lectures (in Japanese)	83
Forum by Gender-equal society (in Japanese)	85
Author Index	87
Exhibitor Index	
Advertisements	
How to view the online abstract book	

Acknowledgement of Sponsorship

The organizing committee of 47th Annual Meeting for JSDB gratefully acknowledges the generous financial support of the following:

Sponsors

The Federation of Pharmaceutical Manufacturers' Associations of JAPAN

The Naito Foundation

Suntory Foundation for Life Sciences

The Company of Biologists

ELSEVIER

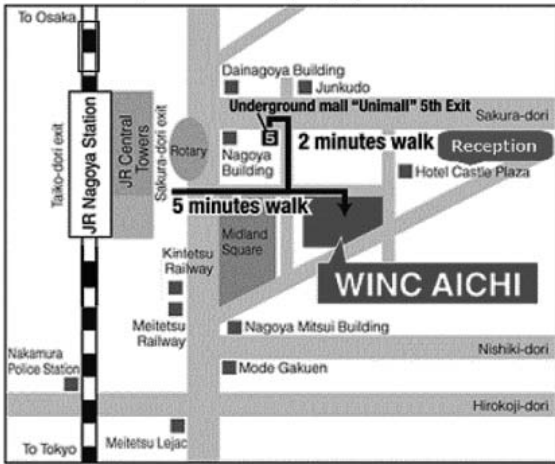
Organizing Committee

Chairperson:	
Masahiko Hibi	Nagoya University
Members:	
Shinji Takada	Okazaki Institute for Integrative Biosciences
Hitoshi Sawa	National Institute of Genetics
Atsushi Kuroiwa	Nagoya University
Takaki Miyata	Nagoya University
Shosei Yoshida	National Institute for Basic Biology
Takashi Shimizu	Nagoya University
Hisashi Hashimoto	Nagoya University
Takayuki Suzuki	Nagoya University
Xinhua Lin	Chinese Academy of Sciences

Access Guide to WINC AICHI

WINC AICHI

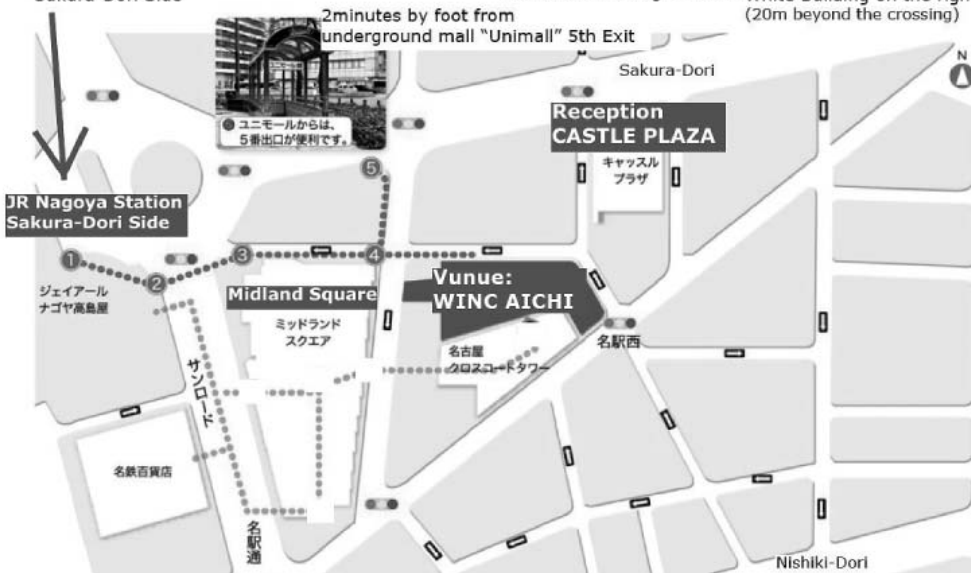
4-4-38 Meieki, Nakamura-ku, Nagoya-city, Aichi 450-0002, Japan



Guide with Pictures from JR Nagoya Station to WINC AICHI



① JR Nagoya Station Sakura-Dori Side ② Crossing the ped-walk ③ Midland Square North side : Straight ahead ④ WINC AICHI : White Building on the right (20m beyond the crossing)



5minutes by foot from JR Nagoya Station.

