The 61st Annual Meeting of the Japanese Society of Plant Physiologists

https://jspp.org/annualmeeting/61/

The 61st Annual Meeting of the Japanese Society of Plant Physiologists in Osaka has cancelled all related committees, related meetings, including the banquet. The 61st Osaka Annual Meeting of the Japanese Society of Plant Physiologists and the conference presentation is deemed to have been held upon publication of the conference abstract.

Date: March 19 (Thur) through March 21 (Sat), 2020

Venue: Suita Campus, Osaka University
1-1 Yamadaoka, Suita, Osaka 565-0871, Japan
https://www.osaka-u.ac.jp/en/access/index.html#suita

Banquet: Hotel Hankyu International
19-19, Chayamachi, Kita-ku, Osaka, 530-0013, Japan
https://global.hankyu-hotel.com/hankyu-international/

Organizing Committee
Chairperson: Toshiya Muranaka
Vice-Chairperson: Tatsuo Kakimoto
General Affairs: Hikaru Seki / Miho Kitazawa / Yuki Sakamoto / Hiroyuki Kajiura / Kenji Osabe / Kazuo Harada
Accounting: Shuhei Yasumoto
Banquet: Atushi Okazawa / Shuhei Yasumoto
Program Committee: Hikaru Seki (Chairperson)
   Tasuo Nakai / Akiko Harada / Koichi Fujimoto / Fumio Matsuda / Masahiro Mizutani / Yube Yamaguchi
Venue: Yoshihiro Toya / Hiroyuki Toya / Atsushi Okazawa / Kenji Osabe / Genji Kurisu / Nozomu Koizumi / Miho Kitazawa / Hiroshi Shimizu / Shingo Takagi / Yohsuke Toyoda / Masakazu Toyoshima / Akiko Harada / Kazuo Harada / Kazuhito Fujiyama / Fumio Matsuda / Yube Yamaguchi
Nursery: Tatsuo Kakimoto / Akiko Harada / Yube Yamaguchi
Mixer: Kajiura Hiroyuki / Eiichiro Fukusaki
Presentations by High School Students: Tatsuo Kakimoto / Miho Kitazawa / Takeharu Nagai / Fumio Matsuda

Conference Secretaria
Nakanishi Printing Co., Ltd.
Shimodachiuri-Ogawa, Kamigyo-ku, Kyoto 602-8048, Japan
FAX: +81-75-415-3662  E-mail: jspp2020@nacos.com

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1. General Information

1-1. Important Notice

1) About spread of the novel coronavirus infection

There is a concern about the spread of the novel coronavirus infection in Japan. The 61st Annual Meeting of the Japanese Society of Plant Physiologists in Osaka will be held on March 19th to 21th, where many people will come together, so please make sure that each participant keeps coughing etiquette and frequent hand washing at the annual meeting.

2) Program and Abstract Book (see also section 1-8.)

• No program booklet is provided at the meeting site. However, for the convenience of the participants, we are considering distributing a simple bound program at the meeting site.
• The program and abstracts are accessible electronically using iOS/Android Apps, which will be available after March 12 (Thur).
• The PDF file for the Abstract Book is also available at the meeting website.
• The Apps and Abstract Book are available only for those who have completed their registration to attend this meeting.

3) Registration of attendance (see also section 1-3.)

• For those who have completed their registration, please do not forget to bring the postcard for name tag, which will be sent at the beginning of March. For those with the postcard, no on-site registration is required; just take a name tag holder at the entrance.
• Early-bird registration has been closed. Those who have not registered online need to register on site.

4) Poster presentations [see also section “1-7. 1) General Presentations 3. Poster presentations”]

• Poster discussions are scheduled on Day 1 (poster numbers beginning with PF) and Day 3 (poster numbers beginning with PL). On Day 2, those presenting on Day 1 should remove their posters at 9:00–12:00, and those presenting on Day 3 should mount their posters at 14:00–17:00.
• On both Day 1 and Day 3, presenters of odd- and even-numbered posters should be in front of their boards during the first half and second half of the discussion time, respectively (Please refer to the programs).

About the Meeting Logo

The logo of the 61st Annual Meeting of JSPP at Osaka was designed by Pramesti Istiandari (PhD course student, Graduate School of Engineering, Osaka University) who is a Student Member of JSPP combining the symbol of Osaka “Osaka Castle” and the flower of Osaka Prefecture “Ume (Japanese apricot or plum)” as a motif. Ume-no-Hana (Blossom of Ume) is not only a flower of Osaka Prefecture, but is also related to the authority of the new era “Reiwa” and the plum blossom poems in Man Yoshu (the oldest extant collection of Japanese Waka (poetry in Classical Japanese)). We welcome everyone who is coming to Osaka for the first annual meeting with the meeting logo of “Ume”.
1-2. Venue and Access

10-minute walk from Monorail Handai Byoin Mae station

By Shinkansen:

By Airplane:
From Osaka Airport station, take Monorail for “Kadoma-shi”, change trains at Bampaku-kinen-kōen for “Saito-nishi”, getting off Handai Byoin Mae station

Others

Hankyuu Senri Line
Going right (east exit) after exiting the ticket gate of the station, Kita-Senri, and crossing the footbridge. Please follow the sign. It is about 15-minute walk to Senri-mon gate.

Hankyuu Bus
For Handai Honbu Mae or Ibaraki Mihogaoka from Senri-Chuo, getting off at Handai Honbu Mae bus stop
Guide map (Osaka University, Suita Campus)

**Building R1**
- Oral Presentation [Room C, D]

**Building U2**
- Oral Presentation [Room E-H]
- Board Delegates’ Meeting [Room H]

**Building M1**
- Oral Presentation [Room A, B]
- Database Workshop [Room B]

**Convention Center**
- Registration Desk / Cloak
- JSPP Awards: Ceremony and Award Lectures [Room W]
- Symposium [Room W—Z]
- High School Students Discussion, Award ceremony [Room Y, Z]

**Gymnasium**
- Poster Presentation
- Research Presentations by High School Students
- Mixer, Exhibition Boot

**Opening hours of university cafeteria**

<table>
<thead>
<tr>
<th>Shop / Cafeteria Name</th>
<th>Venue</th>
<th>Type</th>
<th>March 19, Thur</th>
<th>March 20, Fri</th>
<th>March 21, Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSSOL Café</td>
<td>nearby the Convention Center or Gymnasium</td>
<td>Cafeteria</td>
<td>11:00—14:30</td>
<td>11:30—13:30</td>
<td>close</td>
</tr>
<tr>
<td>7-Eleven</td>
<td></td>
<td>Convenience Store</td>
<td>8:00—21:00</td>
<td>8:00—16:00</td>
<td>8:00—21:00</td>
</tr>
<tr>
<td>Cafeteria Famil Shop</td>
<td>nearby Building R1, U2, M1</td>
<td>Cafeteria (available halal food menu)</td>
<td>11:00—20:00</td>
<td>11:00—14:00</td>
<td>11:00—14:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bread, Boxed lunch, drink, stationery</td>
<td>8:00—20:00</td>
<td>10:00—15:00</td>
<td>11:00—14:00</td>
</tr>
<tr>
<td>Cafeteria Kujiraya</td>
<td>nearby Handai Honbu Mae Bus Stop</td>
<td>Cafeteria</td>
<td>8:00—20:00</td>
<td>close</td>
<td>8:00—14:30</td>
</tr>
<tr>
<td>Cafe Hidamari</td>
<td></td>
<td>Cafeteria</td>
<td>11:00—15:00</td>
<td>close</td>
<td>close</td>
</tr>
</tbody>
</table>

Abstract Book
Annual Meeting of JSPP
Mar. 2020 Osaka
**Convection Center**

1階
- Room X (Training Room)
- Cloak (Meeting Room 1)

2階
- Room Z (Meeting Room 3)
- Room Y (Meeting Room 2)

3階
- Room W (MO Hall)
  - JSPP Awards: Ceremony and Lectures

**Gymnasium**

- Poster Presentation
- Exhibition Booths
- Entrance Hall
- Robby
- Foyer
1-3. Registration of Participants

1) The registration desk will be open from 8:30 on March 19 (Thur) at the Convention Center.
2) **Those who have completed their online registration**: Bring the postcard for the name tag sent to you in the beginning of March, and you do not need to visit the registration desk. We will also distribute name tag holders in the oral presentation area as the registration desk and the oral presentation area are apart.
3) **On-site registration**: Visit the on-site registration desk and pay the fees shown below.

<table>
<thead>
<tr>
<th></th>
<th>On-site registration fee (including fee for online access to the Abstract Book)</th>
<th>Banquet fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSPP Members</td>
<td>JPY 11,000 (tax free)</td>
<td>JPY 10,000 (tax included)</td>
</tr>
<tr>
<td>JSPP Student Members</td>
<td>JPY 6,000 (tax free)</td>
<td>JPY 8,000 (tax included)</td>
</tr>
<tr>
<td>Non-JSPP members</td>
<td>JPY 14,000 (tax included)</td>
<td>JPY 10,000 (tax included)</td>
</tr>
</tbody>
</table>

4) The registration desk may be congested shortly before the start of sessions on Day 1. Those who will register on-site and those who did not bring their name tags are requested to visit the desk in plenty of time.
5) Undergraduate students and junior- and high-school students and leading teachers can attend this Meeting free of charge regardless of their JSPP membership. Please see “Registration” on the meeting website. Although these participants cannot access the online Abstract Book, they can download the program from the meeting website.
6) Always wear your name tag on your chest at the venue. The Meeting Committee will check your name tag.

1-4. Lunch

Although Friday, March 20 is a national holiday during the annual meeting period, the cafeteria, shops and other facilities in Suita Campus will be temporarily open. More information will be provided later.

1-5. Cloakroom

The cloakroom is located on Convention Center and is open during the following hours. Please collect your luggage by the closing hour of each day as belongings will not be kept overnight. Please do not include valuables in your luggage.

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>March 19 (Thur)</td>
<td>8:30–19:00</td>
</tr>
<tr>
<td>2</td>
<td>March 20 (Fri)</td>
<td>8:30–18:30</td>
</tr>
<tr>
<td>3</td>
<td>March 21 (Sat)</td>
<td>8:30–17:30</td>
</tr>
</tbody>
</table>

1-6. Nursery Service

An on-site nursery service is available during the Meeting. For this service, reservation is required beforehand. Please contact the Conference Secretariat for details. The application deadline is Wednesday, February 26, 2020.

1-7. Notes for Presenters

When preparing figures and tables for your presentation, please refer to the website “Color Universal Design (CUD)—How to make figures and presentations that are friendly to colorblind people—” (http://jfly.iam.u-tokyo.ac.jp/color/).
1) General Presentations

1. Qualification of presenters
   In accordance with JSPP Article 7(3), the presenters of the Annual Meeting must be JSPP members. If you are a presenter who is in the process of enrollment, please complete the procedure and the payment of the membership fee before the Annual Meeting, otherwise your presentation will be canceled.

2. Style of presentations
   The type of presentation (poster or oral presentation) is decided by the program committee to meet the requests at the time of application, but if you select “Either will do.” at the time of application, please make sure to confirm the type of presentation through the program before proceeding with the preparation.

3. Poster presentations
   Posters should be in English. The poster panel is 90 cm (width) × 210 cm (height from the floor). Pushpins for mounting your poster are provided by the Meeting Committee.

   <Posting and removing posters>
   • Those making presentation in the first half of the Annual Meeting (marked with PF at the beginning of the abstract number) should mount their posters from 9:00 to 12:00 on Day 1 and remove them anytime from 9:00 to 12:00 on Day 2. Any posters remaining after this period will be removed by the Meeting Committee.
   • Those making presentation in the second half of the Annual Meeting (marked with PL at the beginning of the abstract number) should mount their posters from 14:00 to 17:00 on Day 2 and remove them by 17:00 on Day 3. Any posters remaining after this period will be removed by the Meeting Committee.

   <Poster discussion time>
   • The poster discussion for those making presentations in the first half of the Annual Meeting is on Day 1, while it is on Day 3 for those making presentations in the second half. The poster discussion times are as follows.
   • For presentations in the first half: 17:00–18:30 on Day 1.
   • For presentations in the second half: 13:00–14:30 on Day 3.
   • On both Days 1 and 3, presenters of odd- and even-numbered posters should be in front of their boards during the first and second half of the poster discussion time, respectively

4. Oral presentations
   • Slides used in oral presentations should be in English. Prepare a brief summary slide in English at the end.
   • Each presentation is a 15-min slot, a talk for 12 min and discussion for 2 min 30 sec, followed by a 30-sec interval for the next speaker. To keep the session on time, please strictly follow the time limits.
   • There is no preview room in this time. The presentation room is open 15 minutes before the each session begins. Please check you slides in the presentation room if you need.
   • Only PC projectors can be used. The recommended resolution is 1024 × 768 (aspect ratio 4:3). Set the resolution of your PC to 1024 × 768.
   • The Annual Meeting Committee does not provide PCs for presenters. Presenters should bring their own PC. Also, presenters should ask their colleagues if assistance is required in operating instruments and devices.
   • Presenters should take the Next Presenter’s seat and open files for presentation in their PC before the end of the previous presentation.
   • Connect the PC directly to the external monitor using the cables at the desk for the speaker. To avoid troubles, the input switch box will not be used in this annual meeting.
   • A mini D-sub 15-pin connector cable is used for the connection. If special adapters are required, please provide them by yourself.
   • After the presentation, disconnect the connector and return it to its original position for the next presenter.
2) Symposium presentations

The procedures for symposium presentations are the same as those for oral presentations except for the presentation time slots. Please refer to “4. Oral presentations” above or ask the organizers of your symposium for details.

1-8. Access to Abstract Book Using Application Software

Application software to access the Abstract Book from compatible mobile terminals, such as smartphones and tablets, will be distributed. The software will be available for iOS and Android, and can be downloaded from the App Store or Google Play. The software will be downloadable after March 12 (Thur). The password will be provided by e-mail before March 12. Only the participants of the Annual Meeting, except for those described in section 1-3.5) above, can access the Abstract Book.

1-9. Free Wireless LAN Service

Free wireless LAN connection is available at the venue. Note that the number of access is not limited, but it may be difficult to connect at some locations and in some situations. Use the information on wireless LAN connection printed on the postcard sent to those who completed their registration online. Participants who have completed their on-site registration will receive information on wireless LAN connection at the reception desk for on-site registration. Eduroam will be also available at the venue.

1-10. Notes for Chairpersons

Please come to the assigned session at least 15 minutes before the starting time and notify the staff of your attendance. Please assign a chairperson to each presentation prior to the Annual Meeting.

No microphone for members of the audiences will be available in some small rooms. If the question is difficult to hear, you can ask the questioner to repeat it with a loud voice or you can repeat the question with your microphone. Moreover, ensure that the session proceeds on-time.

1-11. Patents

Upon the revision of “Operational Guidelines for Applicants Seeking the Application of Exceptions to Lack of Novelty of Invention”, a certificate of presentation is considered to be unnecessary. Therefore, JSPP will not issue such a certificate in this Annual Meeting.

1-12. Prohibitions

It is strictly prohibited to photograph the contents of presentations with cameras, videos, or mobile phones, or to make recordings without permission from the presenter.

1-13. Contact Information and Bulletin Board

- Contact to the Conference Secretariat
  For questions to the Annual Meeting Committee, send an e-mail to jspp2020@nacos.com.

- Bulletin board
  Messages to participants will be posted on the bulletin board near the reception desk at the entrance. Announcements will not be made at the venue. The bulletin board is also open to participants for mutual communication; feel free to post your messages.
1-14. Mixer
The mixer will be held from 18:30 on Day 1 (March 19) at the Gymnasium. All participants are encouraged to attend the mixer.

2. Contents of the Annual Meeting

2-1. Banquet
A banquet will be held at the Hotel Hankyu International from 19:00 on Day 2 (March 20). There will be several shuttle buses from the annual meeting place to the hotel. On-site registration for the banquet is accepted at the reception desk.

Hotel Hankyu International
19-19, Chayamachi, Kita-ku, Osaka, 530-0013, JAPAN
https://global.hankyu-hotel.com/hankyu-international/

2-2. JSPP Awards Ceremony and Award Lectures
Date and time: Day 2, March 20 (Fri) 16:15–18:00
Venue: Room W1
Please see the program p.14 for details.

2-3. Symposia
Fifteen symposia will be held in this Meeting. For the content and purpose of each symposium, please refer to the Meeting website (https://jspp.org/annualmeeting/61/e_greeting.php). Please see p.15 for the program.

Day 1, March 19 (Thur) 9:30–12:30
♦ S01 Japan-Taiwan Joint Symposium: Front lines of post-transcriptional gene regulation in environmental responses
♦ S02 Towards a unified understanding of local/systemic signaling and beyond in plant wound and immune responses
♦ S03 Molecular basis of long-distance signaling in plants
♦ S04 Molecular mechanism of cell proliferation and reprogramming —the chromatin perspective and beyond—

Day 1, March 19 (Thur) 13:45–16:45
♦ S05 The highly specialized plant organs and cells —Its function and evolution—
♦ S06 Frontiers of research on embryo and endosperm development: Induction of artificial apomixis
♦ S07 Secret life of chloroplasts: from development to degradation

Day 2, March 20 (Fri) 8:45–11:45
♦ S08 Frontiers of growth and development in grasses explored by young researchers
♦ S09 Two sides of auxin actions on stem cells
♦ S10 Understanding plant developmental processes along spatiotemporal axes

Day 2, March 20 (Fri) 13:00–16:00
♦ S11 Development and application of plant manipulation strategy: towards the design of optimized crop production
♦ S12 Dynamic photosynthetic responses to fluctuating light

Day 3, March 21 (Sat) 8:45–11:45
♦ S14 Higher-order functions in plant endomembrane system
♦ S15 From plant physiology to biotechnology
2-4. The 16th Database Workshop
Date and time: Day 1, March 19 (Thur) 13:45–16:45
Venue: Room B
Organizers: Kentaro Yano (Meiji Univ.)
Please see p.30 for the program.

2-5. Special Program: “Research Presentations by High School Students”
With the aim of enhancing interest in plant science and life science among high school students who will play an active role in the next generation, a special program: “Research Presentations by High School Students” will also be held during the Annual Meeting. It is expected that many high school students will participate in the special program and make active discussion. Many high school students are expected to participate in the program this year. Awards will be given to high school students on a competitive basis. Also, this year an information exchange meeting will be held between the presenters and the regular meeting participants to provide a chance for high school students to discuss research and education with faculty members, researchers, and graduate students to facilitate their research and education. All are encouraged to participate in the information exchange meeting, and award ceremony. The abstracts of poster presentations by high school students will be distributed as a separate supplement.
Time and date: 9:30–16:30, Saturday, March 21, Day 3
Venue: Presentation; Gymnasium of Osaka University, Suita Campus,
Discussion with Meeting Participants and Award Ceremony; Room Y and Room Z, Convention Center
Sponsor: Committee of the 61st Annual Meeting of the Japanese Society of Plant Physiologists

9:30–10:10 Registration and poster setup
10:10–10:20 Opening ceremony
10:30–12:00 Core time of poster presentations with odd abstract numbers
   (poster presentation, question-and-answer session)
12:00–13:00 Lunch
13:00–14:30 Core time of poster presentations with even abstract numbers
   (poster presentation, question-and-answer session)
14:30–14:45 Removal of posters and moving to the venue for Discussion with Meeting Participants and Award Ceremony
14:45–15:45 Information exchange meeting
   (consultation and discussion regarding research and education with faculty members, researchers, and graduate students)
16:00–16:30 Award ceremony

2-6. Luncheon Seminars
Registration is not required, but distribution of lunch box will be on a first-come-first-served basis. Please see p.31 for the program and contents.

♦ PCP Luncheon Seminar “Making an impact with PCP in 2020”
Date and time: Day 1, March 19 (Thur) 12:40–13:30
Venue: Room H
Organizer: PCP Editors Committee, Sponsor: Oxford University Press
Promega Luncheon Seminar “Application of the Automated Nucleic Acid Purification and Bioluminescence Peptide-tag Technologies”
   Date and time: Day 1, March 19 (Thur) 12:40–13:30
   Venue: Room Y
   Sponsor: Promega KK

Illumina K.K. Luncheon Seminar
   Date and time: Day 2, March 20 (Fri) 12:00–12:50
   Venue: Room Y
   Sponsor: Illumina K.K.

OLYMPUS CORPORATION Luncheon Seminar
   Date and time: Day 2, March 20 (Fri) 12:00–12:50
   Venue: Room Z
   Sponsor: OLYMPUS CORPORATION

Luncheon Seminar on Gender Equality — Why are there so few female researchers in Japan? Considerations based on a large questionnaire survey for 18,000 researchers. —
   Date and time: Day 3, March 21 (Sat) 12:00–12:50
   Venue: Room Y
   Sponsor: JSPP Gender Equality Committee

2-7. Satellite Meetings
   Please see p.36 for the programs.

The 22th Plant Organelle Workshop
   Date and time: March 18 (Wed) (The day before the Meeting), 13:00–18:50
   Venue: Nambu Yoichiro Hall, Graduate School of Science, Osaka University (Toyonaka Campus)
   Representative Organizer: Yoshiki Nishimura (Kyoto University)

   Cellular organelles play key roles in the development, function, homeostasis, and environmental adaptation of plants. This workshop provides an opportunity for plant scientists of various disciplines to exchange latest findings, ideas, and relevant techniques regarding plant organelles, and for communication and discussion. Invited speakers will address topics, including chloroplasts, mitochondria, other cellular organelles, and whole plants from the molecular level to the environmental level.

   This workshop is free to all participants, but they are encouraged to register on our website. People who wish to join the mixer after the talk session should register at our website below by Wednesday, March 11. Beer, soft drinks, and food will be provided at the cost of 4,500 yen per person (4,000 yen for graduate and undergraduate students).
   Contact addresses: Masato Nakai, E-mail: nakai@protein.osaka-u.ac.jp
                    Yusuke Kato, E-mail: ykato@okayama-u.ac.jp
   Web site: http://www.rib.okayama-u.ac.jp/OWS/

5th Workshop on Photosynthetic Bacteria
   Date and time: The day before the Meeting, March 18 (Wed) 12:30–18:00
   Venue: Room U2-312
   Organizers: Dr. Jiro Harada (Kurume University School of Medicine), E-mail: jiro_harada@med.kurume-u.ac.jp
               Dr. Yusuke Tsukatani (Japan Agency for Marine-Earth Science and Technology), E-mail: tsukatani@jamstec.go.jp
               Dr. Chihiro Azai (Ritsumeikan University), E-mail: cazai@fc.ritsumei.ac.jp
Anoxygenic photosynthetic bacteria are now subjects for various fields of studies including biochemistry, molecular biology, structural biology, biophysics, bioorganic chemistry, microbial ecology, etc. This workshop invites speakers talking their latest achievements and provides new insights into studies on anoxygenic photosynthetic bacteria through discussion. Registration fee is free. After the workshop, we will have a banquet (fee: about 4,500 yen). To register the workshop and/or banquet, please fill the Entry Form (https://forms.gle/XRCyjzLysSmBHy2K6) (deadline, 03/06/2020). We are expecting your participation.

♦ The 38th Meeting of the Japanese Society for Young Plant Physiologists
Date and time: Day 1, March 19 (Thur) 18:30–20:00
Venue: Room E
Organizers: Rumi Amano (Kyoto Sangyo University), Tatsuya Nobori (Salk Institute)

This meeting offers young scientists and students the opportunity to exchange information and discuss topics related to research and career development. We invited two speakers to share their own stories with us. No registration required to participate in this meeting. Meal boxes will be provided at the meeting upon request. There will be an after meeting gathering with the speakers and participants. Please register for the meal boxes and/or the gathering at https://forms.gle/2Rc6LcPmK2XckQfB6 by March 11. More details are available on the meeting website (http://www.cc.kyoto-su.ac.jp/~i1659019/wakatenokai.html).