2minutes by foot from underground mall “Unimall” 5th Exit.

To JR Nagoya Station:

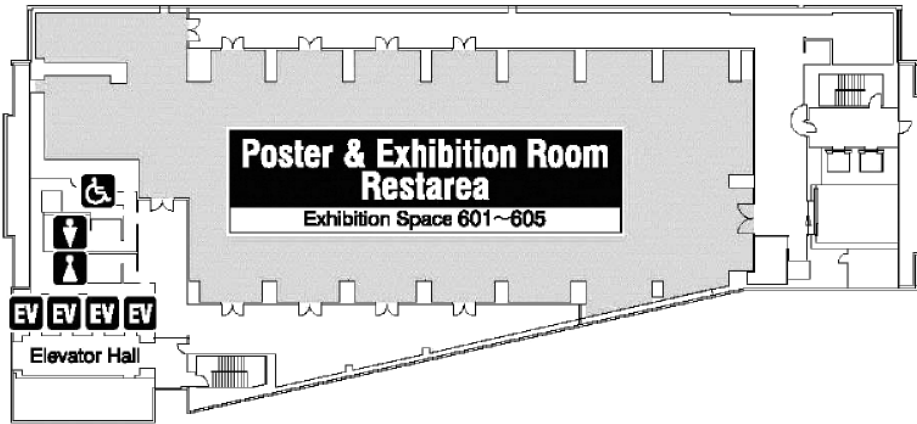
Chubu Centrair International Airport → Meitetsu Line 28min. → Nagoya Station

Tokyo Station → Shinkansen Line 97min. → Nagoya Station

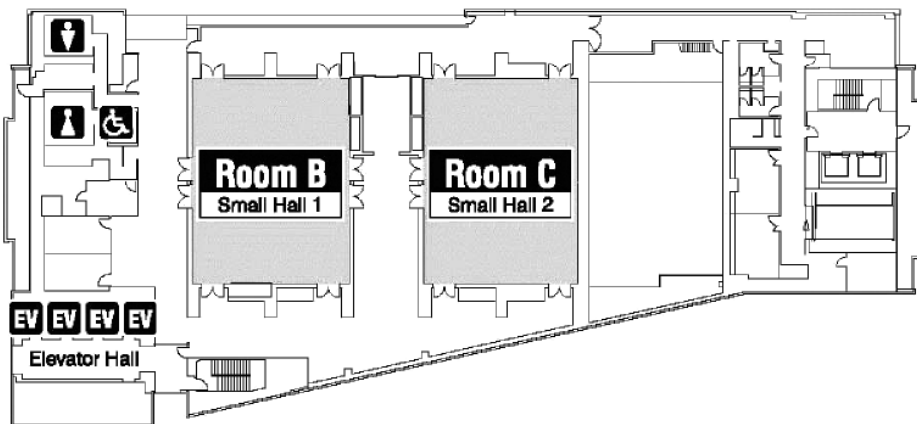
Shin-Osaka Station → Shinkansen Line 51min. → Nagoya Station

Floor Maps of WINC AICHI

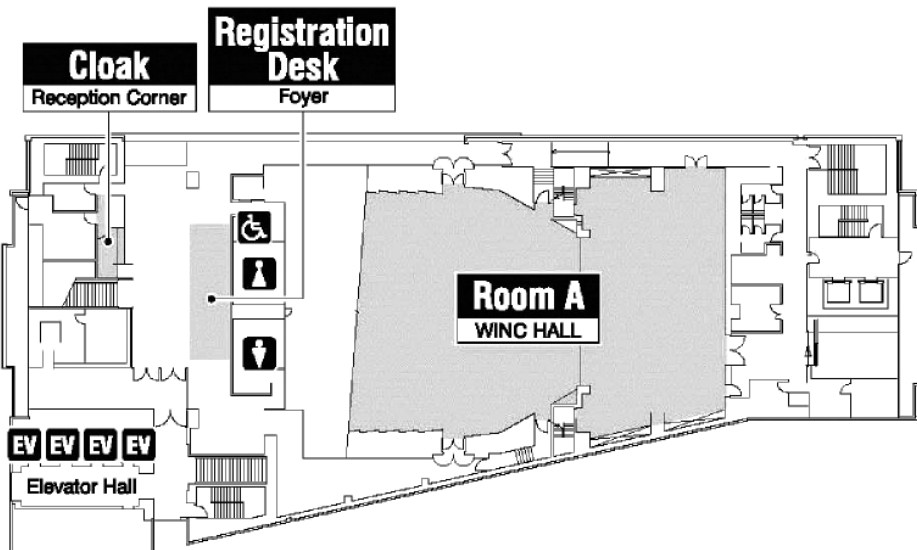
6F



5F



2F



Program at a Glance

Day 0 (May 27(Tue))

	11:00 ~ 15:00	13:00 ~ 16:00	16:30 ~ 19:30
Room A (2F)		Technical Workshop (in Japanese) Fundamentals of Quantitative Image Analysis	Oral presentation 1 Neural Development and Behavior / Technology, Theoretical Approach, Systems Biology
Room B (5F)		Satellite Workshop (in Japanese) Morphogenesis and Signaling	Oral presentation 2 Stem Cells and Regeneration
Room C (5F)		Satellite Workshop (in Japanese) Stem Cells and Neural Development	Oral presentation 3 Signaling in Development
Room D	DGD Editorial Meeting & JSDB Board Meeting		

Day 1 (May 28(Wed))

	9:00 ~ 11:30	12:00 ~ 13:00	13:30 ~ 14:30	14:30 ~ 16:00	16:00 ~ 19:00
Room A (2F)	<p>Symposium 1 Spain-Japan Joint Symposium “Morphogenesis and Organogenesis”</p>	<p>Luncheon (Olympus Corporation) (in Japanese)</p>	<p>Flash Talk 1 Early Embryogenesis / Evolution and Development</p>		<p>Workshops 1 New Genome Technologies in Developmental Biology</p>
Room B (5F)	<p>Symposium 2 Decoding and Handling the Stem Cell System</p>		<p>Flash Talk 2 Morphogenesis</p>		<p>Oral presentation 4 Early Embryogenesis / Evolution and Development</p>
Room C (5F)	<p>Symposium 3 Cellular Dynamics in Early Mammalian Embryogenesis</p>		<p>Flash Talk 3 Neural Development and Behavior</p>		<p>Oral presentation 5 Morphogenesis</p>
Poster Room (6F)	Posters			Discussion time 1	
	Exhibition (Equipment & books)				

Day 2 (May 29(Thu))

	9:00 ~ 11:30	11:45 ~ 13:00	13:30 ~ 14:30	14:30 ~ 16:00	16:00 ~ 19:00	19:30 ~
Room A (2F)	Plenary Lectures	General assembly (in Japanese)	Flash Talk 4 Signaling in Development / Reproduction and Gametogenesis / Cell Biology		Workshops 2 Frontiers in Developmental Biology by Unique Approaches	
Room B (5F)			Flash Talk 5 Stem Cells and Regeneration		Oral presentation 6 Gene Expression and Epigenetics / Reproduction and Gametogenesis	
Room C (5F)			Flash Talk 6 Organogenesis / Regulation of Gene Expression / Neural Development and Behavior		Oral presentation 7 Cell Biology / Organogenesis	
Poster Room (6F)	Posters			Discussion time 2		
Castle Plaza	Exhibition (Equipment & books)					Reception

Day 3 (May 30(Fri))

	9:00 ~ 11:30	12:00 ~ 13:00	13:30 ~ 16:00
Room A	<p>Symposium 4 APDBN Symposium: Mechanisms of Morphogen signaling in pattern formation, organogenesis and homeostasis</p>		<p>Symposium 7 Theoretical and Experimental Investigation of Morphogen Gradient Formation</p>
Room B	<p>Symposium 5 Integrated Approaches Toward Deeper Understanding of Morphogenesis</p>	Gender-equal society	<p>Symposium 8 A Contact Point Between Pluripotency and Germness</p>
Room C	<p>Symposium 6 New Era of Developmental Biology on Plants</p>	Grants-in-Aid for Scientific Research <KAKENHI> Seminar	<p>Symposium 9 Making Conceptual Breakthroughs in Regenerative Biology and Medicine</p>
Poster Room	Exhibition (Equipment & books)		