Contact addresses: Rumi Amano: i1659019@cc.kyoto-su.ac.jp
Tatsuya Nobori: tnobori@salk.edu

♦ The 4nd Meeting of Plant Mathematical Modeling
Date and time: Day 1, March 19 (Thur) 18:30–20:00
Venue: Room F
Organizers: Munetaka Sugiyama (University of Tokyo), Hironori Fujita (Astrobiology Center / NIBB), Takaaki Yonekura (University of Tokyo)

This meeting is aimed at gathering together researchers and students interested in mathematical models in plant science regardless of whether they are experimental researchers, theorists, beginners, or experienced, and to exchange information and deepening friendship. It is also aimed at building a community in this research field, and is planned to be held continuously at annual meetings of JSPP and BSJ. This time we will have a short course of computer programming and simulation of simple mathematical models of the reaction-diffusion system with Wolfram Programming Lab (https://lab.open.wolframcloud.com/objects/wpl/GetStarted.nb), a free on-line platform where Mathematica can be used. This meeting is open to all participants. Please feel free to join us with your computer. For more details, please see http://www.nibb.ac.jp/miyakohp/asari/htdocs/?page_id=57

♦ 15th Plant membrane symposium
Date and time: Day 1, March 19 (Thur) 18:40–20:00
Venue: Room G
Organizers (in alphabetic order): Maki KATSUHARA (Okayama University), Izumi MORI (Okayama University), Yoshiyuki MURATA (Okayama University), Yoshiji OKAZAKI (Osaka Medical College), Shingo TAKAGI (Osaka University)

Prof. Tetsuro MIMURA (Former President of JSPP) will provide the talk summarizing his study of plant membrane biology. This meeting is free to all audience and registration is not required. People who wish to join the mixer (Near Kita-senri Station, 15–20 min on foot from the venue, ¥5,000–6,000) are required to register by e-mail to Maki Katsuhara with title “Joining the mixer for 15th plant membrane symposium” until May, 5th (Thur).

Contact address: Maki Katsuhara, kmaki@okayama-u.ac.jp

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Abstract Book
Annual Meeting of JSPP
Mar. 2020 Osaka
2-8. JSPP Committee Meetings

The day before the meeting, Wed, March 18

9:00–17:00 [C1 Bld. C1-111] PCP Editors and Advisory Editorial Board Meeting
PM [C1 Bld. C1-112] Public Relations Committee Meeting
PM [Room H] Directors’ and managers’ Meeting
Late afternoon [Room H] Board of Delegates’ Meeting

Day1, Thur., March 19
Lunch time [C1 Bld. C1-111] JSPP Awards Committee Meeting
Lunch time [C1 Bld. C1-112] GMO Working Group Meeting

Day2, Fri., March 20
Lunch time [C1 Bld. C1-111] Gender Equality Committee Meeting
Lunch time [C1 Bld. C1-112] Gathering of Science Advisors and Public Relations Committee Members

Day3, Sat., March 21
Lunch time [C1 Bld. C1-111] International Committee Meeting
Late afternoon [C1 Bld. C1-111] Annual Meeting Committee Meeting
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**Other**

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**Day 1, Thurs., March 19**

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**Abstract Book**

**Annual Meeting of JSPP**

**Mar. 2020 Osaka**
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**Day 3, Sat., March 21**

**Time Table**

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**Symposium S14**

Higher-order functions in plant endomembrane system
Luncheon Seminar
Research Presentation by High School Students Discussion

**Symposium S15**

From plant physiology to biotechnology
Career Path Seminar on Gender Equality
Research Presentation by High School Students Discussion, Award ceremony

**Poster presentation (Second half)**

Research Presentation by High School Students
Poster presentation (First half)
Research Presentation by High School Students
Poster presentation (Second half)

**Questions and answers**

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Day 2, PM

Fri., March 20, 16:15–18:00  Room W

JSPP Awards Ceremony and Award Lectures

Awards Ceremony
JSPP Award, JSPP Young Investigator Awards, PCP Award, PCP Top Cited Paper Award, and JSPP Honorary Membership Award

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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</thead>
<tbody>
<tr>
<td>16:15</td>
<td>Reports on Selection Process Chairpersons of Award Committee</td>
</tr>
<tr>
<td>16:30</td>
<td>JSPP Award, JSPP Young Investigator Awards, PCP Award and PCP Top Cited Paper Award JSPP President</td>
</tr>
<tr>
<td>16:40</td>
<td>Honorary Membership Award   Masahiro Sugiura (Nagoya Univ.)</td>
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<td>Mitsuo Nishimura (Kyushu Univ.)</td>
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Award Lectures

Language: Japanese

<table>
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<tr>
<th>Time</th>
<th>Lecture</th>
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<tbody>
<tr>
<td>16:50</td>
<td>A01 JSPP Award “Development of an infrastructure for Lotus japonicas and studies on systemic regulation of symbiosis” Masayoshi Kawaguchi (National Institute for Basic Biology.)</td>
</tr>
<tr>
<td>17:10</td>
<td>A02 JSPP Young Investigator Award “Plant responses to complex natural environments captured by field transcriptomics” Atsushi J. Nagano (Fac. Agr., Ryukoku Univ.)</td>
</tr>
<tr>
<td>17:25</td>
<td>A03 JSPP Young Investigator Award “New insights into the biology of stomatal guard cells” Juntaro Negi (Dept. Biol., Fac. Sci., Kyushu Univ.)</td>
</tr>
</tbody>
</table>
Day 1, AM

Symposium 01

Thur., March 19, 9:30–12:25  Room W

Japan-Taiwan Joint Symposium:
Front lines of post-transcriptional gene regulation in environmental responses

Language: English

Organizers: Misato Ohtani (The University of Tokyo, Japan)
Shih-Long Tu (Academia Sinica, Taiwan)

09:30 Opening remarks

09:35 S01-1 Crosstalk between light signaling and pre-mRNA splicing
Chueh-Ju Shih1,2, Bou-Yun Lin1,2, Hsin-Yu Hsieh1, Shih-Long Tu1,2,4 (1Institute of Plant and Microbial Biology, Academia Sinica, Taiwan, 2Molecular and Biological Agricultural Sciences Program, Taiwan International Graduate Program, Chung-Hsing University and Academia Sinica, Taiwan, 3Graduate Institute of Biotechnology, National Chung-Hsing University, Taiwan, 4Biotechnology Center, National Chung-Hsing University, Taiwan)

09:50 S01-2 snRNP biogenesis-mediated environmental adaptation in plants
Misato Ohtani1,2,3 (1Grad. Sch. Front. Sci., Univ. Tokyo, Japan, 2Div. Biol. Sci., NAIST, 3CSRS, RIKEN, Japan)

10:10 S01-3 Widespread exon junction complex footprints in the RNA degradome mark mRNA degradation before steady-state translation
Ho-Ming Chen (Agricultural Biotechnology Research Center, Academia Sinica, Taiwan)

10:30 S01-4 Boron-dependent translation of a borate transporter BOR1 and its significance for adaptation to boron nutrient availability
Kyoko Miwa (Grad. Sch. Environ. Sci., Hokkaido Univ., Japan)

11:10 S01-5 Lost in translation? The determinants of the translational control and their impacts on plant gene expression
Ya-Ru Li, Ming-Jung Liu (Agricultural Biotechnology Research Center (ABRC), Academia Sinica, Taiwan)

11:30 S01-6 Reproductive system via microRNA producing secondary siRNAs in a photoperiodic environment
Reina Komiya1,2 (1Okinawa Institute of Science and Technology Graduate University (OIST), Japan, 2JST, PRESTO, Japan)

12:05 Discussion
Discussion leader: Tzyy-Jen Chiou (Agricultural Biotechnology Research Center, Academia Sinica, Taiwan)

12:20 Closing remarks
Towards a unified understanding of local/systemic signaling and beyond in plant wound and immune responses

Language: English

Organizers: Masatsugu Toyota (Dept. Biochem. & Mol. Biol., Saitama Univ.)
Shigeyuki Betsuyaku (Fac. Life & Sci., Univ. Tsukuba)

Chairperson: Masatsugu Toyota

09:30 Opening remarks
Miki Matoba (Oxford Univ. Press)

09:32 Opening remarks
Masatsugu Toyota (Dept. Biochem. & Mol. Biol., Saitama Univ.)

09:35 S02-1 Spatiotemporal dynamics of the salicylate and jasmonate signaling pathways regulating plant immune and wound responses
Shigeyuki Betsuyaku¹,² (Fac. Life & Env. Sci., Univ. Tsukuba, MiCS, Univ. Tsukuba)

10:00 S02-2 Spatial coordination of plant immunity at the organism level
Kenichi Tsuda¹,² (Huazhong Agricultural University, Max Planck Institute for Plant Breeding Research)

10:25 S02-3 Signal exchanges between parasitic plants and host plants to establish plant-plant connection
Satoko Yoshida (NAIST, Bioscience)

Chairperson: Shigeyuki Betsuyaku

10:50 S02-4 Rain induces a novel layer of plant immunity through trichome as a mechano-sensor

11:15 S02-5 How plants perceive airborne signals in the shape of volatile organic compounds
Kenji Matsui (Grad. Sch. of Sci. & Tech. for Innov., Yamaguchi Univ.)

11:40 S02-6 Calcium-based intra- and inter-plant communication system
Masatsugu Toyota (Dept. Biochem. & Mol. Biol., Saitama Univ.)

12:05 Closing remarks
Shigeyuki Betsuyaku (Fac. Life & Sci., Univ. Tsukuba)
### Symposium 03

**Thur., March 19, 9:30–12:30  Room Y**

**Molecular basis of long-distance signaling in plants**

**Language:** English

**Organizers:** Hitoshi Sakakibara (Nagoya Univ.)
Koh Aoki (Osaka Pref. Univ.)

- **Chairperson:** Koh Aoki

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenter(s)</th>
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<tr>
<td>09:30</td>
<td>Opening</td>
<td>Opening remarks</td>
<td>Hitoshi Sakakibara</td>
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<tr>
<td>09:35</td>
<td>S03-1</td>
<td>Importance of cytokinin systemic transport for fine-tuning of plant growth</td>
<td>Hitoshi Sakakibara (Grad. Sch. Bioagric. Sci., Nagoya Univ.)</td>
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<td>10:00</td>
<td>S03-2</td>
<td>Sieve Tube Structure Function Relations</td>
<td>Michael Knoblauch, Alex Howell, Winfried Peters, Britteny Wager, Yan Liu, Grayson Ostermeyer (Washington State University)</td>
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<tr>
<td>10:30</td>
<td>S03-3</td>
<td>Shoot-root communication underlying the control of nitrogen homeostasis in plants</td>
<td>Yoshikatsu Matsubayashi (Grad. Sch. Sci., Nagoya Univ.)</td>
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<tr>
<td>11:00</td>
<td>S03-4</td>
<td>Toward understanding the molecular mechanism of florigen transport in <em>Arabidopsis</em> shoot apex</td>
<td>Mitsutomo Abe (Grad. Sch. Arts and Sci., Univ. Tokyo)</td>
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- **Chairperson:** Hitoshi Sakakibara

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<td>11:20</td>
<td>S03-5</td>
<td>Study on mobile mRNAs in plants</td>
<td>Michitaka Notaguchi (Bioscience and Biotechnology Center, Nagoya University)</td>
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<td>11:50</td>
<td>S03-6</td>
<td>Visualizing and evaluating long-distance phloem transport of photoassimilates by the PETIS and $^{13}$CO$_2$ tracer</td>
<td>Yong-Gen Yin (Takasaki Advanced Radiation Research Institute, QST)</td>
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<td>12:10</td>
<td>S03-7</td>
<td>Differential regulation of RNA unloading from phloem</td>
<td>Koh Aoki, Subhankar Bera, Kohki Shimizu (Grad. Sch. Life Environ. Sci., Osaka Pref. Univ.)</td>
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<td>12:25</td>
<td>Closing</td>
<td>Closing remarks</td>
<td>Koh Aoki</td>
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Day 1, AM  

Symposium 04

Thur., March 19, 9:30–12:30  Room Z

Molecular mechanism of cell proliferation and reprogramming  
— the chromatin perspective and beyond —

Language: English

Organizers: Keiko Sugimoto (RIKEN CSRS)  
Sachihiro Matsunaga (Tokyo University of Science)

● Chairperson: Sachihiro Matsunaga

09:30  
S04-1  Factors linking cell proliferation, genome replication and chromatin dynamics  
Crisanto Gutierrez (Centro de Biologia Molecular Severo Ochoa, CSIC)

10:10  
S04-2  Single-cell dissection of regenerating plant roots  
Kenneth David Birnbaum\textsuperscript{1,2}, Bruno Guillotin\textsuperscript{1,2} (\textsuperscript{1}New York University, Center for Genomics and Systems Biology, \textsuperscript{2}New York University, Department of Biology)

10:50  
S04-3  Healing the damage: stress-induced cellular reprogramming in plants  
Keiko Sugimoto (RIKEN CSRS)

● Chairperson: Keiko Sugimoto

11:20  
S04-4  Epigenetic priming for plant regeneration  
Sachihiro Matsunaga\textsuperscript{1}, Mio Shibuta\textsuperscript{1}, Megumi Matsuoka\textsuperscript{1}, Soichi Inagaki\textsuperscript{2}, Yayoi Inui\textsuperscript{1}, Takamasa Suzuki\textsuperscript{2}, Kaoru Sugimoto\textsuperscript{1}, Tetsuji Kakutani\textsuperscript{2}, Takuya Sakamoto\textsuperscript{1} (\textsuperscript{1}Dept. Biol. Appl. Sci., Fac. Sci. Tech., Tokyo Univ. Sci., \textsuperscript{2}Dept. Biol. Sci., Grad. Sch. Biol. Sci., Univ. Tokyo, \textsuperscript{3}Dept. Biol. Chem., Chubu Univ.)

11:50  
S04-5  Building beauty: the role of cell division and differentiation during petal patterning  
Edwige Moyroud (The Sainsbury laboratory, University of Cambridge)

Co-sponsored by Scientific Research on Innovative Areas “Integrative system of autonomous environmental signal recognition and memorization for plant plasticity”
## Symposium 05

**Thur., March 19, 13:45–16:40  Room X**

### The highly specialized plant organs and cells  
— Its function and evolution —

**Language:** English

**Organizers:**  
Makoto Shirakawa (NAIST)  
Naoki Takahashi (NAIST)

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<tr>
<td>13:45</td>
<td>Opening remarks</td>
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| 13:50  | **S05-1** Dissection of the molecular mechanism of root hair morphogenesis in Arabidopsis  
Masa H. Sato¹ (¹Grad. Sch. of Life and Environ. Sci., Kyoto Pref. Univ., ²Kyoto Prefectural University) |
| 14:10  | **S05-2** Microtubule dynamics regulated by a plant-specific protein family, CORD  
Takema Sasaki¹,³, Hiroo Fukuda², Yoshihisa Oda¹,³ (¹Dept. Gene Func. Phen., NIG, ²IFI, Univ. Tokyo, ³Dept. Genet., SOKENDAI) |
| 14:30  | **S05-3** Transcriptional Atlas of Idioblast Myrosin Cells; A Factory for the Mustard Oil Bomb  
Makoto Shirakawa, Toshiro Ito (Grad. Sch. Sci. Tec., NAIST) |
| 14:50  | **S05-4** Endodermal cell differentiation and apoplastic barrier formation  
Takehiro Kamiya (Grad. Sch. Agr. Life Sci., Univ. Tokyo) |
| 15:10  | Break                        |
| 15:15  | **S05-5** Regulatory mechanism of stem cell maintenance in Arabidopsis roots  
Naoki Takahashi, Masaaki Umeda (Grad. Sch. Sci. Tec., NAIST) |
| 15:35  | **S05-6** Root cap morphogenesis and function in the immune system  
Shunsuke Miyashima¹, Kei Hiruma¹,², Keiji Nakajima¹ (¹Grad. Sch. Sci. Tec., NAIST, ²JST PRESTO) |
| 15:55  | **S05-7** Calcium ion mediated memory system in the carnivorous plant Dionaea muscipula  
Hiraku Suda¹,³, Mitsuyasu Hasebe¹,² (¹Div. Evol. Biol., NIBB, ²Sch. Sci., SOKENDAI) |
| 16:15  | **S05-8** Invention and diversity of stomata in land plants  
Tomoo Shimada (Grad. Sch. Sci., Kyoto Univ.) |
| 16:35  | General Discussion           |
Day 1, PM  Symposium 06

Thur., March 19, 13:45–16:45  Room Y

Frontiers of research on embryo and endosperm development: Induction of artificial apomixis

Language: English

Organizers: Miho Ikeda (Saitama Univ)  
Masaru Ohme-Takagi (Saitama Univ)

13:45  
opening remarks  
Masaru Ohme-Takagi

Chairperson: Hironori Takasaki

13:50  
S06-1  
Shedding light on sporogenesis in Arabidopsis  
Arp Schnittger (University of Hamburg)

14:20  
S06-2  
Initiation of zygotic development and fertilization-independent egg cell division in rice  
Takashi Okamoto (Dept. Biol. Sci., Tokyo Met. Univ.)

14:50  
S06-3  
Molecular mechanisms of endosperm initiation in flowering plants  
Duarte Figueiredo (University of Potsdam)

Chairperson: Miho Ikeda

15:20  
S06-4  
Identification of the lifeline gateway within a plant ovule, required for transferring important substances to seeds  
Ryushiro Kasahara (Fujian Agriculture and Forestry University)

15:50  
S06-5  
Regulatory mechanisms of nutrient supply necessary for embryogenesis  
Hironori Takasaki\textsuperscript{1}, Miho Ikeda\textsuperscript{2}, Zhang Yilin\textsuperscript{1}, Shingo Sakamoto\textsuperscript{2}, Daisuke Maruyama\textsuperscript{3}, Nobutaka Mitsuda\textsuperscript{2}, Tetsu Kinoshita\textsuperscript{1}, Masaru Ohme-Takagi\textsuperscript{1,2} (\textsuperscript{1}Graduate School of Science and Engineering, Saitama University, \textsuperscript{2}Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology, \textsuperscript{3}Kihara Institute for Biological Research, Yokohama City University)

16:13  
S06-6  
Role of imprinted genes in relation to sexual and asexual endosperm development in rice  
Kaoru Tonosaki\textsuperscript{1}, Tetsu Kinoshita\textsuperscript{2} (\textsuperscript{1}Faculty of Agr., Iwate Univ., \textsuperscript{2}KIBR, Yokohama City Univ.)

16:43  
Closing remarks  
Miho Ikeda

Co-sponsored by The Advanced Low Carbon Technology Research and Development Program (ALCA)  
MEXT KAKENHI, Grant-in-Aid for Scientific Research on Innovative Areas—The Birth of New Plant Species—
Secret life of chloroplasts: from development to degradation

Language: Japanese

Organizers: Juntaro Negi (Kyushu Univ.)
Yoshiki Nishimura (Kyoto Univ.)

13:45 Opening remarks
Juntaro Negi

Chairperson: Juntaro Negi

13:50 S07-1 The dynamic division cycle of chloroplast nucleoids
Yoshiki Nishimura¹, Yusuke Kobayashi¹,², Osami Misumi¹ (¹Lab. of Plant Mol. Genet., Dep. of Bot., Kyoto Univ., ²Grad. Sch. of Sci. and Tech., Ibaraki Univ., ³Grad. Sch. of Sci. and Tech. for Innovation, Yamaguchi Univ.)

14:10 S07-2 Chloroplast biogenesis starts with lipids
Koichi Kobayashi (Fac. Arts Sci., Osaka Pref. Univ.)

14:30 S07-3 Protective response of photosynthesis
Ryutaro Tokutsu (NIBB)

14:50 S07-4 Chloroplast peptide exporter and organellar homeostasis
Kenji Nishimura (Sch. Sci. and Tech., Kwansei Gakuin Univ.)

Chairperson: Yoshiki Nishimura

15:20 S07-5 A new perspective on the mechanism of chloroplast development in guard cells
Juntaro Negi (Dept. Biol., Fac. Sci., Kyushu Univ.)

15:40 S07-6 A novel regulation in chloroplast movements
Eiji Gotoh (Fac. Agr., Kyushu Univ)

16:00 S07-7 Fate of chloroplasts: the degradation process by autophagy
Sakuya Nakamura¹, Masanori Izumi¹,² (¹CSRS, Riken, ²PRESTO, JST)

16:20 S07-8 Plastidology Begins: A new horizon for evolutionary biology after the flood of genome sequence information
Shinichiro Maruyama (Grad. Sch. Life Sci., Tohoku Univ.)

16:40 Closing remarks
Yoshiki Nishimura

Co-sponsored by New photosynthesis
# Symposium 08

**Day 2, AM**

**Fri., March 20, 8:45–11:35  Room X**

**Frontiers of growth and development in grasses explored by young researchers**

*Language: Japanese*

**Organizers:** Katsutoshi Tsuda (NIG)  
Wakana Tanaka (Hiroshima Univ.)

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**Chairperson: Wakana Tanaka**

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<th>Authors</th>
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<td>08:45</td>
<td>Opening</td>
<td>Opening remarks</td>
<td>Katsutoshi Tsuda</td>
</tr>
<tr>
<td>08:50</td>
<td>S08-1</td>
<td>Post-translational regulation of a KNOX transcription factor in rice</td>
<td>Katsutoshi Tsuda&lt;sup&gt;1,2&lt;/sup&gt;, Ken-ichi Nonomura&lt;sup&gt;1,2&lt;/sup&gt; (&lt;sup&gt;1&lt;/sup&gt;National Institute of Genetics, Plant Cytogenetics Lab, &lt;sup&gt;2&lt;/sup&gt;Graduate University for Advanced Studies)</td>
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<tr>
<td>09:15</td>
<td>S08-2</td>
<td>Functional analysis and genetic interaction among the genes involved in the plastochron regulation of rice</td>
<td>Manaki Mimura (National Institute of Genetics, Plant Cytogenetics)</td>
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<tr>
<td>09:40</td>
<td>S08-3</td>
<td>Antagonistic mechanism of internode elongation in rice</td>
<td>Keisuke Nagai, Motoyuki Ashikari (Nagoya University, Bioscience and biotechnology center, Plant Gene Function)</td>
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<tr>
<td>10:05</td>
<td>Break</td>
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<tr>
<td>10:15</td>
<td>S08-4</td>
<td>Genetic mechanism underlying axillary meristem formation in rice</td>
<td>Wakana Tanaka&lt;sup&gt;1,2&lt;/sup&gt;, Hiro-Yuki Hirano&lt;sup&gt;2&lt;/sup&gt; (&lt;sup&gt;1&lt;/sup&gt;Grad. Sch. Integr. Sci. Life, Hiroshima Univ., &lt;sup&gt;2&lt;/sup&gt;Grad. Sch. Sci., Univ. Tokyo)</td>
</tr>
<tr>
<td>10:40</td>
<td>S08-5</td>
<td>Evolution of the homeobox genes controlling grain number in Triticeae</td>
<td>Shun Sakuma (Faculty of Agriculture, Tottori University)</td>
</tr>
<tr>
<td>11:05</td>
<td>S08-6</td>
<td>Environment-Dependent Root Developmental Processes Common in Various Poaceae Species</td>
<td>Takaki Yamauchi&lt;sup&gt;1,2&lt;/sup&gt;, Mikio Nakazono&lt;sup&gt;3&lt;/sup&gt;, Nobuhiro Tsutsumi&lt;sup&gt;2&lt;/sup&gt; (&lt;sup&gt;1&lt;/sup&gt;JST PRESTO, &lt;sup&gt;2&lt;/sup&gt;Grad. Sch. Agric. Life Sci., Univ. Tokyo, &lt;sup&gt;3&lt;/sup&gt;Grad. Sch. Bioagric. Sci., Nagoya Univ.)</td>
</tr>
<tr>
<td>11:30</td>
<td>Closing</td>
<td>Closing remarks</td>
<td>Wakana Tanaka</td>
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</table>
### Symposium 09