General Information for Attendance

Venue

WINC AICHI

4-4-38 Meieki, Nakamura-ku, Nagoya-city, Aichi 450-0002, Japan

Phone: +81-52-571-6131 Fax: +81-52-571-6132

URL: <http://www.winc-aichi.jp/> (in Japanese)

Official Language

English will be the official conference language, and no simultaneous translation will be provided. The Satellite Workshops and Technical workshop 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)

General Non-members (Residing overseas): ¥2,000 (early ¥0)

Student Non-members (Residing overseas): ¥1,000 (early ¥0)

*Registration includes access to all scientific sessions and exhibits.

*Students should provide the name and affiliation of their supervisor.

JSDB General Assembly

May 29 (Thursday), 11:45-13:00, Room A

Payment

All payment must be made in Japanese yen, by credit card or by bank draft, payable to “The 47th 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 29 (Thu) : Lunch boxes available (¥1,000).

May 28 (Wed) & May 30 (Fri): At the luncheon seminar, a limited number of free lunch boxes will be provided by sponsor.

Refreshments and Internet Access

Free Wi-Fi is available at the Poster Room, 6F.

DGD Editorial Meeting & JSDB Board Meeting

May 27 (Tue) 11:00-15:00, WINC AICHI Room D

Reception

May 29 (Thu) 19:30-21:30

Castle Plaza

4-3-25 Meieki, Nakamura-ku, Nagoya-city, Aichi, 450-0002, Japan

Phone: +81-52-582-2121 Fax: +81-52-582-8666

URL: <http://www.castle.co.jp/plaza/>

Reception fee (On-site) (JPY)

General JSDB members: ¥ 8,000 (early ¥7,000)

Student JSDB members: ¥4,000 (early ¥3,000)

General non-members: ¥ 8,000 (early ¥7,000)

Student non-members: ¥4,000 (early ¥3,000)

General Non-members (Residing overseas): ¥8,000 (early ¥7,000)

Student Non-members (Residing overseas): ¥4,000 (early ¥3,000)

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: 8:30-19:30 (Closed at 17:00 on May 30(Fri.))

Location: 2F

Luncheon Seminar (in Japanese)

オリンパス株式会社 ランチョンセミナー

=Luncheon Seminar by Olympus Corporation. =

May 28 (Mon) 12:00-13:00, Room A

独立行政法人日本学術振興会 ランチョンセミナー

=Luncheon Seminar by Japan Society for the Promotion of Science=

May 30 (Fri) 12:00-13:00 Room C

オリンパス株式会社 ランチョンセミナー
=Luncheon Seminar by **Olympus Corporation.**=
May 28 (Wed) 12:00-13:00, Room A

タイトル: 「レーザー顕微鏡を用いた脳のコネクティクス解析と機能イメージング」

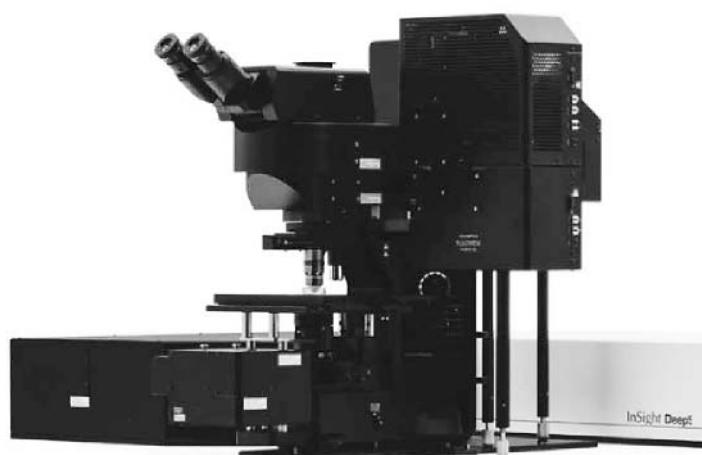
講演者: 伊藤 啓先生 (東京大学 分子細胞生物学研究所 脳神経回路研究分野)

新製品のご紹介

「多光子励起レーザー走査型顕微鏡 FVMPE-RS」

ミリ秒単位の速い生体反応を捉える高速イメージング。
深部でもエネルギー密度の高い理想的なスポットで
励起ができ、散乱した蛍光も効率良く検出する
高 S/N なイメージング。深部での多波長同時イメー
ジング。マルチポイントの光刺激やパッチクランプ
のデータとの同期。

オリンパス FLUOVIEW FVMPE-RS が次世代の
多光子観察のために目指したもの、それは高速、
深部、多色、光刺激。一切の妥協を許さない研究者
のために。



Luncheon Seminar ランチョンセミナー
5月30日(金) 12:00～13:00 会場: Room C

科学研究費補助金セミナー
Grants-in-Aid for Scientific Research <KAKENHI> Seminar

1. 「科研費」の最近の動向

Outline of Grants-in-Aid for Scientific Research (KAKENHI) and its Trends

日本学術振興会 研究助成第一課長 大鷲正和

日本学術振興会から、科研費の配分機関として、制度の概要、応募から審査、決定までの流れ、補助金、助成金の執行と適切な管理、不正防止に関すること、また、成果の公開、科研費の普及啓発などについて、ご説明します。

2. 日本学術振興会の諸事業における学術システム研究センターの役割

Research Center for Science Systems and the Roles of Program Officers

日本学術振興会 学術システム研究センター専門調査役 樋口和憲

日本学術振興会には、公平・公正で透明性の高い審査・評価の実施のために、学術システム研究センターが設置され、研究機関に籍を置く第一線の研究者が、科研費等の審査委員候補者の選考、審査結果の検証、分科細目表の見直しや制度の改善など、幅広い業務に参画しています。学術的な見地から、最新の学術動向や現場の声を事業運営に反映させるための様々な活動について、ご紹介します。

第 47 回日本発牛生物学会年会 保育室のご案内

保育室の利用を希望される方は、以下の規定を御確認の上、所定の手続き方法に従って日本語でお申込ください。なお保育スタッフは英語を話せません。

託児時間	5月28日(水) 8:30～19:30 5月29日(木) 8:30～19:30 5月30日(金) 8:30～16:30 (*原則としてお子様の昼食は、保護者が一緒におとりください。)
対象年齢	生後3ヶ月から12歳まで(大会参加者のお子様に限る)(首のすわっているお子様～)
託児場所	※セキュリティ確保の為、お申込者のみにご案内致します。
託児形態	ベビーシッター会社へ保育スタッフを依頼します。
委託先	株式会社ケアメイトサービス
託児料	500円/時間/お子さま1名(1時間未満は切上げ) 保育料のお支払いは、お子様をお預けの際にお願いします。 *申込みにより保育スタッフを依頼しますので、当日のキャンセルや、実際の利用時間が申込時間よりも短くなった場合は、申込時の保育料のお支払いをお願いします。また、利用時間をやむを得ず延長された場合には、延長分のお支払いをお願いします。
申込み先	「利用規約(PDF95KB)」を確認のうえ、必要事項を記入した「申込書(PDF84KB)」をFAXまたはEメールにてお申し込みください。 後日、詳細を記載しました「受領確認書」をお申し込み頂いた方法で返信します。お申し込み後一週間以内に受領確認書が届かない場合には、下記の「申し込み先・お問い合わせ先」まで必ずお問い合わせください。 ※ 保育室の場所は、受領確認書に記載させていただきます。 ※ 電話での受付は 078-306-3072 (平日 9:00～17:00) ■申し込み先・お問い合わせ先 日本発牛生物学会 事務局 担当: 桃津 FAX: 078-306-3072 E-mail: jsdb2014@jsdb.jp TEL: 078-306-3072 (平日 9:00～17:00)
申込締切	<u>2014年5月9日(金) 17時00分</u> ただし、定員になり次第締め切らせて頂きますのでお早めにお申込み下さい。
不測の事故に対応するために、株式会社ケアメイトサービスが保険に加入しており、保険適用範囲で補償いたします。また第47回日本発牛生物学会年会は、事故の責任は負わないことを申し添えます。	

Instruction for Presentations

大会発表についてのご注意

Oral presentation

1. Presentation time

Oral presentation: **12 min** for presentation and **3 min** for discussion.