**Day 2, AM**

**Fri., March 20, 8:45–11:41  Room Y**

**Two sides of auxin actions on stem cells**

*Language: Japanese*

**Organizers:** Ryuichi Nishihama (Grad. Sch. Biostudies, Kyoto Univ.)
Masaki Ishikawa (NIBB)

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<th>Time</th>
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<tr>
<td>08:45</td>
<td>Opening</td>
<td>Opening remarks</td>
<td>Ryuichi Nishihama</td>
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<tr>
<td>08:50</td>
<td>S09-1</td>
<td>Two sides of auxin actions in lateral root formation</td>
<td>Hidehiro Fukaki (Grad. Sch. Sci., Kobe Univ.)</td>
</tr>
<tr>
<td>09:13</td>
<td>S09-2</td>
<td>Ambivalence of auxin functions in floral meristem determinacy</td>
<td>Toshiro Ito (Grad. Sch. Sci. Tech., NAIST)</td>
</tr>
<tr>
<td>09:36</td>
<td>S09-3</td>
<td>Induction of Somatic Embryogenesis, Auxin and Transcription Factors</td>
<td>Miho Ikeda, Tsubasa Yamagata, Jun Nakayama, Masaru Ohme-Takagi (Grad. Sch. Sci., Saitama Univ.)</td>
</tr>
<tr>
<td>10:22</td>
<td>S09-5</td>
<td>Relationship between stem cell-ness and low auxin-responsiveness in <em>Marchantia polymorpha</em></td>
<td>Ryuichi Nishihama, Takayuki Kohchi (Grad. Sch. Biostudies, Kyoto Univ.)</td>
</tr>
<tr>
<td>10:45</td>
<td>S09-6</td>
<td>Role of auxin in stem cell formation in <em>Physcomitrella patens</em></td>
<td>Masaki Ishikawa&lt;sup&gt;1,2&lt;/sup&gt;, Tsuyoshi Aoyama&lt;sup&gt;1&lt;/sup&gt;, Mitsuyasu Hasebe&lt;sup&gt;1,2&lt;/sup&gt; ('Div. Evo. Biol., NIBB, 'Sch. Life Sci., SOKENDAI)</td>
</tr>
<tr>
<td>11:08</td>
<td>S09-7</td>
<td>Maintenance of genome integrity through controlling chromatin structure</td>
<td>Shiori S Aki, Masaaki Umeda (Grad. Sch. Sci. Tech., NAIST)</td>
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<tr>
<td>11:31</td>
<td>General Discussion</td>
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**Co-sponsored by Scientific Research on Innovative Areas, a MEXT Grant-in-Aid Project for FY2017-2021**

"Principles of pluripotent stem cells underlying plant vitality"
Day 2, AM

Symposium 10

Fri., March 20, 9:00–11:40  Room Z

Understanding plant developmental processes along spatiotemporal axes

Language: English

Organizers: Tatsuaki Goh (NAIST)
            Akane Kubota (NAIST)

09:00 Opening remarks
Tatsuaki Goh

Chairperson: Akane Kubota

09:05  S10-1 Periodic cellular behaviors during root cap maturation and detachment
       Tatsuaki Goh, Kaoru Sakamoto, Shunsuke Miyashima, Keiji Nakajima (Grad. Sch. Sci. Tech., NAIST)

09:30  S10-2 Auxin-dependent root gravitropism in *A. thaliana* and its potential contribution to the local adaptation
       Takehiko Ogura¹, Christian Goeschl², Daniele Filiault², Santosh Satbhai², Wolfgang Busch¹
       (¹SALK Institute for Biological Studies, ²GMI-Gregor Mendel Institute)

09:55  S10-3 Distribution of two phospholipids specifies a dynamic plasma membrane domain for re-orientation of root hair tip growth
       Hiromasa Shikata¹,², Naoki Yanagisawa¹, Yoshikatsu Sato³, Tetsuya Higashiyma³,⁴, Claus Schwechheimer⁵ (¹Div. of Plant Environmental Response, NIBB, ²PRESTO, JST, ³ITbM, Nagoya Univ., ⁴Grad. Sch. Sci., The Univ. of Tokyo, ⁵Chair of Plant Systems Biology, Tech. Univ. of Munich)

Chairperson: Tatsuaki Goh

10:20  S10-4 Morphology, dynamics, and function of unique membrane surrounding sperm plasma membrane
       Daisuke Maruyama¹, Rie Izumi¹, Hidenori Takeuchi², Tetsuya Higashiyma²,³, Tetsu Kinoshita¹, Kazuki Motomura⁴ (¹Kihara Inst. Biol. Res., Yokohama City Univ., ²ITbM, Nagoya Univ., ³Grad. Sch. Sci., The Univ. of Tokyo, ⁴Ritsumeikan Glob. Innov. Res. Org., Ritsumeikan University)

10:45  S10-5 Origination of the circadian clock system in stem cells regulates cell differentiation
       Kotaro Torii¹, Keisuke Inoue¹, Takashi Araki¹, Motomu Endo² (¹Grad. Sch. Biostudies, Univ. Kyoto, ²NAIST)

11:10  S10-6 Quantitative Live imaging of plant organogenesis
       Daniel Kierzkowski¹, Constance Le Gloanec¹, Jerome Burkiewicz², Sylvia Silveira¹, Hana Bertand¹, Richard Smith², Anne-Lise Routier-Kierzkowska¹ (¹IRBV, University of Montreal, ²John Innes Center, Norwich Research Park)

11:35 Closing remarks
Akane Kubota

Sponsored by Grant-in-Aid for Scientific Research on Innovative Areas
  'Periodicity and its Modulation in Plants'
Day 2, PM  Symposium 11

Fri., March 20, 13:00–16:00  Room X

Development and application of plant manipulation strategy: towards the design of optimized crop production

Language: Japanese

Organizers: Masanori Izumi (RIKEN)
Ayako Yokoi (NARO)
Kei Hiruma (NAIST)

Chairperson: Kei Hiruma

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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
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</table>
| 13:00 | S11-1         | Opening remarks
Chloroplast degradation processes as a manipulation target to improve photosynthesis
Masanori Izumi\(^1,2\) (CSRS, RIKEN, \(^2\)PRESTO, JST)

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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
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| 13:25 | S11-2         | Development of novel chemical tools for uncoupling of plant hormone bioactivities
Yousuke Takaoka\(^1,2\), Mana Iwahashi\(^1\), Andrea Chini\(^1\), Hiroaki Saito\(^4\), Yasuhiro Ishimaru\(^1\), Syusuke Egoshi\(^1\), Nobuki Kato\(^1\), Maho Tanaka\(^5\), Khurram Bashir\(^5\), Motoaki Seki\(^5\), Roberto Solano\(^5\), Minoru Ueda\(^5\)\(^6\) (Grad. Sch. Sci., Tohoku Univ., \(^2\)JST-PREST, \(^3\)Spanish National Center for Biotechnology, \(^4\)BDR, RIKEN, \(^5\)CSRS, RIKEN, \(^6\)Grad. Sch. Life Sci., Tohoku Univ.)

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<th>Time</th>
<th>Session</th>
<th>Title</th>
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| 13:50 | S11-3         | Precise genome editing via homologous recombination in plants
Ayako Nishizawa-Yokoi\(^1,2\), Seiichi Toki\(^1,3\) (Inst. Agrobiol. Sci., NARO, \(^2\)PRESTO, JST, \(^3\)Kihara Inst. Biol. Res., Yokohama City Univ.)

Chairperson: Ayako Yokoi

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<th>Time</th>
<th>Session</th>
<th>Title</th>
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| 14:15 | S11-4         | Improving the photosynthetic rate under fluctuating light environment in rice (Oryza sativa L.)
Yu Tanaka\(^1,2\) (Graduate School of Agriculture, Kyoto University, \(^2\)JST PRESTO)

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<th>Time</th>
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</table>
| 14:40 | S11-5         | Exploration of molecules involved in pollen-pistil recognition for upgrading breeding programs
Sota Fujii\(^1,2\) (Grad Sch Agric Life Sci, University of Tokyo, \(^2\)JST PRESTO)

Chairperson: Masanori Izumi

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<th>Time</th>
<th>Session</th>
<th>Title</th>
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| 15:05 | S11-6         | Understanding mechanisms of plant growth promotion provided by a root-associated bacterial and fungal community
Kei Hiruma\(^1,2\) (NAIST. Bio, \(^2\)JST PRESTO)

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<th>Time</th>
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</table>
| 15:30 | S11-7         | Are microbiomes controllable? Frontiers in science of interactions
Hirokazu Toju\(^1,2\) (Center for Ecological Research, Kyoto University, \(^2\)PRESTO, JST)

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<th>Time</th>
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<td>15:55</td>
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<td>Closing remarks</td>
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JST PRESTO Creation of next-generation fundamental technologies for the control of biological phenomena in field-grown plants
Day 2, PM

Symposium 12

Fri., March 20, 13:00–16:00  Room Y

Dynamic photosynthetic responses to fluctuating light

Language: English

Organizer: Ichiro Terashima (Science, U. Tokyo)

Chairperson: Ichiro Terashima

13:00 S12-1 NPQ: the mechanism and effectiveness

Alexander Ruban (School of Biological and Chemical Sciences, Queen Mary University of London)

13:30 S12-2 The role of thylakoid proton antiport via KEA3 in the regulation of photosynthesis

Ute Armbruster (MPI of Molecular Plant Physiology)

14:00 S12-3 Roles of far-red light in efficient photosynthesis in fluctuating light


14:30 S12-4 Evaluation of functional LHCI size and a relationship between LHCI and PSI photoinhibition in rice leaves

Daisuke Takagi¹, Kentaro Ifuku², Amane Makino¹ (¹Graduate School of Agricultural Science, Tohoku University, ²Graduate School of Biostudies, Kyoto University)

15:00 S12-5 Dynamic photosynthesis and the environment: [CO₂], salinity and humidity

Elias Kaiser (Horticulture and Product Physiology, Wageningen University)

15:30 S12-6 Alterations to leaf transcriptome and proteome of Arabidopsis plants growing under fluctuating light

Shizue Matsubara¹, Stefan Niedermaier¹, Anthony Bolger², Vladimir Benes³, Bjoern Usadel¹,², Eva Farre³, Pitter Huesgen¹, Trang Schneider¹,⁵ (¹Research Centre Juelich, ²RWTH Aachen University, ³EMBL Heidelberg, ⁴Michigan State University, ⁵Heinrich Heine University Duesseldorf)

Co-sponsored by Grant-in-Aid for Scientific Research on Innovative Areas “New Photosynthesis”
Day 2, PM

Symposium 13

Fri., March 20, 13:00–16:00 Room Z

New Trends in Plant Chemical Research by the Interconnection between Chemical Biology and Metabolite Chemistry

Language: Japanese

Organizers: Takeshi Nakano (Kyoto Univ.)
            Masami Hirai (RIKEN)

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<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker(s)</th>
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<tr>
<td>13:00</td>
<td>Opening remarks</td>
<td>Takeshi Nakano</td>
</tr>
<tr>
<td>13:10</td>
<td>S13-1 Metabolomic And Molecular Genetic Approaches for Understanding of Plant Metabolic Physiology</td>
<td>Masami Yokota Hirai (RIKEN CSRS)</td>
</tr>
<tr>
<td>13:35</td>
<td>S13-2 Identifications of structures and functions of widely spreading acylspermidine</td>
<td>Tadao Asami (Grad Sch Agr Life Sci, U Tokyo)</td>
</tr>
<tr>
<td>14:00</td>
<td>S13-3 Molecular Basis of Metabolic and Functional Diversity of Triterpenoid Saponins in Plants</td>
<td>Hikaru Seki (Grad. Sch. Eng., Osaka Univ.)</td>
</tr>
<tr>
<td>14:25</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>14:35</td>
<td>S13-4 Chemical biology to reveal molecular mechanisms of plant growth</td>
<td>Takeshi Nakano (Grad. Sch. Biostudies., Kyoto Univ.)</td>
</tr>
<tr>
<td>15:00</td>
<td>S13-5 Plant chemicals shape the rhizosphere</td>
<td>Akifumi Sugiyama, Masaru Nakayasu, Kazufumi Yazaki (RISH, Kyoto Univ.)</td>
</tr>
<tr>
<td>15:25</td>
<td>S13-6 Construction of a reference to unknown metabolites for the discovery of unused plant derived specialized metabolites</td>
<td>Nozomu Sakurai (National Institute of Genetics, Bioinformation &amp; DDBJ Center)</td>
</tr>
<tr>
<td>15:50</td>
<td>General Discussion</td>
<td>Masami Hirai</td>
</tr>
</tbody>
</table>
### Higher-order functions in plant endomembrane system

**Language:** Japanese

**Organizers:** Tomohiro Uemura (Ochanomizu University)
Erika Isono (University of Konstanz)

- **Chairperson:** Erika Isono

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<tr>
<td>08:45</td>
<td>Opening</td>
<td>Opening remarks</td>
<td>Tomohiro Uemura</td>
</tr>
<tr>
<td>08:50</td>
<td>S14-1</td>
<td>Biological significance of the ER morphogenesis in plants</td>
<td>Haruko Ueda, Ikuko Hara-Nishimura (Fac. Sci. Engin., Konan Univ.)</td>
</tr>
<tr>
<td>09:10</td>
<td>S14-2</td>
<td>A Golgi-released subpopulation of the TGN mediates constitutive and pathogen-inducible protein secretion in Arabidopsis</td>
<td>Tomohiro Uemura (Graduate School of Humanities and Sciences, Ochanomizu University)</td>
</tr>
<tr>
<td>09:30</td>
<td>S14-3</td>
<td>Organelle dynamics and membrane trafficking during spermatogenesis in Marchantia polymorpha</td>
<td>Takashi Ueda(^1,2) (National Institute for Basic Biology, (^2)SOKENDAI)</td>
</tr>
<tr>
<td>09:50</td>
<td>S14-4</td>
<td>Cytoskeleton dynamics for polarized cell wall deposition</td>
<td>Yoshihisa Oda(^1,2) (National Institute of Genetics, (^2)SOKENDAI)</td>
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- **Chairperson:** Tomohiro Uemura

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<tr>
<td>10:10</td>
<td>S14-5</td>
<td>Endosomal transport processes and autophagy</td>
<td>Erika Isono (University of Konstanz (Germany))</td>
</tr>
<tr>
<td>10:30</td>
<td>S14-6</td>
<td>Developmental regulation of plant development by TGN-localized trafficking components</td>
<td>Hirokazu Tanaka(^1), Yuki Matsuura(^2), Kosuke Ogita(^1), Narumi Fukasawa(^1), Arisa Ushiro(^1), Tatsuo Kakimoto(^2) ((^1)Sch. Agr., Meiji Univ., (^2)Grad. Sch. Sci., Osaka Univ.)</td>
</tr>
<tr>
<td>10:50</td>
<td>S14-7</td>
<td>Endomembrane system for polar localization and degradation of boric acid transport proteins</td>
<td>Junpei Takano (Osaka Pref. Univ.)</td>
</tr>
<tr>
<td>11:10</td>
<td>S14-8</td>
<td>Ubiquitylation on membrane trafficking component involved in plant adaptation to environmental stresses</td>
<td>Takeo Sato, Yoko Hasegawa, Yongming Luo, Junji Yamaguchi (Fac. Sci. and Grad. Sch. Life Sci., Hokkaido Univ.)</td>
</tr>
<tr>
<td>11:30</td>
<td>Closing</td>
<td>Closing remarks</td>
<td>Erika Isono</td>
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Day 3, AM

Symposium 15

Sat., March 21, 8:45–11:45  Room Z

From plant physiology to biotechnology

Language: Japanese

Organizers: Atsushi Okazawa (Grad. Sch. Life Environ. Sci., Osaka Pref. Univ.)
Hiroyuki Kajiura (ICBiotech, Osaka Univ.)

08:45  Opening remarks
Atsushi Okazawa

- Chairperson: Hiroyuki Kajiura

08:50  S15-1  UV-B response analysis of plants toward production of useful metabolites by LED
Atsushi Okazawa (Grad. Sch. Life Environ. Sci., Osaka Pref. Univ.)

09:00  Break

- Chairperson: Atsushi Okazawa

09:20  S15-2  Utilization of cyanobacterial light-inducible switch for metabolic engineering
Yoshihiro Toya, Sebastian Tommi Tandar, Sachie Senoo, Hiroshi Shimizu (Dept. Bioinfo.
Eng., Grad. Sch. IST, Osaka Univ)

09:50  S15-3  Elucidation of molecular mechanism of natural rubber biosynthesis offers a new perspective on
next generation plant biotechnology
Seiji Takahashi (Grad. Sch. Eng., Tohoku Univ.)

10:20  Break

- Chairperson: Atsushi Okazawa

10:30  S15-4  Elucidation of the accumulation mechanisms and the functions of plant-derived high molecular
weight biopolymers
Hiroyuki Kajiura (ICBiotech, Osaka University)

11:00  S15-5  Development of a high expression system for foreign genes based on knowledge obtained from
translational state analysis of endogenous mRNA
Ko Kato, Shotaro Yamasaki (Grad. Sch. Sci. Tech., NAIST)

- Chairpersons: Atsushi Okazawa, Hiroyuki Kajiura

11:30  General discussion
Day 1, PM Workshop

Thur., March 19, 13:45–16:45 Room B

The 16th Database Workshop

Language: Japanese

Organizer: Kentaro Yano (Sch. of Agri., Meiji Univ.)

Chairperson: Kentaro Yano

13:45  D01-1 The 16th Database workshop: The current status of bio-databases in plant science
       Toshiharu Endo¹, Maasa Kanno¹, Bihe Kong¹, Shun Ohki¹, Shizuka Koshimizu¹, Hajime
       Ohyanagi¹², Kentaro Yano¹ (¹Bioinformatics lab., Sch. of Agri., Meiji Univ., ²King Abdullah
       University of Science and Technology (KAUST), Computational Bioscience Research Center
       (CBRC))

14:05  D01-2 The algorithms and research applications of a deep learning method “Graph Neural Network”
       for graph data structures
       Eli Kaminuma (Tokyo Med. and Dent. Univ.)

15:15  D01-3 Potential applicability of deep learning in plant science; novel interpretations on images and
       DNAs
       Takashi Akagi (Okayama Univ.)

Co-sponsored by “Determining principles in the birth of new plant species”
PCP Luncheon Seminar
“Making an impact with PCP in 2020”

Language: English

In an increasingly competitive global research and publishing landscape, making an impact with your work has never been more important. In this luncheon seminar we talk about what PCP is doing to give its authors the best possible publishing experience and widest international exposure, as well as what you — the author — can do to ensure your work reaches the right people and receives the recognition it deserves.

Symposium outline:

a) PCP in 2020: Editorial board developments and future plans (from the new EIC)
b) The importance of self-promotion
c) How to increase the impact of your research

The audience will be given the opportunity to ask questions to the PCP Editors and editorial staff during and at the end of the presentations.

*The first 150 attendees are served a box lunch and a bottle of tea. No prior registration is required.
Promega provide the Luciferase Bioluminescence Technologies and Nucleic Acid Purification Technologies as unique tools for Life Science research. In this seminar, we will introduce the newly developed applications using these technologies for plant physiology.

*The first 100 attendees are served a box lunch and a bottle of tea. No prior registration is required.

*This seminar will be conducted in Japanese.

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1) The robust RNA extraction from multifarious plant samples

**Speaker:** Atsushi Nagano (Department of Plant Life Science, Ryukoku University)

**Abstract:** The robust RNA extraction from multifarious plant samples is important to perform field transcriptomics and other large-scale studies. I will talk about some troubles and tips in such studies with a large number of samples.

2) High sensitive protein detection system - Adaptation of HiBiT technology to plants and quantification of transcription factors

**Speaker:** Yoshihiro Yoshitake (Laboratory of Plant Molecular Biology, Graduate School of Biostudies, Kyoto University)

**Abstract:** We have been working on elucidating the common mechanism of photoperiod response in plants, using one of the bryophytes, *Marchantia polymorpha*.

Under this research, we developed a quantitative system for HiBIT fusion protein in plants and succeeded a quantification of photoperiod-dependent degradation patterns of transcription factor (TF). In this presentation, I would like to introduce trial and error of the research for the quantification of TF proteins and the usefulness of HiBIT technology.

Web site: www.promega.jp
Speaker 1:
**Applications of the Illumina-based NGS technologies in plant genomics**

*Dr. Keiichi Mochida, RIKEN, Center for Sustainable Resource Science*

High-throughput sequencing has already become a vital tool for plant science and crop breeding. We have applied Illumina sequencing platforms for various applications to analyze genome and transcriptome in model plants, crops, and microalgae. In this seminar, we showcase our practical examples with Illumina sequencers such as NovaSeq 6000 and iSeq100. Regarding NovaSeq 6000, the largest production-scale sequencer, we demonstrate our results of large-scale sequencing in field transcriptome analysis and population-scale exome-sequencing in crop species such as barley. We also introduce our daily-use applications with iSeq100, the smallest bench-top sequencer, such as targeted-amplicon sequencing to analyze genetic variation in specific genes and small-scale test-run to check sequencing libraries. Throughout the presentation, we also highlight a range of applications with various library preparation methods that are compatible to the Illumina sequencing.

Speaker 2:
**The usefulness of Illumina next generation sequencing platforms, from plants’ genome reference construction to marker assisted selection**

*Shuang Li, Applied Genomics Specialist, Illumina K.K.*

At the end of 2018, more than 13,000 Illumina next-generation sequencers have been installed in various areas worldwide. In agriculture field, applications and NGS equipment can be selected to suit multiple purposes, ranging from reference genome construction and linkage analysis to marker assisted selection. In this session, the usefulness of whole genome sequencing on NovaSeq6000 will be introduced. And sequencing service provider, such as Takara Bio Inc., is able to reduce the sequencing cost significantly by using NovaSeq6000. Their services will also be mentioned in this session. In addition, the release of desktop sequencer iSeq100 is largely reducing the initial investment cost for applications such as amplicon sequencing. iSeq100 is being used as a replacement for Sanger sequencers or as test run for large-scale sequencing.

*The first 100 attendees are served with a box lunch and a bottle of tea.
No prior registration is required.*
Day 2, Lunch time

Fri., March 20, 12:00–12:50  Room Z

OLYMPUS CORPORATION Luncheon Seminar

Live imaging of intracellular patterning — with Olympus confocal technologies —

Speaker: Yoshihisa Oda, Ph.D.
Department of Gene Function and Phenomics, National Institute of Genetics

Introduction of FV3000 confocal microscope and new high-performance objective

Speaker: Makoto Kato, OLYMPUS CORPORATION

Language: Japanese

Sponsor: OLYMPUS CORPORATION

FV3000 Confocal Laser Scanning Microscope

Next Generation FLUOVIEW for the Next Revolutions in Science

The FLUOVIEW FV3000 series of confocal laser scanning microscopes meets some of the most difficult challenges in modern science. Featuring the high sensitivity and speed required for live cell imaging as well as deep tissue observation, the FV3000 confocal microscope enables a wide range of imaging modalities, including macro-to-micro imaging, super resolution microscopy, and quantitative data analysis. Choose between upright and inverted microscope frames suited for a range of life science applications, including developmental biology, stem cell research, electrophysiology, cancer research, slide imaging, and more.

*The first 100 attendees are served a box lunch and a bottle of tea. No prior registration is required.
Luncheon Seminar on Gender Equality

Why are there so few female researchers in Japan?
Considerations based on a large questionnaire survey for 18,000 researchers.

Guided by Dr. Michiko Bando (National Institute of Public Health) and Dr. Reiko Motohashi (Shizuoka University)

Have you ever had a question why there are few female professors in Japan, though there are many female graduate students in laboratories? If the number of female researchers is really few in the Japanese academic professions, why is it so? Is it because fewer female students seek for jobs in Japanese universities? If so, what are the reasons why they give up seeking for these jobs?

In this seminar, we will try to find out the reasons why there are few female researchers in the Japanese academic professions by discussing the results of the large-scale survey for 18,000 researchers conducted by the Japan Inter-society liaison association committee for promoting equal participation of men and women in science and engineering in 2016. The results will be explained and commented by Dr. Michiko Bando, who conducted their statistical analysis, and Dr. Reiko Motohashi, who was a former committee member, and is familiar with the background.

This seminar will be held in an interactive style where participants answer quizzes and questions. Participants are advised to bring a smartphone or other devices that can connect to the Internet, whenever possible. Nevertheless, anyone without those devices are also welcome to join the seminar. The seminar will be held in Japanese.