Satellite Workshop: **12 min** for presentation and **3 min** for discussion.

2. Computer for oral presentation

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 Nagoya is provided at 100 V, 60 Hz.

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.

Flash Talk

1. Regarding flash talk

In your Flash talk, please give a simple summary of what your poster is about. Please avoid presenting specific data.

2. Presentation time

Flash talks are **3 min** in length. There is no Q & A. When three minutes are up, the slides will automatically be removed from the screen. We would appreciate your cooperation in keeping to the allotted time to ensure that the session runs smoothly.

3. Presentation data

Please submit your presentation data in advance between Monday, May 19 and Sunday, May 25.

Submit to: jsdb2014@jsdb.jp

- **Please make your presentation using PowerPoint (in Windows or Mac; Keynote cannot be used).**
- First slide should be the title slide which includes your name, affiliation, presentation title, and subject number), and your presentation should be no more than three slides long (including the title slide).
- File size should be less than 5 MB.
- PowerPoint file name is “Subject number (Presenter name)”. Example: FT01-01 (Taro Nihon)
- Please do not lock your file with a password.

*The presentation data received for the Flash Talk will only be used on the day of the presentation. We will not upload it to the web or publish it in other media. The data will be deleted after the session.

****If presentation data is not received by the deadline, your slot will be canceled.**

4. Presentation method

A computer will be prepared for the presentations. Presentation data submitted in advance will be pre-installed in the computer prepared for the presentations. You will not be able to use your own computers for the presentation. Please submit your presentation data by the deadline.

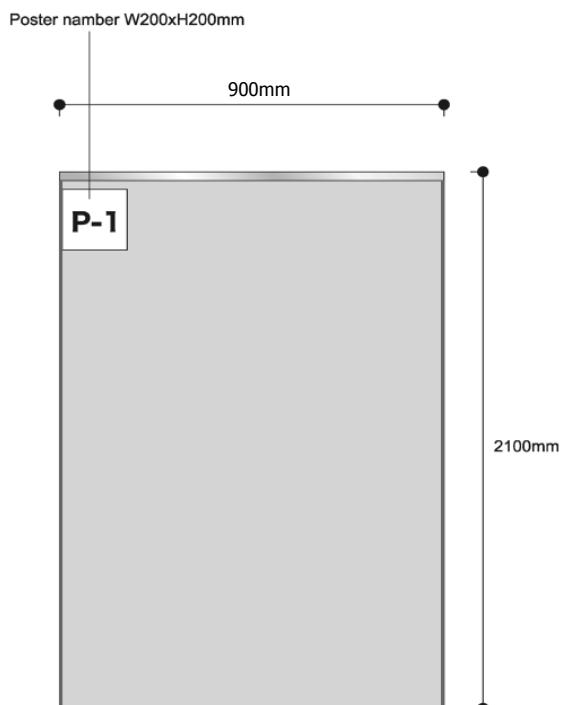
5. Presenter registration

Present yourself at the reception desk for presenters located in the venue for the Flash Talks at least **20 min** before the session begins.

Poster Presentations

Poster board size: 900 mm (width) × 2,100 mm (height)

- ✧ Please leave a 200 mm × 200 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 (May 28) and Day 2 (May 29).
- ✧ Best Presentation Awards will be given for several student presenters. Award winners will be selected using the web voting system by capable participants of the meeting, and will be announced after the meeting.



Mounting:	9:00-13:00 on 28 May
Day1(May 28)	14:30-16:00 on 28 May
Discussion:	14:30-15:15 for odd number posters 15:15-16:00 for even number posters
Day2(May 29)	14:30-16:00 on 29 May
Discussion:	14:30-15:15 for A number posters 15:15-16:00 for B number posters
Removal:	9:00-13:30 on 30 May

Chairpersons

All chairpersons are required to come to their assigned session rooms at least **20 min** prior to the start of the session they will chair.