A bento-box lunch will be provided for 100 participants. (These lunches will be served in exchange of a lunch coupon, 70 of which will be distributed at the reception of the meeting from 8:30 on the day of seminar and the rest is available at Room Y before the seminar. The coupons are distributed on a first come, first served basis.)
The day before the meeting, PM

Satellite Meeting

Wed., March 18, 12:30–18:00  Room U2-312

5th Workshop on Photosynthetic Bacteria

Language: Japanese

Organizers: Chihiro Azai (Ritsumeikan University)
Yusuke Tsukatani (JAMSTEC)
Jiro Harada (Kurume University School of Medicine)

12:30
Registration

13:00
Opening remarks
Jiro Harada

13:05
“Detecting chlorophyll fluorescence on habitable exoplanets”
Kenji Takizawa (Astrobiology Center, NINS)

13:35
“Genome-scale metabolic modeling and FBA simulation of photosynthetic electron transport in cyanobacteria”
Masakazu Toyoshima (Department of Bioinformatic Engineering, Graduate School of Information Science and Technology, Osaka University)

13:55
“Scenario of rebooting synthetic cyanobacterial genome in Bacillus subtilis BEST7613”
Satoru Watanabe (Department of Bioscience, Tokyo University of Agriculture)

14:25
Coffee break

14:50
“Diversity of the light-harvesting complexes in extremophilic purple phototrophic bacteria”
Seiu Otomo (Ibaraki University)

15:20
“Extension of Light-harvesting Ability and Photocurrent Generation by Purple Bacterial Light-Harvesting/Reaction Center Complexes”
Takehisa Dewa (Department of Life Science and Applied Chemistry, Graduate School of Engineering, Nagoya Institute of Technology)

15:50
“Signal transduction mechanism of light sensor protein PYP: Interaction dynamics between PYP and its downstream protein”
Kim Suhyang (Graduate School of Science, Kyoto University)

16:10
Discussion
Yusuke Tsukatani

18:00
Get together

Entry Form: https://forms.gle/XRCyjzLysSmBHv2K6 (Dead line: 06/03/2020)
The 22th Plant Organelle Workshop  
— Metamorphosing paradigms in organelle biology —

Organizers (in alphabetical order): Masanori Izumi (RIKEN), Yusuke Kato (Okayama University), Kensuke Kusumi (Kyushu University), Masato Nakai (Osaka University), Yoshiki Nishimura (Kyoto University), Junichi Obokata (Kyoto Prefectural University), Atsushi Takabayashi (Hokkaido University), Tomohiro Uemura (Ochanomizu University)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>13:00</td>
<td>Opening remarks</td>
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</table>
| 13:05 | PSI-PSII megacomplex in green lineage  
Makio Yokono (Nippon Flour Mills Co., Ltd.), Atsushi Takabayashi (Hokkaido University), Seiji Akimoto (Kobe University) |
| 13:40 | Functional and structural insights into an evolution of photosynthetic light harvesters  
Ryo Nagao (Okayama University) |
| 14:15 | Break |
| 14:25 | Formation of chloroplast-associated organelle zones  
Masanori Izumi (RIKEN) |
| 15:00 | Molecular mechanism of mitophagy  
Tomotake Kanki (Niigata University) |
| 15:35 | Importance of maintaining homeostasis by selective/non-selective autophagy in plants  
Kohki Yoshimoto (Meiji University) |
| 16:10 | Break |
| 16:20 | Dynamics of protein sorting zones on the TGN in plant  
Tomohiro Uemura (Ochanomizu University) |
| 16:55 | Cisternal maturation dynamics of the trans-Golgi network in budding yeast  
Takuro Tojima (RIKEN) |
| 17:30 | Break |
| 17:40 | Keynote lecture  
Endomembrane-mediated survival strategies in plants  
Ikuko Nishimura (Konan University) |
| 18:40 | General discussion |
| 18:50 | Closing remarks |
| 19:15 | Mixer |

This workshop is open to all interested participants, but online registration in advance is encouraged.  
(http://www.rib.okayama-u.ac.jp/OWS/).  
Contact address: Masato Nakai: nakai@protein.osaka-u.ac.jp  
Yusuke Kato: ykato@okayama-u.ac.jp
Day 1, Evening

Satellite Meeting

Thur., March 19, 18:30–20:00  Room E

The 38th Meeting of the Japanese Society for Young Plant Physiologists

Language: Japanese

Organizers: Rumi Amano (Kyoto Sangyo University)
              Tatsuya Nobori (Salk Institute)

18:30  Opening remarks by Organizers

18:40  Molecular system for flexible regulation of cell proliferation and differentiation in plants
        ~Or, how to understand what is plants in my own way~
        Dr. Misato Ohtani (The University of Tokyo)

19:10  Genome editing: development of CRISPR-Cas and its supporting technologies in plants
        Dr. Shigeo Sugano (National Institute of Advanced Industrial Science and Technology)

19:40  Discussion

This meeting offers young scientists and students the opportunity to exchange information and discuss topics related to research and career development. We invited two speakers to share their own stories with us.

No registration required to participate in this meeting.

Meal boxes will be provided at the meeting upon request. There will be an after meeting gathering with the speakers and participants. Please register for the meal boxes and/or the gathering at https://forms.gle/2Rc6LcPmK2XekQfB6 by March 11.

More details are available on the meeting website (http://www.cc.kyoto-su.ac.jp/~i1659019/wakatenokai.html).

Contact addresses: Rumi Amano: i1659019@cc.kyoto-su.ac.jp
                  Tatsuya Nobori: tnobori@salk.edu
The 4th Meeting of Plant Mathematical Modeling

Language: Japanese

Organizers: Munetaka Sugiyama (University of Tokyo)
Hironori Fujita (Astrobiology Center / NIBB)
Takaaki Yonekura (University of Tokyo)

This meeting is aimed at gathering together researchers and students interested in mathematical models in plant science regardless of whether they are experimental researchers, theorists, beginners, or experienced, and to exchange information and deepening friendship. It is also aimed at building a community in this research field, and is planned to be held continuously at annual meetings of JSPP and BSJ. This time we will have a short course of computer programming and simulation of simple mathematical models of the reaction-diffusion system with Wolfram Programming Lab (https://lab.open.wolframcloud.com/objects/wpl/GetStarted.nb), a free on-line platform where Mathematica can be used. This meeting is open to all participants. Please feel free to join us with your computer. For more details, please see http://www.nibb.ac.jp/miyakohp/asari/htdocs/?page_id=57.
Day 1, Evening

Satellite Meeting

Thur., March 19, 18:40–20:00  Room G

15th Plant membrane symposium

**Language: Japanese**

**Organizers (in alphabetic order):** Maki Katsuhara (Okayama University)  
Izumi Mori (Okayama University)  
Yoshiyuki Murata (Okayama University)  
Yoshiji Okazaki (Osaka Medical College)  
Shingo Takagi (Osaka University)

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>18:40</td>
<td>Opening: Organizers</td>
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</table>
| 18:45 | “I have learned everything from plant electrophysiology”  
Tetsuro Mimura (Kobe University) |
| 19:30 | General Discussion |

Mixer (see below)

Prof. Tetsuro Mimura (Former President of JSPP) will provide the talk summarizing his study of plant membrane biology.

This meeting is free to all audience and registration is not required.

People who wish to join the mixer (Near Kita-senri Station, 15–20 min on foot from the venue, ¥5,000–6,000) are required to register by e-mail to Maki Katsuhara with title “Joining the mixer for 15th plant membrane symposium” until March, 5th (Thu).

Contact address: Maki Katsuhara  
kmaki@okayama-u.ac.jp
GENERAL PRESENTATIONS

PROGRAM OF ORAL PRESENTATIONS

- Each presentation is 12-min talk and 2-min 30-sec discussion, allowing a 30-sec interval for speaker changes in a 15-min slot. To keep the session on time, please strictly concern the time limits.

  1st Bell 10 min
  2nd Bell 12 min End of Talk
  3rd Bell 14 min 30 sec End of Discussion

- Before the presentation, please check your slides

- Chairpersons are requested to come to the assigned sessions at least 15 minutes before the start time, and to notify the staff of your attendance. Please assign a chairperson to each presentation prior to the Annual Meeting.

- Chairpersons are listed at the end of Program of Oral Presentations.
### Day 1, Thur., March 19, AM (9:30–12:15)

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<tr>
<th>Time</th>
<th>Room A</th>
<th>Room B</th>
<th>Room D</th>
<th>Room E</th>
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<tr>
<td>09:30</td>
<td>1aA01</td>
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<tr>
<td></td>
<td>Cryo-EM structure of a diatom PSL-FCSI supercomplex</td>
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<td>Ryo Nagao1, Koji Katō1, Kentaro Huke1, Takehiro Suzuki1, Minoru Kumezawa1, Ikuko Uchihara2, Yauhuo Kashiho3, Naohi Doi14, Seiji Akimoto1, Jun Rui Shen1, Naoyuki Miyazaki1, Fusumichi Akita1,15</td>
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<td>(RIIS, Okayama University, Graduate School of Biostudies, Kyoto University, RIKEN, Faculty of Agriculture, Kyoto University, NIBB, Graduate School of Life Science, University of Hyogo, Graduate School of Science, Kobe University, JPR, Osaka University, TARA, University of Tsukuba, JST PRESTO)</td>
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<td>09:45</td>
<td>1aA02</td>
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<td></td>
<td>Structural study of phycocyanin complex in phycobilisome by cryo-electron microscopy</td>
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<td>Ryo Nagao1, Koji Katō1, Jun Rui Shen1, Naoyuki Miyazaki1, Fusumichi Akita1,15, O Yuhei Tahara1, Junko Shami3, Daisuke Kasumi3, Nobuo Kamaya1,16 (RecAP, Osaka City Univ., Harima Inst., Riken, Chem. Sch. Sci., Osaka City Univ., Pul. Pow. Sci., Kumamoto Univ., OCARINA, Osaka City Univ.)</td>
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<td>10:00</td>
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<td>Excitonic couplings in type-I reaction centers of Heliobacteria and Photosystem I</td>
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<td>Hironobu Kishita1, Akihito Kinuma3,17 (JST PRESTO, Cent. for Comp. Sci. Univ. of Tsukuba, Grad. Sch. of Sci. Nagoya Univ.)</td>
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<td>10:15</td>
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<td>Structural and spectroscopic characteristics of photosystem I complex with chlorophyll f</td>
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<td>Toshiyuki Shindo1, Koji Katō1, Ryo Nagao1, Seiji Akimoto1, Jun Rui Shen1, Fusumichi Akita1,15, Naoyuki Miyazaki1,16, Tatuya Tomyo1 (Fac. Sci., Tokyo Univ. Sci., RIKEN, Okayama Univ., Grad. Sch. Sci., Kobe Univ., PRESTO, JST, TIP, Osaka Univ., TARA, Tsukuba Univ.)</td>
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<td>10:30</td>
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<td>Fluorescence heterogeneity in chlorophyll-f containing photosystem I observed by single molecule spectroscopy</td>
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<td>Takamori Kobyashi1, Rin Taniguchi1, Yuta Shibuishi1, Toshiyuki Shindo1, Tatuya Tomyo1, Shenyu1 (Graduate School of Science Tohoku University, Faculty of Science, Tokyo University of Science)</td>
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<td>Photosynthesis</td>
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<td>Marchantia Tubulin Kinase MtPKIS1 is Required for Morphological Changes under Osmotic Stress</td>
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<td>Shinichiro Komakami1, Hideyuki Takahash1,19, Yui Mizunobu1, Ai Takegawa1, Kazuyuki Band1, Ryoichi Nishihama1, Takayuki Kohno1, Takuji Hashimoto1,20 (Grad. Sch. Sci., NAIST, Grad. Sch. Biostudies, Kyoto Univ.)</td>
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<td>The isolation of picl as a novel moderate high temperature-insensitive mutant</td>
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<td>Arisa Nakamura1, Takuma Tamaura1, Narumi Okazaki1, Tsuyoshi Furumoto (Faculty of Agriculture, Rikkyo University)</td>
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<td>Properties and physiological importance of bifunctional UDP-glucose 4-epimerases in Arabidopsis</td>
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<td>Akira Umezawa1, Rina Matsumura1, Yu Hikita2, Daisuke Takahashi1, Yotshi Tsuchiya1, Takahiko Konishi1,21 (Graduate School of Life Science and Engineering, Saitama University, Faculty of Science, Saitama University)</td>
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<td>1aE02</td>
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<td>Characterization of ERF group II-E transcription factor for primary cell wall formation in plant</td>
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<td>Shingo Sakamoto1,22 (Nobutsuka Minuta (Bioprod., AJST)</td>
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<td>11:00</td>
<td>1aE03</td>
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<td>Analysis of G418 members regulating germinativedifferentiation and development of the vegetative cell in Arabidopsis</td>
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<td>Kazuo Ebine1,2, Shohi Yamaoka3,23, Takanori Ueda1,2 (1Div. Cellular Dynamics, NIBB, Sch. Life Sci., SOKENDAI, Grad. Sch. Biostudies, Kyoto Univ.)</td>
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<td>Effects of boron deprivation on mechanical responses after wounding</td>
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<td>Motoki Kuno1,2, Toshihikourretake3, Rie Suzuki1,2 (1Biotechnology Research Center, The University of Agriculture, Nagoya Univ., 2Grad. Sch. Sci., Teikyo University, 3Advanced Instrumentation Center, Teikyo University)</td>
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<td>11:30</td>
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<td>Effect of boron deprivation on mechanical strength of Arabidopsis root cell walls</td>
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<td>Daisuke Umegaki1, Masaru Kobayashi3,24, Takashi Ueda1,2 (1Grad. Sch. Agriculture, Univ. Kyoto)</td>
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**Symposium S01** Japan-Taiwan Joint Symposium: Front lines of post-transcriptional gene regulation in environmental responses (9:30–12:25)

**Symposium S02** Towards a unified understanding of local/systemic signaling and beyond in plant wound and immune responses (PCP sponsored symposium) (9:30–12:10)
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<th>Room F</th>
<th>Room G</th>
<th>Room H</th>
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<tbody>
<tr>
<td><strong>Plant hormones/Signaling molecules</strong></td>
<td><strong>Secondary (specialized) metabolism</strong></td>
<td><strong>Vegetative growth</strong></td>
</tr>
<tr>
<td>1aF01</td>
<td>1aG01</td>
<td>1aH01</td>
</tr>
<tr>
<td>Functional analysis of Arabidopsis CYP707A, which encode key enzymes forABA catabolism</td>
<td>Identification and characterization of key factors involved in the biosynthesis of isopinoquinone alkaloid in Eschscholzia californica</td>
<td>Analysis of the Differential Expression Process of Epidermal Cells during Shoot Regeneration in Cultured Stem Segments of Torenia fournieri</td>
</tr>
<tr>
<td>Momoka Miyata1, Ryosuke Megu1, Jane-Sik Kim2,3, Mitsunori Sez1, Eiji Nambara4, Masatoshi Nakajima2, Shunpei Moto1,2,3, Notsu ap, HKo1</td>
<td>Yasuyuki Yamada1,2, Kentaro Horii2, Shouhei Nishida1, Daiki Hanada1, Nobukazu Shira1,2, Fumihiko Sato1,2</td>
<td>Hataanee Morimana1, Akiko Mamita1, Hiroaki Tama1,2, Iwai Ohba1,2, Takamura Suzuki1, Monoko Ikeno1,2, Akira Iwano1,2, Keiko Sugimoto1,2</td>
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<td>Plant hormones and these functions to akinetes germination in a cyanobacterium, Nostoc sp. HK-01</td>
<td>1aF02</td>
<td>1aH02</td>
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<tr>
<td>Identification of specific inhibitor for root-cutting response in Arabidopsis thaliana and involvement of phytohormone response</td>
<td>Metabolomics for identifying intermediates of camptothecin in Ophiocorda pumila</td>
<td>WIND1 has a potential to orchestrate pleistomorphic responses after wounding</td>
</tr>
<tr>
<td>Shu Kog1,2,3, Masaaki Watahiki1,2,3</td>
<td>Ryo Nakahara1,2, Atsuki Rau1, Tetsuya Mori1,2, Taiki Nakaya1,2, Mani Yamazaki1,2, Kazuki Sato1,2</td>
<td>Akira Iwano1,2, Keiko Sugimoto1,2, Amane Lashavina1, Arkia Takebayashi1, Monoko Ikeno1,2, Keita Matuo1,2, Masashi Azahama1, Nobukazu Shira1,2, Ken Shirasa1,2, Hiro Fukuda2, Keiko Sugimoto1,2</td>
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<tr>
<td>Masasumi Nakajima1,2, Eri Yumoto1,2, Koji Miyamoto1,2, Midoi Ong1,2, Kaori Yokomizu1,2, Tadao Asami2</td>
<td>(Kobe Pharm. Univ., 2Grad. Sch. Bio., Kyoto Univ., 3Grad. Sch. Sci., Osaka Prefect. Univ.)</td>
<td>(Kobe Pharm. Univ., 2Grad. Sch. Bio., Kyoto Univ., 3Grad. Sch. Sci., Osaka Prefect. Univ.)</td>
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<tr>
<td>Identification of specific inhibitor for root-cutting response in Arabidopsis thaliana and involvement of phytohormone response</td>
<td>Terpenoid indole alkaloid biosynthesis in Catharanthus roseus</td>
<td>Mechanisms underlying wound-induced regeneration of Ricinocarpus aquaturic</td>
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<td>Xu Kang1, Masaaki Watahiki1,2,3</td>
<td>Kentaro Yamamoto1,2, Dagyo Grzegor1,2, Mai Uzaki1,2, Carlos R. Rodriguez-Lopez1,2, Lorenzo Capunti1,2, Tetsuya Nakamura1,2, Sarah E. O’Connor2</td>
<td>Rumi Amam1, Risa Momoi1,2, Eri Oota1,2, Taisa Nakahara1,2, Shaka Ikumarti1,2, Tomomi Sakamoto1,2, Mieko Kimura1 (Facul. Life Sci., Kyoto Sangyo Univ., 2Facul. Life Sci., Kyoto Sangyo Univ.)</td>
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<tr>
<td>The role of multilayered regulation of membrane-bound ONA10354 in ascorbic acid-induced leaf senescence in rice</td>
<td>Recruitment of pathway-specific flavonoid binding hydroxylases for the independent generation of soluble flavone C-glycosides and cell-wall-bound tricin-like</td>
<td>A wounding-inducible WUSCHEL RELATED HOMEOBOX promotes callus formation via cell wall modification</td>
</tr>
<tr>
<td>Yuruhito Sakurabara1,2, Gihyeung An1,2, Shusuke Yamagishita1,2, Nans-Chen Puek1, Biotechnology Research Center, The University of Tokyo, 2Department of Plant Molecular Systems Biotechnology, Kyung Hee University, Republic of Korea, 3Department of Plant Molecular Systems Biotechnology, Seoul National University, Republic of Korea</td>
<td>Minami Ono1,2, Taiso Ojima1,2, Aliudair Fernie2, Motumidi Watanabe1,2, Takayuki Tohge1, 2Graduate School of Biological Sciences, Nara Institute of Science and Technology (NAIST), 3Max Planck Institute</td>
<td>Monoko Ikeno1,2, Akira Iwano1,2, Keiko Sugimoto1,2 (Grad. Sch. Sci., Univ. Tokyo, 2RIKEN CSRS, 3Col. Biosci. Biotech. Chubu Univ.)</td>
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<tr>
<td>Identification of ABA-RESPONSIVE KINASE SUBSTRATE orthologs in guard cells from Eschscholzia californica</td>
<td>Investigation of metabolic polymorphism in Solanum spp.</td>
<td>Analyses of cellular plasticity in Arabidopsis leaf protoplasts</td>
</tr>
<tr>
<td>Yukie Hayashi1,2, Yohei Takashashi1,2, Kenko Kawano1, Takamasa Suzuki1,2, Toshikazu Kinoshita1,2</td>
<td>Minami Ono1,2, Taiso Ojima1,2, Aliudair Fernie2, Motumidi Watanabe1,2, Takayuki Tohge1, 2Graduate School of Biological Sciences, Nara Institute of Science and Technology (NAIST), 3Max Planck Institute</td>
<td>Yukie Sakamoto1,2, Takamasa Suzuki1,2, Keiko Sugimoto1,2 (Grad. Sch. Sci., Univ. Tokyo, 2RIKEN CSRS, 3Col. Biosci. Biotech. Chubu Univ.)</td>
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=Presentation in English
<table>
<thead>
<tr>
<th>Time</th>
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<th>Room C</th>
<th>Room D</th>
<th>Room E</th>
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<tbody>
<tr>
<td></td>
<td>Photosynthesis</td>
<td>Environmental responses B</td>
<td>Environmental responses C</td>
<td>Cell wall</td>
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<tr>
<td>10:45</td>
<td>1aA06</td>
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<td>1aC06</td>
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<td></td>
<td>Effects of LHCA3 and LHCA7 subunit deletion on the structure and function of the photosystem I Light-harvesting complex in the green alga Chlamydomonas reinhardtii</td>
<td>Functional analysis of acquired photosynthesis</td>
<td>Heat shock factors A1 mediate thermomorphogenesis and stomatal movement to accelerate heat avoidance</td>
<td>Heat shock factors A1 mediate thermomorphogenesis and stomatal movement to accelerate heat avoidance</td>
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<td>Mikiho Takagi1, Shin-ichiro Ootasa2, Yuihiro Takahashi1(Grad. Sch. Sci., Osaka University, 2RIIS, Okayama Univ., 3RIK)</td>
<td>Hirotsuka Arita1, Keisuke Tanaka2, Izumi Yonaha1, Yoichi Sakata1, Teruki Taj1</td>
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<td>Short-term light adaptation of a glaucophyte Cyanophora paradoxa, probed by fluorescence spectroscopy</td>
<td>Down regulation of root water permeability (Lt) by phosphorylation of HvPIP2;1, a barley aquaporin</td>
<td>Molecular mechanisms of Arabidopsis DREB1 gene expression regulated by circadian components under cold stress conditions</td>
<td>Molecular mechanisms of Arabidopsis DREB1 gene expression regulated by circadian components under cold stress conditions</td>
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<td>Yushi Kimura Uemi, Seiji Akimoto (Grad. Sch. Sci., Kobe Univ.)</td>
<td>Aya Nishimura, Maki Katsuhara (IPS, Univ. Okayama)</td>
<td>Satoshi Kikukura1, Kentauro Hayashi1, Hiroki Haraguchi1, Tomoasa Ishikawa1, Satomi Tada1, Takamasa Suzuki2, Kazuo Shinozaki2, Kazuo Yamaguchi-Shinozaki2(Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2College of Bioscience and Biotechnology, Chubu Univ., 3Center for Sustainable Resource Science, RIKEN)</td>
<td>Satoshi Kikukura1, Kentauro Hayashi1, Hiroki Haraguchi1, Tomoasa Ishikawa1, Satomi Tada1, Takamasa Suzuki2, Kazuo Shinozaki2, Kazuo Yamaguchi-Shinozaki2(Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2College of Bioscience and Biotechnology, Chubu Univ., 3Center for Sustainable Resource Science, RIKEN)</td>
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<td>Functional study on hydrogen-bond networks near oxygen-evolving center in photosystem II</td>
<td>No secretion from the Root of Vigna marina and Genome Assembly with Nanopore Sequencing</td>
<td>Functional analysis of transcription factors that regulate cold-inducible expression of Arabidopsis DREB1 genes in a circadian manner</td>
<td>Functional analysis of transcription factors that regulate cold-inducible expression of Arabidopsis DREB1 genes in a circadian manner</td>
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<td>Hiroshi Kaneda1, Keisuke Kashimura1, Kazuya Ueda1, Takuji Iida1, Keisuke Saito2, Ryo Ninomiya3, Chisato Hida1, Yuihiro Takahashi1, Hiroshi Ishihita1(Grad. Sch. Sci., Okayama Univ., 2Dep. Appl. Chem., Grad. Sch. Eng. Univ. Tokyo, 3Grad. Sch. Nat. Sci. &amp; Tech., Okayama Univ., 4RCAST, Univ. Tokyo, 5Dept. Biol., Fac. Sci. Okayama Univ.)</td>
<td>Hironori Ohash11, Yosuke Noda1, Jun Furukawa1, Nobuo Sasa1, Yong-Gen Yun1, Yuta Miyoshi1, Naoki Kawai1, Ken Naito1(Grad. Sch. Front. Sci., the Univ. of Tokyo, 2Genetic Resources Center, NARO, 3CREED, Univ. of Tukuba, 4Takasaki Advanced Radiation Research Inst., 5QITE)</td>
<td>Ken Naito1(Grad. Sch. Frontier Science, U-Tokyo, 2Institute of Crop Science, NARO, 3Genetic Resources Center, NARO)</td>
<td>Ken Naito1(Grad. Sch. Frontier Science, U-Tokyo, 2Institute of Crop Science, NARO, 3Genetic Resources Center, NARO)</td>
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<td>Origin of High Spin EPR signal in S-State Oxygen Evolving Complex</td>
<td>Genetics of salt tolerance in two wild Vigna species</td>
<td>Plant winter sensing and characteristic features</td>
<td>Plant winter sensing and characteristic features</td>
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<td>Hiroki Nagashima (Graduate School of Science, Nagoya University)</td>
<td>Milho Hugiba1, Eri Ogiso2, Ken Naito1, Naoki Ogura1(Grad. Sch. Frontier Science, U-Tokyo, 2Institute of Crop Science, NARO, 3Genetic Resources Center, NARO)</td>
<td>Toshiya Muranaka1(1Dept. Biotech., Grad. Sch. of Eng., Osaka University, 2University of Agriculture, 3Dept. Biol. Sci., 4RIKEN CSRS, 5NODAI Genome Research Team, 6Utsunomiya University, Center for Bioscience &amp; Education)</td>
<td>Toshiya Muranaka1(1Dept. Biotech., Grad. Sch. of Eng., Osaka University, 2University of Agriculture, 3Dept. Biol. Sci., 4RIKEN CSRS, 5NODAI Genome Research Team, 6Utsunomiya University, Center for Bioscience &amp; Education)</td>
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<td>Establishment of Virus-mediated gene function analysis tool for wild Vigna species</td>
<td>DNA barcoding and morphological analyses of a diatom which inhabits on the surface of sea ice in Lake Saroma</td>
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<td>Establishment of Virus-mediated gene function analysis tool for wild Vigna species</td>
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**Day 1, Thur., March 19, AM (9:30–12:15)**

- **Symposium S02**
  - Towards a unified understanding of local/systemic signaling and beyond in plant wound and immune responses (PCP sponsored symposium) (9:30–12:10)

- **Symposium S04**
  - Molecular mechanism of cell proliferation and reprogramming — the chromatin perspective and beyond — (9:30–12:30)
<table>
<thead>
<tr>
<th>Room F</th>
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<tr>
<td><strong>Plant hormones/Signaling molecules</strong></td>
<td><strong>Secondary (specialized) metabolism</strong></td>
<td><strong>Vegetative growth</strong></td>
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**Symposium S01 Japan-Taiwan Joint Symposium: Front lines of post-transcriptional gene regulation in environmental responses (9:30–12:25)**

- **1aF06** Comparative Phosphoproteomic Analysis of Barley Seed Embryos during After-ripening
  - Shimomura Ishikawa, Jose Barrero, Fuminoi Takahashi, Hirofumi Nakagami, Scott Peck, Frank Gubler, Kazuo Shinozaki, Taishi Umezawa (Grad. Sch. BASE, Tokyo Univ. of Agri. Tech., TCSRO, CSRS, RIKEN, Max-Planck-Instit., Dept. Biochem., Univ. Missouri)

- **1aF07** Functional analysis of PIP5K7, PIP5K8, and PIP5K8 in Arabidopsis thaliana
  - Ryo Kuroda, Makiko Kato, Tomohiko Tsuge, Takashi Aoyama (Institute for Chemical Research, Kyoto University)

- **1aF08** Functional differentiation of phosphatidylinositol phosphate 5-kinase genes in Arabidopsis thaliana
  - Michiko Watanabe, Romain Blanc-Mathieu, Hiroo Oda, Mariko Kato, Tomohiko Tsuge, Takashi Aoyama (Institute for Chemical Research, Kyoto University)

- **1aG06** Functional analysis of \(\beta\)-Substituted diamine Syrakos (RS45) gene family in Arabidopsis
  - Hiroki Nagashima (Graduate School of Biological Sciences, Nara Institute of Science and Technology (NAIST))

- **1aG07** Functional analysis of the calmodulin-binding domain from rice glutamine decarboxylase (OMGAD3)
  - Kazuhito Akama, Masakazu Kanoh (Dept. Life Sci., Fac. Life & Environ Sci., Shimane Univ.)

- **1aG08** Analysis of Haplophyte algae that are capable of alkaline biosynthesis
  - Hiroshi Iida, Chihong Song, Tomohiro Itoh, Miyako San, Hirofumi Kurita, Kazuyoshi Murata, Toshihiko Ikeda, Naomi Harada (Toyohashi Univ. of Tech., Grad. Sch. of Eng., National Institute of Physiological Sciences, Phytopen Co., Ltd., Japan Agency for Marine-Earth Science and Technology)

- **1aG09** Lotus japonicus triterpenoid profile and characterization of the CYP716A45 and 2CYP74E1 genes involved in their biosynthesis in plant
  - Hayato Suzuki, Ery Odette Fukushima, Yuko Shimizu, Hikaru Seki, Yutaka Fujisawa, Masao Ishimoto, Keishi Otsukae, Yuriko Otsuka, Toshiyuki Murakami (Grad. Sch. Eng., Osaka Univ., Universidad Regional Amazónica IKIAM, Institute of Crop Science, NARO, Faculty of Bioscience and Biotechnology, Tokyo University)

- **1aG10** Integrating platform to elucidate the key amino acid of CYP716 family enzymes in triterpenoid biosynthesis
  - Junpei Romazaki, Ery Odette Fukushima, Shuhei Yasumoto, Hikaru Seki, Toshiya Murakami (Dept. Biotech., Grad. Sch. of Eng., Osaka University, Universidad Regional Amazónica IKIAM)

- **1aG11** Comparative analysis of different plant NADPH-cytochrome P450 reductase classes in triterpenoid biosynthesis
  - Praserti Istambul, Shuhei Yasumoto, Ery Odette Fukushima, Hikaru Seki, Toshiya Murakami (Osaka University, Department of Biotechnology, Universidad Regional Amazónica IKIAM, Ecuador)

- **1aH06** Characterization of the Role of Endogenous IAA in the Regulation of Organogenic Competence in 2,4-D-Induced Callus of Arabidopsis

- **1aH07** Screening of key transcription factors contributing to the tuberous root formation in Arabidopsis thaliana

- **1aH08** Room-knot Nematodes (RKN) Hijack Auxin-signaling Modules to Activate Procamblial Stem Cells
  - Reo Suetake, Takashi Ishida, Shinichiro Sawa (Graduate School of Science and Technology, Kumamoto University, International Research Organization for Advanced Science and Technology (IAROAST), Kumamoto University)

- **1aH09** A Lotus LRR receptor regulates vascular differentiation and nodule development
  - Yasuyuki Koyanahara, Stig Anderson, Jens Stougard (Department of Plant Biosciences, Faculty of Agriculture, Iwaya University, Department of Molecular Biology, Aarhus University)

- **1aH10** Manipulation of root developmental regulation by plant immunity and associated microbiota
  - Shuhei Yasumoto, Hikaru Seki, Toshiya Murakami (Dept. Biotech., Grad. Sch. of Eng., Osaka University, Universidad Regional Amazónica IKIAM)

- **1aH11** Signaling During Parasitic Plant Haustorium Formation
  - Maxwell Robert Fishman, Anuphon Laohavisit, Sarah Christina Stolze, Hirofumi Nakagami, Ken Shirasu (RIKEN CSRS Plant Immunity Research Group, Max-Planck Institute for Plant Breeding Research)

**Symposium S02 Molecular basis of long-distance signaling in plants (9:30–12:30)**

**Symposium S03 Molecular mechanism of cell proliferation and reprogramming — the chromatin perspective and beyond — (9:30–12:30)**

**Symposium S04 Molecular mechanism of cell proliferation and reprogramming — the chromatin perspective and beyond — (9:30–12:30)**

**Room W**

**Room X**

**Room Y**

**Room Z**

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<th>Time</th>
<th>Symposium S01</th>
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<td>Biochemical analysis of PGR1 in the green alga <em>Chlamydomonas reinhardtii</em></td>
<td>Hydrogen-bonding in photosynthetic thylakoid membrane</td>
<td>Potential role of acetate in enhancing tolerance in <em>Lolium culinaris</em> against multiple abiotic stresses</td>
<td>Elucidation of flower opening and closing movement mechanism in Japanese gentian <em>Kerchitsora Notozono</em>, Fumina Goto, Aiko Watanabe, Masahiro Nishihara (Iwate Biotechnology Research Center)</td>
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<td>(Hiroko Takahashi)</td>
<td>(Michael Hippler)</td>
<td>(Md. Shahidul Hosseini, Masayuki Fujita (Faculty of Agriculture, Kagawa University))</td>
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<td>(Michael Hippler)</td>
<td>(Philipp Gibelet)</td>
<td>(Alkiko Baba-Karui, Kaoru Ebana, Norihiko Tanooka (Genetic Resources Center of NARO))</td>
<td>(Jhwan Park, Koh Aiaki (Grad. Sch. Life Environ. Sci., Osaka Pref. Univ.))</td>
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<td>Chemical crosslinking combined with mass spectrometric analyses revealed dynamic photosynthetic membrane protein complex interactions</td>
<td>Chemical crosslinking combined with mass spectrometric analyses revealed dynamic photosynthetic membrane protein complex interactions</td>
<td>Increased nickel tolerance by mutations in <em>AH42 in Arabidopsis thaliana</em></td>
<td>Up-regulation of cell division- and vascular development-related genes of host plant is not caused by the mechanism similar to tissue reunion in the parasitic interface</td>
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<td>(Shin-ichiro Ozawa)</td>
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<td>(Shin-ichiro Ozawa, Philipp Gibelet)</td>
<td>(Shota Yamamoto, Koh Aoki (Grad. Sch. Life Environ. Sci., Osaka Pref. Univ.))</td>
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<td>(Laura Mosebach)</td>
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<td>C13-Demethoxy carbonylation and hydrolysis of zinc chlorophyll b derivatives by a BoC enzyme</td>
<td>C13-Demethoxy carbonylation and hydrolysis of zinc chlorophyll b derivatives by a BoC enzyme</td>
<td>Autophagy increases zinc bioavailability to avoid hydroxyl radical production in chloroplast under zinc starvation</td>
<td>Functional analysis of histone deacylase involved in the DNA damage response</td>
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<td>(Mitsuki Hino)</td>
<td>(Mitsuki Hino)</td>
<td>(Dakki Shinohazi, Ekaterina Merkulova)</td>
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<td>(Misato Teramura)</td>
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<td>(Loreto Naya, Celine Masciaux-Dinantree)</td>
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<td>Oxygenation of 8-Hydr-Alkylated Pigment Mixture of Bacteriochlorophyll c or d</td>
<td>Oxygenation of 8-Hydr-Alkylated Pigment Mixture of Bacteriochlorophyll c or d</td>
<td>Elucidation of negative regulatory mechanism of Fe uptake by BHLH11 transcription factor in Arabidopsis <em>Arabidopsis thaliana</em></td>
<td>A mechanism of precise termination of root hair growth</td>
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<td>(Jiro Harada)</td>
<td>(Jiro Harada)</td>
<td>(Koichi Yamao, Masaaki Umeda (Grad. Sch. Sci. Tech., Utsunomiya Univ., 3RIKEN)</td>
<td>(Mika Tsugane, Ayumi Yamagami (National institute for basic biology), SOKENDAI)</td>
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<td>(Yusuke Kinoshita)</td>
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<td>(Takeshi Hashishin)</td>
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<td>(Yoshito Yoshinaka, 1, Takayuki Kusakabe, Ayumi Okada (1NIBB, 2SOKENDAI))</td>
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**Symposium S05 The highly specialized plant organs and cells —Its function and evolution— (13:45–16:40)**
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<td><strong>Secondary (specialized) metabolism</strong></td>
<td><strong>Vegetative growth</strong></td>
<td><strong>Symposium S05</strong></td>
<td><strong>The highly specialized plant organs and cells — its function and evolution</strong></td>
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<td><strong>BR biosynthesis in the primary root tip is governed by light perception in the shoot tissue in Arabidopsis</strong> Jan Sakasai, Yuihiro Watanabe (Grad. School of Arts and Sciences, The Univ. of Tokyo)</td>
<td><strong>Genetic manipulation of transcriptional regulators alters nicotine biosynthesis in tobacco</strong> Muneki Watanabe, Makoto Kobayashi, Takayuki Tohge, Takashi Hashimoto (Dep. Biol. Sci., NAIST)</td>
<td><strong>Analyzing the role for auxin in CLE peptide signaling in the apical meristem of Marchantia polymorpha</strong> Yuki Hirakawa1, Go Takahashi1, Toko Fujimoto1, Tomohiro Kiyosue2 (Dept. Life Sci., Gakushuin Univ., Grad. Sch. Sci., Univ. Tokyo)</td>
<td><strong>BR biosynthesis</strong></td>
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<td><strong>BRASSINOSTEROID-RELATED-HOMEOBOX (BJHH1) negatively regulates BR biosynthesis</strong> Reika Hasegawa1, Kenjiro Fujita1, Yuihiro Watanabe, Hisanori Takakas1, Mito Ikeda1, Ayumi Yamagami1, Nobutaka Matsumori1, Takashi Nakano1, Masaru Ohme-Takagi1 (Grad. Sch. Eng. and Sci., Univ. Tsukuba, Grad. Sch. Bio., Univ. Kyoto, Grad. Sch. Agri., Univ. Meiji, AIST)</td>
<td><strong>Diversity analysis of phenylexin producing ability in rice</strong> Tomoki Kobayashi1, Kazumori Okada1, Takayuki Tohge1, Takafumi Shimizu1 (NAIST, Biotechnology Research Center, The Univ. of Tokyo)</td>
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<td><strong>Functional analysis of a secreted peptide which inhibits brassinosteroid signaling</strong> Takayuki Kondoh1, Iwai Ohbayashi1, Yuki-Wang Kim1, Masanori Okamoto1, Yutaka Kodama1, Takeshi Yoshizumi1, Takeshi Haraguchi1, Mieko Higuchi-Takeuchi1, Minami Shimizu1, Mika Nomoto1, Yasuo Tsuda1, Yuiichiro Kukada1, Kazuo Shinozaki1, Keiko Kusumoto1, Shunsuke Oishi1, Takahiro Kukakade1, Jaeman Lee1, Koukou Handa1,2 (Dept. Biosci. &amp; Bioinform., Kyushu Inst. Technol., Ctr. for Biosci. Res. Educ., Utsunomiya Univ., RIKEN CSRS, Ctr. for Genet. and Appl. Technologies, TRM, Nagoya Univ., Fac. of Agri., Kyushu Univ.)</td>
<td><strong>Analysis of sulfur deficiency response in Brassica oleracea crops</strong> Ryota Nishimoto1, Kana Nakayama1, Hirofumi Raser1, Fermin Alisada1 (NAIST, Plant secondary metabolites lab., Max Planck Institute)</td>
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<td><strong>Analysis of gene candidates for signaling peptides in Marchantia polymorpha</strong> Hanaki Kohyama1, Shogo S. Sugano1, Kentaro Tamura1, Tomoko Shimada1 (Grad. Sch. Sci., Univ. Kyoto, Sch. Food &amp; Nutritional Sci., Univ. Shizuoka, Bioproduction, AIST)</td>
<td><strong>Glucosinolate Breakdown Regulated by <em>AtTYPICAL Thioesterases</em> Inhibits Unique Sulfur Catabolism</strong> Rui Li1, Ryosuke Sugiyama1, Ayuko Kawahara1, Masami Yokota Hirano1 (CSRS, RIKEN)</td>
<td><strong>ZAHRA1, ALOG transcription factor, mediates stem-cell maintenance and differentiation in Physcomitrella patens</strong> Yuki Hara1, Yuki Hiwatashi1, Satoshi Naramoto1, Junko Kiyosue1 (Grad. Sch. Life Sci., Tokoha Univ., Sch. Food, Agri., Environ. Sci., Miyagi Univ.)</td>
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<td><strong>Cyclic-peptides affecting root architecture</strong> Akira Yoshimura1</td>
<td><strong>Characterization Secreced Lipid Molecules Involved in the Apoplastic Accumulation of Shikonin derivatives</strong> Kanade Tanaka1, Takakji Ichino1, Yuto Okazaki1, Yasuhiro Higash1, Amatsuka Kajikawa1, Hideya Fukuzawa1, Kimiiro Toyooka1, Mayuko Sat01, Ikuo Ichimu1, Kazuki Sato1, Kansumi Yasaki1 (RIKH, Kyoto Univ., RIKEN CSRS, Grad. Sch. Bioresources, Mie Univ., Grad. Sch. Biostudies, Kyoto Univ., Fac. Core Res., Ochanomizu Univ., Grad. Sch. Pharm. Sci., Chiba Univ.)</td>
<td><strong>Functions of AMPK and CYPT8 enzymes in auxin response and meristem formation in the liverwort Marchantia polymorpha</strong> Hiroko Sugiura, Hidemasa Suzuki, Hiroto Ikeda, Hisayuki Kita, Mayako Takeda, Ryusie Nishihama, Takayuki Kukada (Grad. Sch. Biostudies, Kyoto Univ.)</td>
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* = Presentation in English
### The 16th Database Workshop (13:45–16:45)

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<td>15:00</td>
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<td>1pC06  ⚪ Molecular genetic analysis of Arabidopsis thaliana Cd-sensitive1 mutant (Yuichiro Takahashi1, Hiroshi Kuroda2, Ruri Nihara1)</td>
<td>1pD06  ⚪ Cell-wall deposition during photodegradation responses in Arabidopsis thaliana (Kotaro Okada, Kost Yuchi, Kenzo Ohno, Tae-Hong Lee)</td>
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<td>1pC07  ⚪ Cell-cycle responses of the Arabidopsis root apical meristem under toxic metal stress (Shinya Uraguchi, Yuka Ohshiro, Haruka Sat0, Motokihiro Hikawa, Chihiro Hagai, Natsumu Tamanu, Ryojiro Nakamura, Yasuaka Takeyamazawa, Masako Kiyono)</td>
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<td>1pC08  ⚪ Loss of Function of RAPTOR1B, a Positive Growth Regulator, Mitigates Inhibition of Plant Primary Root Growth Under Low Boron Conditions (Nanaki Uwasa, Kyoko Miwa)</td>
<td>1pD08  ⚪ Nitrogen-fixing Rice Roots (Kiyoshi Yamazaki1, Yoshiohiro Ohmori1, Hiroshi Nakazato1)</td>
<td>1pE08  ⚪ Charting the co-transcripts of plants and the plant microbiota (Tanaka Nishina1, Yu Cao1, Eik Dahms1, Karel Dolezal2)</td>
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### Symposium S07 Secret life of chloroplasts: from development to degradation (13:45–16:45)

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<td>Discovery of consensus sequence for RNA mobility in Plants</td>
<td>A metabolomic approach for the functional analysis of taxane compound transporters from yew</td>
<td>Mathematical model analysis on the generation of a steep spiral of costodial phyllotaxis</td>
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<td>Ken-ichi Kurata1, Hiroki Tsunoi1, Yu Sawai1, Takamasa Suzuki1, Michitaka Notsuichi1,2</td>
<td>Hiroki Kusano1, Hiroshi Minami2, Yoshitomo Kato1, Kaoru Kanazawa1, Akihiko Sugiyama1, Homare Tabata1, Kazufumi Yuzuki1,2 (RIHS, Kyoto Univ., Life Science Center, Hokkaido Mitsui Chemicals, Inc.)</td>
<td>Takasuki Yonekura</td>
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<td>Study on the response to external thermospermine in vascular plants</td>
<td>Physico-Chemical and cooking quality characteristics: A comparative study of some salt tolerant, drought tolerant and land races of rice genotypes</td>
<td>Imaging of auxin and cytokinin signaling in the shoot apical meristem of rice</td>
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<td>Generation of reactive carbonyl species in proliferating cells in roots</td>
<td>Molecular analysis of red flower color development in red-flowered gentian cultivars Keichinou Nemosu1, Nobuhiro Sasa1, Yurina Nishizaki1, Naoi Sugimoto2</td>
<td>Searching for factors initiate shoot apical meristem formation downstream of ETTIN in rice</td>
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<td>Leucine-rich repeat receptor-like kinases mediate quinone perception in plants</td>
<td>Antioxidative Tea Flavonoids Can Scavenge the Reactive Carbonyl/Species Azorein, Through the Formation of Flavonoid-carbonyl Conjugates</td>
<td>Competitive relationship among BES/BAZ transcription factors improves a robustness of stem cell maintenance</td>
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<td>Atsuhito Loshaw1, Takamori Watabe1,2, Nobuki Ishihama1, HUGH Mulvey1, Kaori Takazawa1, Takamasa Suzuki1, Ken Shirasu1,2 (RIKEN CSRS, Graduate School of Science, The University of Tokyo, College of Bioscience and Biotechnology, Chubu University)</td>
<td>Keichi Sugimoto1, Kyoko Sakai1, Norita Fujiy1, Jun’ichi Mago1,2 (Science Research Center, Yamaguchi Univ., Dept. of Agriculture, Yamaguchi Univ.)</td>
<td>Tomohiro Furuya1, Masato Saito1, Haruka Yehara1, Shohei Nosaka1, Takuya Miyakawa1, Akiko Sataka1, Shinji Shimadzu1, Wataru Yamori1,2, Masaru Tanokura1, Hiroaki Fukuda1, Yukiko Kondo1,2 (Grad. Sch. Sci., The Univ. Tokyo, Grad. Sch. Agr. Life Sci., The Univ. Tokyo, Grad. Sch. Sci., Kyushu Univ.)</td>
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<td>16:00</td>
<td>Photosynthesis</td>
<td>The 16th Database Workshop (13:45–16:45)</td>
<td>Environmental responses B</td>
<td>Environmental responses C</td>
<td>Plant-organism interaction B</td>
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<td>Evaluation of aluminum-detoxifying abilities of various hydrolyzable tannins identified in <em>Eucalyptus camaldulensis</em> Ko Tahara¹, Shinichi Suzuki², Mitsuru Nishiguchi³, Koh Hashida², Hideyuki Ino³ (¹Forestry and Forest Products Research Institute, ²Graduate School of Health and Welfare Science, Okayama Prefectural University)</td>
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<td>Towards Molecular Biochemical Identification of Stemness-Related Proteins in Arabidopsis Ryuji Tsugeki¹, Hitoshi Morii² (¹Grad. Sch. Sci., Kyoto Univ., ²Grad. Sch. Agric. Sci., Nagoya Univ.)</td>
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<td>1pH11</td>
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<td>Divergent roles of CLAVATA 1 and BARELY ANY MERISTEM class receptor kinases in the regulation of root stem cells Takashi Ishida¹, Shinichiro Sawa² (¹Kumamoto University, IROAST, ²Kumamoto University, FAST)</td>
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<td>The role of ER localized SNARE protein in root growth Yushi Yoshitake¹, Wataru Hayasaka², Kohki Yoshimoto³ (¹OSRI, Meiji Univ., ²Dep. Life Sci., Sch. Agri., Meiji Univ.)</td>
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● Day 1, Thur., March 19, PM (13:45–16:45)

**Symposium S05** The highly specialized plant organs and cells — its function and evolution — (13:45–16:40)

**Symposium S06** Frontiers of research on embryo and endosperm development: Induction of artificial apomixis (13:45–16:45)

**Symposium S07** Secret life of chloroplasts: from development to degradation (13:45–16:45)

₃=Presentation in English
### Day 2, Fri., March 20, AM (9:00–11:30)

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<td>2aB01</td>
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<td>Analysis of transgenic rice plants with co-overproduced Rubisco and Rubisco activase</td>
<td>Long-term Ca²⁺ imaging in <em>Arabidopsis thaliana</em></td>
<td>Transcriptional demand affects transcriptome dynamics in rice plants</td>
<td>Effect of foliage spraying of oxidized glutathione on <em>Chamamecypris obstua</em> mother trees on germination of seeds and growth of seedlings</td>
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<td>Mao Suganami1, Yui Suzuki2, Youshi Tazoe3, Amame Makino4 (Grad. Sch. Agr., Tohoku Univ., Fac. Agr., Iwate Univ.)</td>
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<td>Transgenic rice overproducing Rubisco exhibits high yields with high nitrogen use efficiency in a paddy field from 2016 to 2019</td>
<td>Live cell imaging of plant bilirubin using a fluorescent biosensor UnGI</td>
<td>Identification of guard cell K⁺ channel inhibitors that contribute to drought tolerance in <em>Arabidopsis thaliana</em></td>
<td>Increased seed lipid accumulation by feeding of hinoki cypress (<em>Chamamecypris obstua</em>) trees with oxidized glutathione</td>
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<td>Dong Kyung Yoon1, Keishi Ishiyama2, Mao Suganami1, Takakki Kagiwa3, Masu Watanabe1, Serina Imamura2, Maki Ogura1, Youshi Tazoe2, Hirotsu Isida3, Yuji Suzuki2, Mitsuhiro Obara2, Amane Makino1 (Grad. Sch. Agr., Tohoku Univ., Fac. Agr., Iwate Univ., JIRCAS)</td>
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<td>Flavodioxin Proteins Affect the Photosynthesis Electron Transport in Transgenic Rice with Decreased Rubisco Content</td>
<td>Live imaging system to track RNA polymerase II σerylphosphorylation in living <em>Arabidopsis thaliana</em></td>
<td>Preventing Submerge-Triggered Ammonium Toxicity - Mechanism of Inhibition of Ammonium Transporter activity in <em>Arabidopsis</em></td>
<td>Regulation and physiological importance of H₂O₂ metabolism in chloroplasts</td>
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<td>Ryo Marahashi1, Youshi Tazoe2, Shinya Wada1, Daisuke Takagi1, Hiroshi Yamamoto3, Toshiharu Shikama1, Amame Makino1 (Grad. Sch. Agr., Univ. Tohoku, Grad. Sch. Agr., Univ. Kobe, Grad. sch. Sci., Univ. Kyoto)</td>
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<td>Development of iTOME</td>
<td>Functional and Molecular Characterization of MYB71 and MYB79 Transcription Factors in <em>Arabidopsis</em></td>
<td>Glutathione-dependent arsenate recycling in high light</td>
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<td>Yusuo Terai1, Mio Tanaka2, Hiroki Ueno2, Daisuke Takagi1, Hiroshi Yamamoto3, Toshiharu Shikama1, Amame Makino1 (Grad. Sch. Agr. Sci., Tohoku Univ.)</td>
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**Photosynthesis**
- Transcriptional demand affects transcriptome dynamics in rice plants.
- Identification of guard cell K⁺ channel inhibitors that contribute to drought tolerance in *Arabidopsis thaliana*.

**New technology**
- Live cell imaging of plant bilirubin using a fluorescent biosensor UnGI.
- Live imaging system to track RNA polymerase II σerylphosphorylation in living *Arabidopsis thaliana*.

**Environmental responses A**
- Functional and Molecular Characterization of MYB71 and MYB79 Transcription Factors in *Arabidopsis*.

**Environmental responses B**
- Glutathione-dependent arsenate recycling in high light.
2aE01 E Elicitation of regulatory mechanisms for gibberellin-promoted arbuscular mycorrhizal symbiosis in *Eustoma grandiflorum*

Takahiro Nishiyama, Cheng-Chung Lin


2aE02 E Parasitic nematode hijacks plant systemic signaling for successful infection

Saeko Nakazumi, Atsuko Nomachi, Satoru Okamoto, Takanoi Iida, Yoshikazu Sato, Tetsuya Higashiyama, Allen Yi-Lun Tsai, Takahito Ishida, Shinichiro Sawa, Graduate School of Sci. Tech., Kumamoto University, (Room E 427)

2aE03 E Characterization of unknown haustorium inducing factor(s) for parasitic plant *Streptanthus arctomifolius*

Kazuki Katsuki, Takayuki Tanabe, Satoshi Yoshida (NAIST)

2aE04 E Bioluminescence imaging of fluorescent-tagged monolignol reveals lignification in the parasitic plant *Streptanthus arctomifolius*


2aF01 Biological role of actin cytoskeleton modulator in cytokinin signaling in *Arabidopsis thaliana*

Yoshiyuki Shiba, Hiromi Suzuki, Yuki Aoi, Hiroki Kanari, University of Tokyo, (Room F 2)

2aF02 E Identification of an Arabidopsis NTR1/PTR FAMILY protein that functions as an indole-3-butryric acid transporter

Shunsuke Watanabe, Naoki Takahashi, Yuki Kanno, Hiromi Suzuki, Yuki Aoi, Mutsunori Sato, RIKEN CSRS, (Room F 1)

2aF03 Functional analysis of an Arabidopsis JA-Ile transporter NEP1-1/PTR1 during Hpa infection

Kazumi Shimizu, Shota Asai, Hidenori Matsui, Gang-Su Hyon, Yuki Kanno, Hirofumi Nakagami, Ken Shinmura, Minatomi Sato, (NAIST, RIKEN CSRS, Graduate School of Life Sci., University of Okayama, MPH for Plant Breeding Research, Okayama, Japan)

2aF04 E Quantitative expression protein analysis of apical dominance in pea

Hitoshi Mori, Graduate School of Agr., Nagoya University, (Room F 427)

2aG01 E Activation mechanism of the nitrogen depletion responsive transcription factor MYB170 in the unicellular red alga *Cyanidiophycus meruloides*

Naofumi Zhao, Ken Tanaka, Sonoko Imamura, Institute for Chemistry and Life Science, Institute of Innovative Research, Tokyo Institute of Technology, (Room G 5)

2aG02 Target of rapamycin (TOR) signaling modulates starch accumulation via glycosgenphosphorylation status in the unicellular red alga *Cyanidiophycus meruloides*

Jin Pan, Hiroki Shimizu, Nakhi Higaishintani, Kazuhiro Igarashi, Atsushi Higaishintani, Kan Tanaka, Sonoko Imamura, Laboratory for Chemistry and Life Science, Institute of Innovative Research, Tokyo Institute of Technology, Department of Biochemistry, Tokushima University Graduate School of Medicine, Graduate School of Life Science, Tokushima University, (Room G 37)

2aH01 E Possible roles of the sugar transporter SfSWEET2, SfSWEET4, and SfSWEET6 in thermogenic inflorescences of skull cabbages (*Symlocarpus renifolius*)


2aH02 Functional analyses of ALMT malate transporters expressed in guard cells

Takayuki Sasaki, Izumi C. Mori, Michiyo Arisawa, Yoko Yamamoto, Institute of Plant Science and Resources, Okayama University, (Room H 37)

2aH03 E Multimeric structure of the nitrate transporter composed of small membrane proteins

Shin-ichi Maeda, Yuna Nishino, Tatsumi Omata, Laboratory of Photosynthesis Research, Department of Applied Biosciences, Graduate School of Bioagricultural Sciences, Nagoya University, (Room H 5)

2aH04 E Role of ammonium transporters in ammonium uptake by rice roots

Noriyuki Komishi, Jian Feng Ma, EPSR Okayama University, (Room H 2)

3JIRCAS)
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<tr>
<td>10:00</td>
<td>2aA05 Plastid encoded over-expression of Rubisco activase in <em>Nicotiana tabacum</em> for improved photosynthesis and biomass-related traits Shinji Rao Morey, Mieko Higuchi-Takeuchi, Masaki Odahara, Keiji Numata (RIKEN Center for Sustainable Resource Science, Biomacromolecules Research Team)</td>
<td>2aB05 Raman Microscopy for Real-time Multiplex Metabolic Imaging in Plants Simin Su, Yiu Len, Yukita Kodama, Keiji Numata (RIKEN, Center for Sustainable Resource Science, RIKEN)</td>
<td>2aC05 Ethanol mitigates drought stress tolerance in plants Kiharu Bashi, Suhana Rasheed, Toshihiro Tani, Yoshibi Habara, Yuari Tsuji, Jun Kikuchi, Shunsuke Watanebe, Mutsunori Seo, Figo Ando, Toshinori Kinoshita, Makoto Sato, Kanako Kawaura, Miki Fujita, Miyo Kusano, Kani Sato, Kazuo Shinozaki, Motooki Seki (Plant Genomic Network Research Team, CSRS, RIKEN)</td>
<td>2aD05 Is Plastidial Serine Biosynthesis Redox-Regulated? Keisuke Yoshihara, Kinsaku Ohtaka, Masami Yokota Hirai, Toru Hisabori (CSL, Tokyo Tech, RIKEN CSRS)</td>
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<tr>
<td>10:15</td>
<td>2aA06 Biologically compatible polyacrylamide for Bioplastic and Spider Silk Production Choon Pin Fong, Mieko Higuchi-Takeuchi, Keiji Numata (Center for Sustainable Resource Science, RIKEN)</td>
<td>2aB06 Simultaneous introduction of multiple biomacromolecules into plant cell mediated by cell-penetrating peptide nanocarrier Chonprakan Thung, Yukita Kodama, Keiji Numata (Biomacromolecules Research Team, CSRS RIKEN)</td>
<td>2aC06 Development of a plant phenotyping platform using “RIPPS”, an automated phenotyping system Miki Fujita, Saya Kikuchi, Masami Toyoshima, Yasunari Fujita, Takami Tanabe, Kazuo Shinzoaki (RIKEN CSRS, JIRCAS, Univ. Tokyo, Kuzusa DNA Research Institute)</td>
<td>2aD06 ROS Level Dynamics during Development of Zygote in Rice Kansudi Ratanaewong, Narumi Kiso, Takashi Okamoto (Dept. Biol. Sci., Tokyo Med. Univ.)</td>
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<td>10:30</td>
<td>2aA07 Roles of lipid transfer protein in the reduction of leaf blade size at elevated CO2 in rice Yumiharu Kim, Sumire Takahashi, Michiyo Miyano (Grad. Sch. Agric. Sci., Tohoku Univ.)</td>
<td>2aB07 Functional peptide-mediated chloroplast transformation in rice, Tobacco, and Kenaf Masaki Odahara, Jun Itami, Yoko Horii, Yuki Nogami, Kenta Watanabe, Keiji Numata (Biomacromolecules Research Team, CSRS RIKEN)</td>
<td>2aC07 Functional complementation of guard cell specific or phloem companion cell specific ABA biosynthesis Masami Kusamori, Miki Fujita, Makoto Sato, Saya Kikuchi, Kazuo Shinzoaki (RIKEN CSRS)</td>
<td>2aD07 The Effects Of LZY3 Expression Level On Its Subcellular Localization And Gravitropism Shogo Mori, Momota Nakamura, Ryutiro Osada, Takeshi Nishimura, Masahiko Furutani, Miyu T. Morita (Grad. Sch. Bioagri., Univ Nagoya, NIBB, Coll. Life Sci., Fujian Agriculture and Forestry Univ.)</td>
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<td>Prioritization of Solanum pennelli genes that confer post-germination resistance against a root parasitic plant, <em>Phelipanche aegyptiaca</em></td>
<td>Small Molecule Inhibitors Of Parasitic Striga Germination</td>
<td>An Arabidopsis <em>NRT1.1</em> allele is a superior allele conferring better nitrogen use under nitrogen-deficient conditions</td>
<td>Characterization of the nicotianamine exporter ENA1 in rice (Tomoko Nanyama)</td>
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<td>Long-distance movement of host derived modified mRNA, GUS:RNA-like sequences, and the translation in a stem parasitic plant, <em>Cucurbita campestris</em></td>
<td>Regulation of stirioglaucine biosynthesis by the DWARF14-LIKE pathway</td>
<td>Vacuolar network analysis for identification of key regulators of nitrogen responses in rice</td>
<td>Mutation of OsTultz2 alters iron distribution in rice</td>
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<td>Epidermal cell-patterning genes are involved in the holoblast formation of a stem parasitic plant, <em>Cucurbita campestris</em></td>
<td>Evolution of unique reproductive system using a high bioactive gibberellin in rice</td>
<td>Functional analysis of rice isozyme lyase in the oxalate synthesis</td>
<td>Mechanism underlying differential expression of HvHMA3 involved in cadmium accumulation in barley</td>
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<td>Semi-in vitro growth method for searching hyphae of a stem parasitic plant, <em>Cucurbita campestris</em></td>
<td>Functional analysis of EUL2, an epoxide hydrolase, in deactivation of gibberellins in rice</td>
<td>Studies on the molecular mechanisms regulating nitrogen-responsive flowering in Arabidopsis</td>
<td>Functional characterization of OCSASP1 involved in formation of the taproot strip in rice</td>
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### Day 2, Fri., March 20, AM (9:00–11:30)

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<tr>
<td>11:00</td>
<td>2aA09 Reactivation of oxidatively inactivated Rubisco by BSD2 in plants</td>
<td>2aB09 RAP tag and PMab-2 antibody: a tagging system used for detection and purification of proteins in plant cells</td>
<td>2aC09 Identification of protein kinases that activate ABA-unresponsive subclass I SnRK2 protein kinases under drought stress conditions</td>
<td>2aD09 Polarly localized LZY3 recruits RLD1 in gravity-sensing cells</td>
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<td>Sara E. Milward1, Kohji Nishimura1, Youke Toda2, Takezaki Tamaki3,</td>
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<td>Shunsuke Watanabe4, Toshinori Kinoshita5, Wataru Sakamoto6, Atsushi</td>
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<td>11:15</td>
<td>2aB10 Isolation of a rabbit monoclonal antibody for highly sensitive detection of citrus mosaic virus</td>
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<td>2aD10 Genetic analysis of anti-gravitropic offset in Arabidopsis</td>
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<td>Shogo Miyoshi1, So Tokunaga1, Tatsuhiko Ozawa2, Hiroki Takeda3, Misao</td>
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<td>Aono3, Takanori Miyoshi1, Hiroki Kishi4, Atsushi Muraguchi5, Shin-ichi</td>
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**Photosynthesis**

**New technology**

**Environmental responses B**

**Environmental responses A**
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<tr>
<td>2aE09 Bi-directional movement of mobile small RNA influence common physiological changes in different root-parasitic plant complexes Subhanak Bera¹, Kohki Shimizu¹, Keisuke Tanaka², Shunsuke Fujisawa³, Katsumi Yamaguchi³, Shuji Shigemori⁴, Koh Aoki² (¹Department of Applied Life Sciences, Graduate School of Life and Environmental Sciences, Osaka Prefecture University, Japan, ²NODAI Genome Research Center, Tokyo University of Agriculture, Japan, ³National Institute for Basic Biology, Japan)</td>
<td>2aG09 Analysis of C/N-nutrient responses through membrane localized ubiquitin ligase ATL31 and SNARe protein SYP61 Yoko Hasegawa¹, Akari Fujimaki², Yongming Lu³, Koki Makita³, Mayu Ara³, Tomohiro Uemura¹, Yohann Boutte³, Akiko Nakano³, Takeo Sato³, Junji Yamaguchi³ (¹Fac. Sci. and Grad. Sch. Life Sci., Hokkaido Univ., ²Sch. Sci., Hokkaido Univ., ³Graduate School of Humanities and Sciences, Ochanomizu Univ., ⁴Laboratory of Membrane Biogenesis - CNRS/ Bordeaux Univ. - France, ⁵Live Cell Super-Resolution Imaging Research Team, RIKEN Center for Advanced Photonics)</td>
<td>2aH09 Plasma membrane H+ -ATPase is required for active Si uptake in rice Namito Yamamura¹, Yuya Kawai¹, Masaki Okamura², Tameo Yusa¹, Namiki Mitani-Ueno², Naoki Yamaji², Jian Feng Ma², Yoshinori Kinoshita¹ (¹Grad. Sch. Sci., Nagoya Univ., ²IPSR, Okayama Univ., ³ITbM, Nagoya Univ.)</td>
<td>Symposium S08</td>
<td>Frontiers of growth and development in grasses explored by young researchers (8:45-11:45)</td>
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<td>2aH10 Expression and Ion Transport Activity of Salt Tolerant Pokkali Rice OsHKT1;1 Variants Shahin Imran¹, Maki Katsuhara², Tomoko Hori² (¹Institute of Plant Science and Resources, Okayama University, ²Division of Applied Biology, Faculty of the Textile Science and Technology, Shinshu University)</td>
<td>2aB09 RAP tag and PMab-2 antibody: a tagging system used for detection and purification of proteins in plant cells Kenji Miura¹,2, Hideki Yoshida¹,2, Mika Kaneko3, Yukinari Kato3 (¹Faculty Life Environ Sci, Univ Tsukuba, ²T-PIRC, Univ Tsukuba, ³Grad Sch Medicine, Tohoku Univ)</td>
<td>Symposium S09</td>
<td>Two sides of auxin actions on stem cells (8:45-11:41)</td>
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<td>2aC09 Identification of protein kinases that activate ABA-unresponsive subclass I SnRK2 protein kinases under drought stress conditions Fumiyuki Soma¹, Fuminori Takahashi², Takamasa Suzuki³, Kazuo Shinozaki², Kazuko Yamaguchi-Shinozaki¹ (¹Grad. Sch. Agr. Life Sci., Univ. Tokyo, ²Center for Sustainable Resource Science, RIKEN, ³Biosci. Biotech., Chubu Univ.)</td>
<td>2aD09 Polarly localized LZY3 recruits RLD1 in gravity-sensing cells Moritaka Nakamura¹, Masahiko Furutani², Chiemi Kondo³, Takeshi Nishimura¹, Masatoshi Taniguchi⁴, Miyo T. Morita¹ (¹NIBB, ²Col. Life Sci., Fujian Agriculture and Forestry Univ., ³Sch. Agr., Nagoya Univ., ⁴Grad. Sch. Bioagri. Sci., Univ. Nagoya)</td>
<td>Symposium S10</td>
<td>Understanding plant developmental processes along spatiotemporal axes (9:00-11:40)</td>
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<td>The function of the chloroplast-localized dynamin-like protein FZL in the regulation of photosynthetic electron transport</td>
<td>Direct-lyte Maize RNAiSeq to plant samples</td>
<td>Endosymbiont or organelle? Lipid-based strategy on the origins of plastids and chloroplasts</td>
<td>Genome-wide non-coding RNA trancription by RNA polymerase V</td>
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<td>The Analysis of a Novel Gene Essential for Cytochrome b6-Complex Accumulation in cyanobacterial species</td>
<td>3D transcriptional technology in plants</td>
<td>Comparative transcriptome analysis of chlorophyll a/b complexes in cyanobacterial species</td>
<td>Activation of an endogenous pararetrovirus and suppression of RNA interference in star-type petania</td>
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<td>Alterations in three-dimensional architecture of thylakoid membranes are concurrent with compositional changes and the functional conversion in photosystems</td>
<td>Gene targeting in Arabidopsis using an all-in-one strategy that uses a translational enhancer to aid Ca^2+ expression</td>
<td>Analysis of initiation of organelle DNA replication in red alga Cyanidioschyzon merolae</td>
<td>A microRNA derived from CMTI regulates global CHG methylation levels by controlling CMT5 activity in Arabidopsis thaliana</td>
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<td>Creation of the mutants in phytophyllosome genes of the cyanobacterium Anabaena sp. PCC 7120</td>
<td>Targeted transcriptional activation using the Cas9-activator in its planta-regeneration system</td>
<td>Evolutionary Scenario behind Bacterial-to-Eukaryotic Takeover of Plantid DNA Ligase Function in Land Plants</td>
<td>Analysis of the gene regulation through histone demethylation in response to DNA damage</td>
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<td>Mechanism of photoprotection of photosystem II by carotenoids during acclimation to very strong light in Synechocystis sp. PCC 6803</td>
<td>Genome editing by direct introduction of CRISPR/Cas9-protein-RNA complex into plant cells using our plasma technique</td>
<td>A novel light-dependent behavior of nucleoids dependent seedling growth</td>
<td>JUMONJI-C DOMAIN-CONTAINING PROTEINS control heat acclimation through epigenetic memory of histone modifications in Arabidopsis thaliana</td>
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<td>Taiichi Ichihara1,2,3</td>
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**Abstract Book**  
**Annual Meeting of JSPP**  
**Mar. 2020 Osaka**
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<td>Flowering/Clock</td>
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<td>Membrane trafficking/Cell cycle/Cell division</td>
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**Day 2, Fri., March 20, PM (13:15–15:45)**

- **2pE01**
  - Structural and functional analysis of a receiver-like domain of PRR8 that are implicated in central oscillator function of the circadian clock in Arabidopsis thaliana
  - Yasunori Takata, Chikae Teramae, Takafumi Yamashiro (Nagoya University Graduate School of Biocultural Sciences)
  - Identification of key transcription factors that determine pericycle stem cell identity in Arabidopsis

- **2pE02**
  - Cellular oxidative stress tolerance regulated by circadian clock in Synechococcus elongatus PCC7942
  - Kenya Tanaka1,2, Shuji Nakamichi1,2
  - Characterization of a novel transcription factor involved in flavin metabolism regulation in plants

- **2pE03**
  - Time information transmitting by sugar- and nutrient-transport maintenance in the circadian period in plants
  - Kyotaro Ueno1,2, Yumi Kusunoki1,2
  - A MYB transcription factor regulating coloration in garden peonies

- **2pE04**
  - Chronic jet-lag increases light damages in aged leaves
  - Mitsuaki Yamakawa, Akane Kubota, Motomu Endo (NAIST, Biological Science)
  - Identification of negative regulators of environmental stress response, by denediyulase ACF48 and RNA binding protein APUM5

- **2pE05**
  - Molecular mechanism of day-length measurement under natural conditions
  - Akane Kubota1,2, Shingo Inamurazawa1,2, Motomu Endo1, Takuma Imaizumis1,2
  - Importance of the RNA secondary structure and the helicase domain of Dicer-like in Arabidopsis microRNA biogenesis

**Room W Time**

- **2pG01**
  - Intracellular dynamics during spriomgeiosis in Marchantia polymorpha
  - Naoki Minamino1,2, Takuya Nishiyama1,2, Kazuo Ebine3,4
  - Isolation and characterization of putative transcription factors that bind to the promoter of EXE1 by yeast one-hybrid assay

- **2pG02**
  - Screening for Factors Involved in Biogenesis of the Oil Body in Marchantia polymorpha
  - Takehiko Kanagawa1,2, Takashi Ueda1,2
  - Characterization of a novel transcription factor involved in flavin metabolism regulation in plants

- **2pG03**
  - Capture-and-release process of ER exit sites by Golgi stacks
  - Shinya Tanaka1,2, Akira Amano1,2
  - A MYB transcription factor regulating coloration in garden peonies

- **2pG04**
  - Phenotypic analysis of vascular sorting mutant Image in sucrose-dependent seedling growth
  - Chika Hoshikawa1,2, Kentaro Tamura1,2, Tommy Shimada1,2
  - Identification of key transcription factors that determine pericycle stem cell identity in Arabidopsis

- **2pG05**
  - In Silico Identification, Characterization And Functional Annotation OCSNARE And NPSRN Genes of Wheat (Triticum aestivum)
  - Payal Gargar, Manish Kumar, Kunal Mukhopadhyay (Birla Institute of Technology)

- **2pH01**
  - Identification of key transcription factors that determine pericycle stem cell identity in Arabidopsis
  - Naoki Minamino1,2, Takuya Nishiyama1,2, Kazuo Ebine3,4
  - Identification of key transcription factors that determine pericycle stem cell identity in Arabidopsis

- **2pH02**
  - Tissue growth rules self-organize reproducible and scalable organ shape of plant root
  - Motonori Fujita1,2, Tatsuaki Goto1,2, Satosi Tozawa3,4, Koichi Fujimoto1,2

**Room X Time**

- **2pH03**
  - Genome-wide alteration of pre-messenger RNA splicing in a light-sensitive moss-hair development mutant of Arabidopsis thaliana
  - Miku Ishizawa1,2, Kei-ichiro Mishiba1,2, Shinichi Takaichi4,5
  - Genomic alteration of pre-messenger RNA splicing in a light-sensitive moss-hair development mutant of Arabidopsis thaliana

- **2pH04**
  - De novo ATML1 transcription in the outermost cells
  - Hiroki Iida1,2, Gerd Hбережев1,2, Shinshu Takekawa1
  - Identification of redox-responsive transcription factor in the outermost cells

**Room Y Time**

- **2pH05**
  - An epidermis-specific transcription factor Mpg4BDZ is essential for growth of Marchantia
  - Shogo Ignoya1,2, Hiromitsu Motose1,2, Takashi Takahashi1,2
  - An epidermis-specific transcription factor Mpg4BDZ is essential for growth of Marchantia
<table>
<thead>
<tr>
<th>Time</th>
<th>Room A</th>
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<th>Room C</th>
<th>Room D</th>
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</thead>
<tbody>
<tr>
<td>14:30</td>
<td>2pA06 Regulatory mechanism of photosynthetic complexes by antisense RNA Aa_cpcC2 in the cyanobacterium Synechocystis sp. PCC 6803</td>
<td>2pB06 CRISPR-Cas9 technology for single nucleotide insertion in rice genome editing</td>
<td>2pC06 Evolutionary Aspects of Plantid-to-Nucleus Signaling and GUN1 Function</td>
<td>2pD06 Two Modes of H3K4me Regulation Revealed by Machine Learning; Upstream and Downstream of Transcription</td>
</tr>
<tr>
<td></td>
<td>Yuko Matsumoto1, Makoto Inagaki2, Wolfgang R. Hess3, Yukako Hihara3</td>
<td>Hidetsu Kaya1,2, Hirooki Saika1, Naho Haru1, Takeda Hi1, Keichi Toki1,2,3 (PMBV, Graduate School of Agriculture, Ehime University)</td>
<td>Nobuyoshi Mohri1, Hidetsu Sakayama1, Tomoaki Nishiyama1, Akira Nagatani12, Yukako Chiba2,</td>
<td>Satoyo Oya1, Inagaki Soichi2, Tetsuji Kakutani1,2 (Grad. Sch. Biol. Sci., UTokyo, 7NGU)</td>
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<td>(Grad. Sch. Sci. Eng., Saitama Univ., Fac. Biol., Freiburg Univ.)</td>
<td>Institute of Agrobiological Sciences, NARO, Bioinformatics Team, Advanced Analysis Center, NARO, Department of Life and Environmental System Science, Graduate School of Nanobioscience, Yokohama City University, Kihara Institute for Biological Research, Yokohama City University)</td>
<td>University of Tokyo, 7Agric., Res. Cen., Kanazawa Univ.)</td>
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<tr>
<td>14:45</td>
<td>2pA07 Mapping analysis of error prone PCR generated mutations on ChlR, which enable to activate gene expression constitutively, in the cyanobacterium Synechocystis sp. PCC 6803</td>
<td>2pB07 Development of Giri (CKX2) gene-knockout indica rice line with enlarged sink capacity using genome-editing technologies</td>
<td>2pC07 MEN6 transcription factors regulate salt-induced chloroplast division in the moss Physcomitrella patens</td>
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<td>Yuto Hiraide1, Akira Komatsu1, Maki Ohtake1, Maki Nagata1, Masaki Okamura2, Hitoshi Sakakibara3,</td>
<td>Haruki Yamamoto1, Maki Ontake1, Maki Nagata1, Masaki Okamura1, Hirofumi Fukuda1, Kyoko Miwa2,</td>
<td>Aiyarathine Menaka1, Hiroyoshi Takano2, Yaushi Yoshikuni2, Oni-Keck Tch1,</td>
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<td>cyanobacterium gene expression constitutively, in the mutations on ChlR, which enable to activate</td>
<td>Tatsuki Itoh3, Tomohide Kondo1 (NARO Institute of Agrobiological Sciences (NIAS), NARO Hokuriku Research Station, Central Region Agricultural Research Center, Graduate School of Bioagricultural Sciences, Nagoya University, NARO Hokkaido Agricultural Research Center)</td>
<td>Tomonobu Fujita1,2,3, Kengo Suzuki2,3, Osamu Iwata2,3, Kengo Suzuki1,2,3,</td>
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<td>genes, in the mutations on ChlR, which enable to activate gene expression constitutively, in the</td>
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<td>Keiichi Mochida1,2,4,5 (RIKEN CSRS, for Biological Research, Yokohama City University, 7Agric., Res. Cen., Kanazawa Univ.)</td>
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<td>cyanobacterium Synechocystis sp. PCC 6803, Yuto Hiraid1, Haruki Yamamoto1,</td>
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<td>Yaushi Kawai1, Hisanori Yamakawa1, Kei Wada1, Yuchi Fujita1 (Graduate school of</td>
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<td>Bioagricultural Sciences, Nagoya University, 7Department of Medical Sciences, University of Miyazaki)</td>
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<td>15:00</td>
<td>2pA08 Development of a novel transformation method of marine purple photosynthetic bacteria using microcystin-photocleaving peptide</td>
<td>2pB08 Highly efficient genome editing in Euglena gracilis</td>
<td>2pC08 Roles of anionic membrane lipids during the development of etioplasts in dark-grown cotyledons</td>
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<td>Miki Higuchi-Takasaki, Kumiko Morisaki, Mami Goto, Keiji Namaura (RIKEN CSRS, Biomacromolecules Research Team)</td>
<td>Yoshitaka Nomura1,2,3, Kosaki Inoue1,2,3,</td>
<td>Akiko Yoshihara1, Hajime Wada2, Shinya Yonezawa1, Keiichi Kajita1,2,3,</td>
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<td>Yukiko Uchida-Yamauchi1, Kohji Yamauda1,2, Osamu Iwata2,3, Kengo Suzuki1,2,3, Kitchen Modeshi1,2,3,4,5,</td>
<td>Akiko Yoshihara1, Hajime Wada2, Shinya Yonezawa1, Keiichi Kajita1,2,3,</td>
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<td>(RIKEN CSRS, RIKEN BPR, Euglena Co., Ltd., 7Kihara Inst. Biol. Yokohama city Univ., 7IPSR Okayama Univ.)</td>
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<tr>
<td>15:15</td>
<td>2pA09 Development of a genome-editing system in cyanobacterium, Acaryochloris marina</td>
<td>2pB09 Transgene-free genome editing using removal highly active Platinum TALEN plasmids in oleaginous microalga, Nannochloropsis</td>
<td>2pC09 Role of ppcP in the chloroplast biogenesis during early leaf development in rice</td>
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<td>Hiroki Tabuchi, Chikahito Matumoto, Ruyasuri Furuya, Kazuyuki Watabe,</td>
<td>Tomoharu Kumita1, Katsuhisa Morii1, Masako Iwai1, Kumiko Okazaki1, Seiji Nomura1, Fumihiro Saito1,</td>
<td>Kazuhiro Ino1, Doshin Ino1, Shinya Masuda1, Koji Doi, Kensi Kusumi1 (Dept. Biol. Fac. Sci. Kyushu Univ., 7Dept. Life Science &amp; Technology, Tokyo Institute of Technology, Center for Biologica</td>
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<td>Flowering/Clock</td>
<td>Transcriptional, post-transcriptional or translational, post-translational regulations</td>
<td>Membrane trafficking/Cell cycle/Cell division</td>
<td>Vegetative growth</td>
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<tr>
<td>2pE06</td>
<td>The short day- and salicylic acid-induced flowering pathway of a backcrossed, Wolfiella lujumensis 7378</td>
<td>2pG06</td>
<td>Evolution of plantin RNA editing sites and strategy of new target acquisition by pPR protein as a specificity factor</td>
<td>2pH06</td>
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<td>2pE07</td>
<td>A mechanism of early flowering in Arachis hypogaea</td>
<td>2pG07</td>
<td>Comprehensive analysis of nuclear pore complex in centromere arrangement in Arabidopsis thaliana</td>
<td>2pH07</td>
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<td>2pE08</td>
<td>Puriifer promotes internode elongation in wheat</td>
<td>2pG08</td>
<td>Differential regulation of cell cycle progression in the root epidermis</td>
<td>2pH08</td>
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F = Presentation in English
## Day 2, Fri., March 20, PM (13:15–15:45)

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<td>Membrane trafficking/Cell cycle/Cell division</td>
<td>Vegetative growth</td>
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<td>2pF10</td>
<td>2pH10</td>
<td>Symposium S11</td>
<td>Development and application of plant manipulation strategy; towards the design of optimized crop production (13:00–16:00)</td>
<td>Symposium S12</td>
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</table>

**Symposium S11**

**Development and application of plant manipulation strategy: towards the design of optimized crop production (13:00–16:00)**

**Symposium S12**

**Dynamic photosynthetic responses to fluctuating light (13:00–16:00)**

**Symposium S13**

**New Trends in Plant Chemical Research by the Interconnection between Chemical Biology and Metabolite Chemistry (13:00–16:00)**

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2pF10 SUMO E3 ligase SIZ1 negatively regulates shoot regeneration in Arabidopsis
Duncan Coleman1,2, Ayako Kawamura1, Motoko Ikeuchi1, David S. Favero2, Akira Iwase2, Alice Lambrechts2, Takamasa Suzuki3, Keiko Sugiimoto1,2 (Center for Sustainable Resource Science (CSRS), Riken, 1Department of Biological Science, Graduate School of Science, The University of Tokyo (Grad. Sch. Sci., Univ. Tokyo), 2College of Bioscience and Biotechnology, Chubu University. (Col. Biosci. Biotech., Chubu Univ.))

2pH10 ROS production by MpRbohB activated by Ca2+ binding and MpCPK5-mediated phosphorylation is essential for polar tip growth of rhizoids in Marchantia polymorpha

E=Presentation in English
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<tbody>
<tr>
<td>09:15</td>
<td><strong>3aA02</strong> Analysis of germ cell-specific histone H1 variants involved in spermiogenesis in Marchantia Kenta Konoki, Ruri Nishida, Asuka Higo, Ken-ichi Nonomura, Kenta Mabuchi, Tatsuya Higashiyama, Takashi Ito, Nara University, Tokyo University, University of Tokyo, Japan.</td>
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<td>09:45</td>
<td><strong>3aA04</strong> COP9 signalosome and its interacting partner AISAPI30 both contribute to pollen development in Arabidopsis thaliana Chika Akagi, Shiori S Aki, Takashi Aoyama, Tomohiko Tsuge (ICR, Kyoto Univ.)</td>
<td><strong>3aB03</strong> ATTED-II v10: a Plant Coexpression Database Providing Logit Score of Ensemble Mutual Rank as Coexpression Index to Enhance Usability for Genome-Wide Analyses Takeshi Ohbayashi, Yuiichi Aoki, Grad. Sch. Info. Sci., Univ. Tokohoku, Tohoku University</td>
<td><strong>3aC03</strong> Starch sheath is required for the CO2-concentrating mechanism in <em>Chlamydomonas reinhardtii</em> Chiharu Takeda, Takeshi Yamano, Hideya Fukuzawa, Grad. Sch. Bio., Kyoto Univ.</td>
<td><strong>3aD03</strong> PRR7 regulates phototropin-mediated light responses Shunta Sugi, Hinako Kasuga, Kentaro Torii, Akane Kubota, Toshiro Kinoshita, Norihiko Nakamichi, Motomu Endo, Dev. Biol. Biostudies, Univ. Kyoto, Grad. Sch. Sci., Univ. Nagoya</td>
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**Day 3, Sat., March 21, AM (9:00–11:45)**

- **Reproductive growth**
- **Systems biology**
- **Organelles/Cytoskeleton**
- **Photoreceptors/Photoreponses**
### Room E

<table>
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<th>Authors</th>
<th>Affiliations</th>
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<tr>
<td>09:00</td>
<td>Plant aquaporin phosphorylation for antibacterial water defense under high humidity</td>
<td>Shigetaka Yasuda, Taishi Hinata, Lionel Verdoucq, Collette Tournaire-Roux, Kohji Yamada, Iris Finkemeier, Hirofumi Nakagami, Xia-Fang Xu, Sheng Yang He, Christophe Maunoury, Yauke Saito</td>
<td>RIAST, CNRS, NIMFE, Tokushima Univ., Univ. Munster, Michigan State Univ.</td>
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### Room F

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<tr>
<td>09:00</td>
<td>Sensitization of PEPK damage signaling confers pathogen resistance under phosphate deficiency in Arabidopsis thaliana</td>
<td>Kazuo Hara-Leg, Motoki Tanaka, Taishi Hinata, Shigetaka Yasuda, Kei Hiruma, Yauke Saito</td>
<td>RIAST, JST PRESTO</td>
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### Room G

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<tbody>
<tr>
<td>09:00</td>
<td>OGG1PC1 acts as a NO sensor to trigger disease resistance to rice blast fungus through the degradation of histone deacetylase HDT701</td>
<td>Kon-ichi Kusami, Jing Su, Tae-Thu Dang, Ko Shimamoto, Yoji Kawano</td>
<td>NRIAS, JST PRESTO, NIGST, RIKEN, Osaka Univ.</td>
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### Room H

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<tbody>
<tr>
<td>09:00</td>
<td>Pathogen challenge to Arabidopsis coryledon sets sustained aquisition of a WRKY gene and defense priming at newly formed rosette leaves</td>
<td>Kanekura Sakiyama, Tokoji Tachiyama</td>
<td>Grad. Sch. Bion., Nagoya Univ., Coll. Biosci., Nagoya Univ.</td>
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**Room W**

- **Symposium S15**: From plant physiology to biotechnology in plant light response systems (09:00-11:35)
- **Room X**: Abstract Book, Annual Meeting of JSPP, Mar. 2020 Osaka
- **Room Y**: Abstract Book, Annual Meeting of JSPP, Mar. 2020 Osaka
### Day 3, Sat., March 21, AM (9:00–11:45)

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<tr>
<td>10:00</td>
<td>3aA05 Molecular analyses of CFI 25 in plant 3'-UTR length determination</td>
<td>3aB05 Functional Analysis Of Novel Small Coding Gene In Plant Genome</td>
<td>3aC05 On the C-terminal DYW domain of PPR type RNA editing factors in plant organelles</td>
<td>3aD05 The role of blue-light sensing by PHOT and CRF in the regulation of unequal gemmulation in Marchantia polymorpha subsp. alpinae</td>
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<td>Xinran Zhang1, Naoki Takahashi2, Masaki Umeda3, Marta Garcia Leon1, Vicente Rubio2, Mika Nomoto3, Yauomi Tada4, Tsuyoshi Furukawa5, Takashi Aoyama6, Tomohide Fuse7</td>
<td>Somerselli Takada1, Kentaro Nakamura2, Mieko Higuchi-Teakeuchi2, You-Wang Kim3, Minami Shinomi2, Masanori Okamoto2, Takashi Yoshidzuma2, Ranko Nishi3, Motoaki Saka1, Kazuo Shinomi2, Minami Matsui1, Kousuke Hanada1</td>
<td>Mizuki Takezaka1, Ikoda Yuki2, Ayuko Maeda1, Sachiko Takekawa1, Matthias Burger1, Gert Weber1</td>
<td>The role of blue-light sensing by PHOT and CRF in the regulation of unequal gemmulation in Marchantia polymorpha subsp. alpinae</td>
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<td>(ICR, Kyoto University, 2Graduate School of Science and Technology, NAIST, CNB-CSIC, Spain, *Center for Gene Research, Nagoya University, Faculty of Agriculture, Ryukoku University)</td>
<td>(ICR, Kyoto University, 2Graduate School of Science and Technology, NAIST, CNB-CSIC, Spain, *Center for Gene Research, Nagoya University, Faculty of Agriculture, Ryukoku University)</td>
<td>(ICR, Kyoto University, 2Graduate School of Science and Technology, NAIST, CNB-CSIC, Spain, *Center for Gene Research, Nagoya University, Faculty of Agriculture, Ryukoku University)</td>
<td>(ICR, Kyoto University, 2Graduate School of Science and Technology, NAIST, CNB-CSIC, Spain, *Center for Gene Research, Nagoya University, Faculty of Agriculture, Ryukoku University)</td>
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<tr>
<td>10:15</td>
<td>3aA06 Biochemical analysis of natural variations in STEGOMATIC PRIVACY1, an interspecies incompatibility factor, in Arabidopsis thaliana Yohi Shida Kato, Yuka Kimura, Seiji Takeyama, Sota Fuji (Grad. Sch. Agric. Life Sci., Univ. Tokyo)</td>
<td>3aB06 Predicting genes related to the biosynthesis of Campothecin by integrating promoter similarity score with gene co-expression analysis</td>
<td>3aC06 Alternative Oxidase Capacity of Microorganisms in Microsporophyll May Function in Cydad Thermogenesis Yui To Inaba, Mizuki Ohara, Hanami Yamamoto, Takahiro Inaba (Fac. Agric. Univ. Miyazaki)</td>
<td>3aD06 Characterization of light-induced leaf movement in soybean Yunsuke Kudo1, Rie Mishima1, Toshimori Kinosita1, Shin-ichiro Inoue1 (Biol., Sci., Nagoya Univ., *THMM, Nagoya Univ.)</td>
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<tr>
<td>10:30</td>
<td>3aA07 Study of amino acid residues involved in the function of Stegomatic protein 1 that rejects foreign pollen Shota Ishida, Yuka Kimura, Sota Fuji, Seiji Takeyama (Laboratory of Bioorganic Chemistry Graduate School of Agriculture and Life Sciences The University of Tokyo)</td>
<td>3aB07 Transcriptional assessment of the reproducibility of seasonal phenomena in poplar trees grown in a shortened annual cycle system Yuki Kurita1, Ayumi Tenzuka1, Ayumi Deguchi1, Misao Ohnishi1, Kiminori Ishizaki2, Hidehiro Fukaki2, Ken'ichi Haba1, Tetsuro Minoura3, Aritoshi J. Nagano3 (Faculty of Agriculture, Ryukoku University, *Grad. Sch. Sci., Kobe University, RISH, Kyoto University)</td>
<td>3aC07 Critical roles of autophagy and enzymatic ROS production in the regulation of tapetal programmed cell death in rice Takamatsu Kana1, 2, Shigeru Hanakata3, Junpei Sawada1, Togo Fukunaga1, Kanaori Ogawa2, Seiji Ono2, Hidetaka Kato3, Seichi Toki2, Ken'ichi Nonomura4, Kazuyuki Kuchitsu3,4</td>
<td>3aD07 Multiple roles of auxin transport in the blue-light-directed movement of petiole Yuta Otok1, Masaki Watanuki1, Ken Haga1, Tatsuya Sakai1, Hirotsuru Tsuchiya2,3,4 (Grad. Sch. Sci., UTokyo, 2Grad. Sch. Sci., Hokkaido Univ., 3Dept. App. Chem., Fac. Fan. Eng., 4NT, Grad. Sch. Sci. Tech., Niigata Univ., *ExtCELLS, OIB)</td>
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<tr>
<td>10:45</td>
<td>3aA08 Deep evolutionary origin of gamete-directed zygote activation by KNOX BEL transcription factors in green plants Tetsuya Hisanaga1, 2, Shota Fujimoto2, Yubu Cui1, Kazutoshi Sato1, Shohei Yamaoka2, Takayuki Kohchi1, Frederic Berger1, Kei'ichi Baba1,2 (Grad. Sch. Sci. Tech., NAIST, *Grad. Sch. Bio admitting, Kyoto Univ.)</td>
<td>3aB08 Characterization of secondary metabolites in black rice in field conditions Kokuo Hayashi1, Hiroki Saka1, Shiori Kojima1, Tomohiro Igasaki1</td>
<td>3aC08 Essential roles of autophagy in metabolic regulation in endosperm development during rice seed maturation Shigeki Hayashi1, 2, 3, Yari Sera1, Shingo Sakamoto1, Sei'ichi Ono2, Kentaro Kaneko1, Yoshiki Matsuda1, Tomoko Koyano1, Naoki Fujita2, Ai Sato3, Takahiro Minoura1, Hikaru Saji2, Ken'ichi Nonomura4, Nobukata Mito4, Tatsuki Matsui1, Takamatsu Kana1,2,3,4, Kazuyuki Kuchitsu3,4</td>
<td>3aD08 AT-hook transcription factors restrict petiole growth by antagonizing PIFs David E Farmer1, 2, Ayako Kawanura3, Michitaro Shibata1, Arika Takeyashiki1, Joo-Hoon Jung2, Takamasa Suzuki1, Katja E Jager3, Takashi Ishida2, Akira Iwasue1, Philip A Wigge1, 2, Michael N Neff1, 2, Keiko Sugimoto3, 4 (RIKEN Cent. Sust. Res. Sci., *Sainsbury Lab., Univ. Cambridge, UK, 2Dept. Biol. Sci., Sungkyunkwan Univ., Korea, 3Dept. Biol. Chem., Chiba Univ., 4Leibniz-Institut fur Genom- und Zueifpflanzenbau, Germany, 5Dept. Crop Soil Sci., Washington State Univ., USA, 6Dept. Plant Sci. Grad. Prog., Washington State Univ., USA, 7Dept. Biol. Sci., Univ. Tokyo)</td>
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**Notes:**
- **Room A** is located in Room E, Room F, Room G, Room H.
- **Room B** is located in Room A, Room B, Room C, Room D.
- **Room C** is located in Room A, Room B, Room C, Room D.
- **Room D** is located in Room A, Room B, Room C, Room D.
- **Abstract Book** is available for reference.
- **Annual Meeting of JSPP** is held in Mar. 2020 Osaka.
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<td>3aE06</td>
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<td>Effect of salicylic acid and jasmonate-mediated transient transformation in <em>Marchantia polymorpha</em>&lt;br&gt;Hidekazu Iwakawa&lt;sup&gt;1,2&lt;/sup&gt;, Naotsu Naonoto&lt;sup&gt;2,3&lt;/sup&gt;, Jumpei Koyukada&lt;sup&gt;2&lt;/sup&gt;, Hirofumi Nakagami&lt;sup&gt;4&lt;/sup&gt; (1Max-Planck Institute for Plant Breeding Research, Germany, 2Graduate School of Life Sciences, Tokoku University, 3Graduate School of Bioscience and Biotechnology, Chubu University)</td>
<td>Physiological characterization of a bacterial community, cryoconites, and its dominant cyanobacteria on the glacial surface in Spitsbergen, Svalbard&lt;br&gt;Makiko Komiya&lt;sup&gt;1,2&lt;/sup&gt;, Jun Uenaka&lt;sup&gt;1&lt;/sup&gt;, Mitsuo Yano&lt;sup&gt;1&lt;/sup&gt;, Yuri Tabuchi&lt;sup&gt;1&lt;/sup&gt;, Naichi Sato&lt;sup&gt;1&lt;/sup&gt;, Hiroiyo Keke&lt;sup&gt;1&lt;/sup&gt; (1Astrobiology Center, 2Chao University, 3Colorado State University)</td>
<td>A Hexasamine-containing Head Group of Sphingolipid Is a Novel Determinant of Seed Size in <em>Arabidopsis thaliana</em>&lt;br&gt;Makio Kawai-Yamada&lt;sup&gt;1&lt;/sup&gt;, Maki Kawasaki-Yamada&lt;sup&gt;1&lt;/sup&gt;, (Grad. Sch. Sci. Eng., Saitama Univ.)</td>
<td>ABA and Transcription Factor Control of Submergence-Induced Stomatal Suppression in an Amphibious Plant, <em>Calliandra pauciflos</em>&lt;br&gt;Yuki Doi&lt;sup&gt;1&lt;/sup&gt;, Hiroyuki Koga&lt;sup&gt;1&lt;/sup&gt;, Hirokazu Tsukaya&lt;sup&gt;1,2&lt;/sup&gt; (1Grad. Sch. Sci., Univ. Tokyo, 2ESTCELLS, NINS)</td>
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<td>Effects of excess sterols on cellular activity of plants&lt;br&gt;Shoji Shijinobu&lt;sup&gt;1&lt;/sup&gt;, Kentaro Yanaguchi&lt;sup&gt;2&lt;/sup&gt;, Hiro Takashashi&lt;sup&gt;1&lt;/sup&gt;, Shuichi Fukuyoshi&lt;sup&gt;2&lt;/sup&gt;, Takashi Ueda&lt;sup&gt;1&lt;/sup&gt;, Ikko Hara-Nishimuras&lt;sup&gt;1&lt;/sup&gt; (Chiba Univ., 2NIBB, 3Kanazawa Univ., 4Kaneo Univ.)</td>
<td>Effects of excess sterols on cellular activity of plants&lt;br&gt;Takeshi Shimada&lt;sup&gt;1&lt;/sup&gt;, Kentaro Yanaguchi&lt;sup&gt;2&lt;/sup&gt;, Hiro Takashashi&lt;sup&gt;1&lt;/sup&gt;, Shuichi Fukuyoshi&lt;sup&gt;2&lt;/sup&gt;, Takashi Ueda&lt;sup&gt;1&lt;/sup&gt;, Ikko Hara-Nishimuras&lt;sup&gt;1&lt;/sup&gt; (Chiba Univ., 2NIBB, 3Kanazawa Univ., 4Kaneo Univ.)</td>
<td>Plant hormone and light signal crosstalk in rapid response of <em>Arabiga aquatica</em> to suppress stomatal development under submergence&lt;br&gt;Shuji Kijmatsu, Tatsusha Utsunomiya, Fuku Noguchi, Tomosuke Sakamoto, Seiko Kusuma (Kyoto Sangyo Univ., Life Science)</td>
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<td>Pinothin, the main sugar component of the Sugi male strobili&lt;br&gt;Tomohiro Hara&lt;sup&gt;1&lt;/sup&gt;, Shogo Ishiyama&lt;sup&gt;2&lt;/sup&gt;, Koichi Kakegawa&lt;sup&gt;3&lt;/sup&gt; (1Dept. of Mol. Genet. Biotech., 2FFPRI, 3Dept. of For. Res. Chem., FFPRI)</td>
<td>Pinothin, the main sugar component of the Sugi male strobili&lt;br&gt;Tomohiro Hara&lt;sup&gt;1&lt;/sup&gt;, Shogo Ishiyama&lt;sup&gt;2&lt;/sup&gt;, Koichi Kakegawa&lt;sup&gt;3&lt;/sup&gt; (1Dept. of Mol. Genet. Biotech., 2FFPRI, 3Dept. of For. Res. Chem., FFPRI)</td>
<td>The role of <em>CREASED FLOWERS</em> in the morphogenesis of flattened leaf blade&lt;br&gt;Xiaofeng Yin, Hideo Tsukaya (The University of Tokyo)</td>
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<td>3aA09 Transcriptional approach to identify the molecular regulators of</td>
<td>3aC09 Microtubule dynamics on the first asymmetric division in the spore</td>
<td>3aD09 CDKA regulates light signaling responses in Physcomitrella patens</td>
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<td>yzolate polarity</td>
<td>of Marchantia polymorpha</td>
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<td></td>
<td>Yauke Kimura1, Takamura Suzuki1, Miya Mizutani1,2, Tomomi Yamada1,3,</td>
<td>Yuki Sakai1,2, Takami Higashi1, Ryuichi Nishihama2, Takayuki Kohuchi2,</td>
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<td>Masahiro Kamada1,2,3, Takayuki Higashiyama1, Minako Ueda1,3</td>
<td>Seiichiro Hasezawa2,3,4 (GSFS, Univ. Tokyo, Grad. Sch. Sci., Kobe Univ.,</td>
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<td>(WPI-ITIMM, Nagoya University, College of Bioscience and Biotechnology,</td>
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<td>Chubu University, Graduate School of Science, Nagoya University,</td>
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<td>3aC10 Functional Analysis of a Plant Nuclear Lamina Protein CRWN in</td>
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<td>development in rice</td>
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<td>Yiling Miao1, Taiyo Toriba1,</td>
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<td>Junko Kyozuka1 (Grad. Sch. Life Sci., Univ. Tohoku, Grad. Sch. Agri.,</td>
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<td>Nanjing Agri.)</td>
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<td>11:30</td>
<td>3aA11 Genome-wide association study and physiological observation of</td>
<td>3aC11 Involvement of distinct glycolytic enzymes in glycogen turnover</td>
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<td>afternoon flower and opening morning glory (AFOMG)</td>
<td>in Synechocystis sp. PCC 6803</td>
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<td>Seika Motoyama1, Kimyo Sage-Ono1,</td>
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<td>Kenta Watanabe2, Nobuo Nakamura2,</td>
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<td>Eiji Nitasaka4, Nobuyoshi Nakajima1,</td>
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<td>Kenta Shirasawa6, Michiyuki Ono1 (GRC, Univ. Tsukuba, RIKEN CSRS,</td>
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<td>Hokkaido SG HS, Kira. Sch. Sci, Kyushu Univ., NIES, Kazusa DNA Res.</td>
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<td>Involvement of distinct glycolytic enzymes in glycogen turnover in Synechocystis sp. PCC 6803</td>
<td>Identification of Genes Specifically Expressed in Hydathodes</td>
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<td>Eiji Suzuki, Ryutaro Suzuki (Grad. Bioresour Sci, Akioka Pref Univ)</td>
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<td>Tatsuya Ishikawa1, Hiroshi Hasebe2,3,4,5, Masatomo Toyoda1,3,5, Satama Univ.</td>
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<td>Naoko Terada1, Hiroki Tomonaga2, Kazuma Nagawa1, Fanyu Nie1, Akiko Yoshida2, Junko Kyoyama2,2,3,4,5, Tohoku Univ., 2RIKEN CSRS, 3Grad. Sch. Agri., Tokyo Univ. of Agri. and Tech.)</td>
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Sousuke Imamura
Shuichi Yanagisawa
Takeo Satou

2aH01-10 Biomembrane/Ion and solute transport
Tomoko Nozoye
Tomoaki Horie
Jian Feng Ma

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2pA01-09 Photosynthesis
Toshiharu Shikanai
Yukako Hihara
Jiro Harada

2pB01-10 New technology
Keiichi Mochida
Daisuke Miki
Hidetaka Kaya

2pC01-09 Organelles/Cytoskeleton
Yoshiki Nishimura
Kouichi Kobayashi
Kensuke Kusumi

2pD01-06 Epigenetic regulation
Toshiyuki Fukuhara
Yoko Ikeda

2pE01-08 Flowering/Clock
Motomu Endo
Hiroyuki Tsuji
Tokitaka Oyama

2pF01-10 Transcriptional, post-transcriptional or translational, post-translational regulations
Yukako Chiba
Nobutaka Mitsuda
Mayuki Tanaka

2pG01-08 Membrane trafficking/Cell cycle/Cell division
Tomoo Shimada
Takashi Ueda
Akira Iwase

2pH01-10 Vegetative growth
Tomomichi Fujita
Yukiko Yasui
Tatsuaki Goh

Day 3, Sat., March 21, AM

3aA01-11 Reproductive growth
Tetsuya Higashiyama
Shohei Yamaoka
Keiji Nakajima

3aB01-08 Systems biology
Masami Hirai
Takeshi Obayashi
Mami Yamazaki

3aC01-10 Organelles/Cytoskeleton
Yuuki Sakai
Yasuko Ito-Inaba
Takashi Yamano

3aD01-11 Photoreceptors/Photoreponses
Shin-Ichiro Inoue
Yusuke Aihara
Toshiaki Kozuka

3aE01-11 Plant-organism interaction A
Yoji Kawano
Hiroyuki Hirai
Hirofumi Nakagami

3aF01-06 Environmental responses of photosynthesis
Haruhiko Jimbo
Nobuyuki Takatani

3aG01-10 Primary metabolism
Toshiki Ishikawa
Eiji Suzuki
Shoji Mano

3aH01-11 Vegetative growth
Chiyoko Machida
Kumi Sato-Nara
Gorou Horiguchi
GENERAL PREsentations

Program of Poster Presentations

- On Day 2, those presenting on Day 1 should remove their posters at 9:00–12:00, and those presenting on Day 3 should mount their posters at 14:00–17:00.

The poster discussion times are as follows.

- For presentations in the first half: 17:00–18:30 on Day 1.
- For presentations in the second half: 13:00–14:30 on Day 3.
- On both Days 1 and 3, presenters of odd- and even-numbered posters should be in front of their boards during the first and second half of the poster discussion time, respectively.
Photosynthesis

PF-001  Screening of crystallization and cryo-protectant conditions of photosystem II with a high efficiency of S-state transitions
  Yoshihi Nakajima1, Naoki Matsubara2, Fusamichi Akita1,2, Jian-Ren Shen1 (1Research Institute for Interdisciplinary Science, and Graduate School of Natural Science and Technology, Okayama University, 2Faculty of Science, Okayama University, 3Japan Science and Technology Agency, PRESTO)

PF-002  An open-cubane oxyl/oxo mechanism for O=O bond formation in photosystem II revealed by X-ray free laser pulses
  Michi Sue1,2, Fusamichi Akita1,2, Masaki Yamamoto3, Hideo Ag0, Jian-Ren Shen1 (1Okayama Univ. RIIS, 2JST PREST, 3RIKEN SPring-8 center)

PF-003  Cryo-EM structure of Anabaena PSI tetramer
  Koji Kato1, Ry Nagao1, Tian-Yi Jiang1, Yoshifumi Ueno1, Makio Yokono1, Siu Kit Chan1, Mai Watanabe1, Masahiko Ikeuchi4, Jian-Ren Shen1, Seiji Akimoto2, Naoyuki Miyazaki3, Fusamichi Akita1,6 (1RIIS, Okayama Univ., 2Grad. Sch. Sci., Kobe Univ., 3Nippon Flour Mills Co., Ltd., 4Grad. Sch. Arts & Sci., Univ. Tokyo, 5TARA, Univ. Tsukuba, 6PRESTO, JST)

PF-004  Structural analysis of Photosystem I-Isa supercomplex by Cyro-EM
  Fusamichi Akita1,2, Ryo Nagao1, Koji Kato1, Yoshiki Nakajima1, Makio Yokono3, Yoshifumi Ueno4, Takehiro Suzuki5, Naoshi Dohmae3, Jian-Ren Shen1, Seiji Akimoto2, Naoyuki Miyazaki3 (1RIIS, Okayama Univ., 2PRESTO, JST, 3Nippon Flour Mills Co., Ltd., 4Grad. Sch. Sci., Kobe Univ., 5CSRS, RIKEN, 6TARA, Tsukuba Univ.)

PF-005  Reduction of E. arvense Fd I in anaerobic chamber and heteronuclear NMR analysis for the reduced structure

PF-006  Effect of external environment on amino acid sequences of hydrophilic domains in type II reaction center membrane protein complex of photosynthetic bacteria
  Yurika Morisaka, Sakiko Nagashima, Satoshi Hanada (Grad. Sch. Sci., Univ. Tokyo Met. Univ.)

PF-007  Purification of the Rieske/cytb complex under anaerobic conditions and its interaction analysis with cytochrome c-556 in green sulfur bacteria

PF-008  Chlorophyll protein complexes in Alocasia odora, a shade tolerant plant: Mechanisms for the resistance to PS I photoinhibition

PF-009  Analysis of A Novel Thylakoid Protein Required for Proper Accumulation of Photosystem I in Arabidopsis
  Hiroshi Yamamoto, Toshiharu Shikanai (Grad. Sch. Sci., Kyoto Univ.)

PF-010  Effects of site-directed mutations at D1-R140 or D2-T231 interacting with one phosphatidylglycerol molecule (PG714) on the function of PSII

PF-011  Light-Induced Amino-Acid Conversion of the Mutant of a Carboxylate Ligand to the Mn Cluster in Photosystem II
  Tomomi Kitajima-Ibara1, Takehiro Suzuki2, Shin Nakamura1, Yuhihiro Shimada1, Ryo Nagao1,2, Naoshi Dohmae2, Takumi Noguchi1 (1Grad. Sch. Sci., Nagoya Univ., 2CSRS, RIKEN, 3RIIS, Okayama Univ.)

PF-012  Role of D1-H252 in pH-dependent electron transfer regulation in photosystem II
  Yuichihiro Shimada4, Sciyro Nakajima4, Tomoyuki Kobayashi1, Ryo Nagao1,2, Takumi Noguchi1 (1Grad. Sch. Sci., Nagoya Univ., 2RIIS, Okayama Univ.)

PF-013  PsbM contributes to PSII supercomplex stability during prolonged dark incubation in higher plants
  Kaori Kohzuma1, Makoto Kusaba2 (1Grad. Sch. Life Sciences, Tohoku Univ., 2Grad. Sch. Int. Sciences for Life, Hiroshima Univ.)
Primary metabolism

- ACT-domain repeat protein, CmACR, integrates GS/GOGAT cycle in the unicellular red alga *Cyanidioschyzon merolae* (Tokiaki Takemura1,2, Sousuke Imamura1, Kan Tanaka1 (Laboratory for Chemistry and Life Science, Institute of Innovative Research, Tokyo Institute of Technology, 2School of Life Science and Technology, Tokyo Institute of Technology)

- Characterization of Target of Rapamycin (TOR) Complex in the Unicellular Red Alga *Cyanidioschyzon merolae* (Kaumee Chokshi, Kan Tanaka, Sousuke Imamura (Lab. for Chem. and Life Sci., Tokyo Inst. of Tech.))


- Functional analysis of class III SERAT genes in *Arabidopsis thaliana* (Aiko Yamagawa, Takayuki Tohge, Mutsumi Watanabe (Grad. Sch. Bio. Sci., NAIST))


- Mathematical modeling of the expression pattern of *NRT2.1* gene during the nitrate response in Arabidopsis (Yoshiaki Ueda, Shuichi Yanagisawa (Biotech. Res. Center, Univ. Tokyo))

- Characterization of a deubiquitinating enzyme involved in C/N-nutrient response in *Arabidopsis thaliana* (Yongming Luo, Yoko Hasegawa, Takeo Sato, Junji Yamaguchi (Fac. Sci. and Grad. Sch. Life Sci., Hokkaido Univ.))

- The differential roles of OsNLPs in regulating growth under nitrate condition in rice (Mengyao Wang1, Takahiro Hasegawa1, Makoto Hayashi2, Yoshihiro Ohsomori1, Kenji Yano1, Shota Teramoto1, Takehiro Kamiya1, Toru Fujiwara2 (1Graduate School of Agricultural and Life Sciences, The University of Tokyo, 2RIKEN Center for Sustainable Resource Science))

- Cross-species comparison of fruit-metabolomics to define pathway structure and metabolic regulation of fruit polyphenolics in different species of pepper (*Capsicum* spp.) (Carla Lenore F. Calumpang, Mutsumi Watanabe, Takayuki Tohge (Plant Secondary Metabolism Laboratory, Nara Institute of Science and Technology (NAIST)))
PF-030 Diversity and species specificity of anthocyanin biosynthesis in plants
Tomoki Saito, Hiroshi Marui, Tong Wang, Mutsumi Watanabe, Takayuki Tohge (Graduate School of Science and Technology, Nara Institute of Science and Technology)

PF-031 Cross-species Comparison and Functional Analysis of Flavonoid Type MYB Transcription Factors
Tong Wang, Tomoki Kobayashi, Mutsumi Watanabe, Takayuki Tohge (Nara Institute of Science and Technology)

PF-032 Elucidation of Biosynthetic Mechanism of Secondary Metabolisms in Sophora flavesens
Yohei Shimizu1,2, Amit Rai1, Michimi Nakamura1, Hideyuki Suzuki1, Kazuki Saito1,2, Mami Yamazaki1 (Grad. Sch. Pharm. Sci., Chiba Univ., 2RIKEN CSRS, 3Kazusa DNA Res. Inst.)

PF-033 Evolution of P450 enzymes activity drives saponin chemodiversity in medicinal Glycyrrhiza plants
Much Zaenal Fanani1, Satoru Sawai1,2,3,4, Hiroki Seki1,2, Masato Ishimori1, Hisashi Sudo1, Ery Odette Fukushima1, Kiyoshi Ohyama1,2, Kazuki Saito1,2, Yoshiya Muranaka1,2,3 (Dept. Biotech., Grad. Sch. Eng., Osaka Univ., 2RIKEN CSRS, 3Grad. Sch. Pharm. Sci., Chiba Univ., 4Tokwa Phytochemical Co., Ltd., 5Dept. Chem. Mat. Sci., TITECH.)

PF-034 Induction and analysis of S-alk(en)ylcysteine sulfoxides of Allium callus tissues
Ayuna Kisaruki1, Takashi Asano2, Chihiko Kanno2, Machiko Asanuma2, Isao Fuji2, Kazuki Saito1, Naoko Yoshimoto1 (Grad. Sch. Pharm. Sci., Chiba Univ., 2Sch. Pharm., Iwate Med. Univ.)

PF-035 Isolation and functional characterization of UDP-glucosyltransferases involved in benzoxazinoid biosynthesis in Scoparia dulcis
Yuria Kasai, Takayoshi Kuraoka, Ryosuke Lee, Yoshimi Yamamura (Fac. Pharm. Sci., Univ. Toyama)

PF-036 Characterization of 4-coumaroyl-CoA ligase (4CL) involved in the secondary metabolism in Lithospermum erythrorhizon
Kohei Nakamichi1, Hao Li1, Keishi Osakabe2, Bunta Watanabe3, Kazufumi Yazaki1 (RISH, Kyoto Univ., 1Faculty Biosci. Bioind., Tokushima Univ., 1ICR, Kyoto Univ.)

PF-037 Functional differentiation of shikonin/alkannin acyltransferases in Lithospermum erythrorhizon
Haruka Oshikiri1, Hao Li1, Bunta Watanabe3, Kazufumi Yazaki1, Kojiro Takenashi1,5 (Grad. Sch. Sci. & Tech., Shinshu Univ., 2RISH, Kyoto Univ., 1ICR, Kyoto Univ., 3Fac. Life Sci., Toyo Univ., 5Fac. Sci., Shinshu Univ.)

PF-038 A search for novel vacuolar transporter of glucosinolates in Arabidopsis thaliana
Kaichiro Endo1, Akiko Nakazaki1, Tomo Shimada1, Ikuko Nishimura1, Kenji Yamada1 (Malopolska Centre of Biotechnology, Jagiellonian Univ., 1Graduate School of Science, Kyoto Univ., 2Faculty of Science and Engineering, Konan Univ.)

■ Biomembrane/Ion and solute transport

PF-039 Identification of genes involved in the regulation of NIP5;1 expression in response to boron in Arabidopsis thaliana
Mayuki Tanaka1, Naoyuki Sotta1,2, Toru Fujiwara1 (Grad. Sch. Agri. Life Sci., Univ. Tokyo, 2Cardiff University)

PF-040 Overexpression of BOR5 alleviates the inhibition of root elongation under a high boron condition

PF-041 Reduced function of AVP2;1 confers low-boron tolerance in Arabidopsis thaliana
Amarachukwu Faith Onuh1, Kyoko Miwa (Graduate School of Environmental Science, Hokkaido University)

PF-042 Elucidation of Physiological Roles of OsHKT1;4 Na+ Transporter in Rice under Salinity Stress Using Rice TILLING Mutants

PF-043 Ca2+ sensitive and non-selective Na'/K+ channel activity in a barley aquaporin HvPIP2;8
Sen Thi Huong Tran1, Maki Katsuhara1, Tomaoki Horie1 (Graduate School of Plant Science and Resources, Okayama university, 2Division of Applied Biology, Faculty of the Textile Science and Technology, Shinshu University)

PF-044 Water transport activities of Arabidopsis tonoplast intrinsic proteins, ArTIPs
Shigeo Utsugi, Maki Katsuhara (IPS R., OKAYAMA Univ.)
■ Membrane trafficking

PF-045 Sucreost starvation induce the degradation of proteins in trans-Golgi network and secretory vesicle cluster in tobacco BY-2 cells
Yamato Oda1, Satoru Asatsuma2, Hiroaki Nakasone1, Ken Matsuoka1,2 (1Grad. Sch. Agric., Kyushu Univ., 2Fac. Agric., Kyushu Univ.)

PF-046 Spatiotemporal relation between vacuolar trafficking zone of trans-Golgi network and multivesicular body/pre-vacuolar compartment
Yutaro Shimizu1,2, Junpei Takagi3, Yoko Ito4,5, Yamato Komatsu2, Kazuo Ebine5,6, Takashi Ueda5,6, Kazuo Kurokawa1,

PF-047 Identification of RAB5 effectors containing PH domain called REAP2 and REAP3 in Arabidopsis
Seung-won Choi1, Kazuo Ebine2,3, Naoya Kato1, Takafumi Ishihara1, Chie Suzuki1, Yuki Sugiyama1, Yumiko Tanaka3,
Nami Kuwano1, Takashi Ueda2,3, Akihiko Nakano1, Emi Ito1 (1Dept. Natural Sciences, ICU, 2Div. Cellular Dynamics, NIBB, 3Grad. Sch. Science, Univ. Tokyo, 4RIKEN, RAP, 5Sch. Life Sci., SOKENDAI)

PF-048 Golgi Transport 1 (GOT1B) is required for localization of storage protein RNA to cortical ER domain and for efficient export of proglutelin and a-globulin from ER
Mako Fukuda1, Toshihiro Kumamaru1, Thomas W. Okita1 (1Agriculture, Kyushu Univ., 2Biol. Chemistry, Washington state Univ.)

PF-049 Functional analysis of Arabidopsis phosphate transporter traffic facilitator 1
Hui-Fang Lung, Jia-Dong Chu, Tzu-Yin Liu (Institute of Bioinformatics and Structural Biology, National Tsing Hua University, Taiwan (R.O.C.))

PF-050 Analyses Of Small RNAs In Plants Extracellular Vesicles
Tepppei Aso1, Takahito Takei2, Yoko Ikeda1, Chao Jin, Kaho Tsuruyama, Minori Sakamoto, Tomohide Uno, Kengo Kanamaru (Grad. Sch. Agri. Sci., Kobe Univ.)

■ Organelles/Cytoskeleton

PF-051 HMG protein controls the level of chloroplast DNA compaction in Chlamydomonas reinhardtii
Mari Takusagawa1, Yoichiro Fukao2, Kumi Hidaka1, Takashi Hamaji1, Yusuke Kobayashi1, Masayuki Endo1, Hiroshi Sugiyama3,

PF-052 Identification of Pyrenoid Component's Structure and Function in Marine Diatom Phaeodactylum tricornutum
Kohei Ueda, Maiko Aoi, Natsumi Morishima, Kohei Yoneda, Sae Kikutani, Yoshinori Tsuji, Yusuke Matsuda (Kwansei Gakuin University)

PF-053 Biochemical changes in nitrogen assimilation in an Arabidopsis mutant having giant chloroplasts
Chao Jin, Kaho Tsuruyama, Minori Sakamoto, Tomohide Uno, Kengo Kanamaru (Grad. Sch. Agri. Sci., Kobe Univ.)

PF-054 Reconsideration of transcriptome in var2 white sector

PF-055 A novel ATP hydrolysis activity of VIPP1 protein involved in chloroplast membrane integrity

PF-056 Preprotein translocation across the inner envelope of chloroplast in Arabidopsis thaliana
Xueyang Zhao1,2, Takeshi Higa1, Masato Nakai1 (1Institute for Protein Research, Osaka University, 2Department of Biological Sciences, Graduate School of Science, Osaka University)

PF-057 Identification and analysis of a suppressor gene of the suppressor line S1-9 of crl mutant in Arabidopsis thaliana

PF-058 Identification and analysis of the suppressor gene of the suppressor line 2-6 of crl mutant in Arabidopsis thaliana

PF-059 Chloroplast Relocation Induced by CO2
Taichi Sugiyama, Ichiro Terashima (Plant Eco-Physiology Laboratory, Department of Biological Science, Graduate School of Science, The University of Tokyo)
Cell wall

PF-060 Time-lapse analysis of chloroplast movement in sun- and shade-type leaves of Arabidopsis thaliana
Ayu Masuda, Shingo Takagi (Grad. Sch. Sci., Osaka Univ.)

PF-061 Impact of O-acetylation of Xyloglucans on Seed Germination Performance
Hiromi Suzuki1,2, Parisa Savane1, Julien Sechet1, Annie Marion-Poll1 (1EJPB, INRA, AgroParisTech, CNRS, Universite Paris-Saclay, 2CSRS, Riken)

PF-062 VND7 Regulates Expression of Ubiquitin E3 Ligases FLY1 and FLY2 in Xylem Vessel Cell Differentiation
Tadashi Kunieda1,2,3, Mitsuki Jifuuki1, George W. Haughn3, Ikuko Hara-Nishimura3, Taku Demura3 (1Div. of Biol. Sci., NAIST, 2Dept. of Bot., UBC, 3Fac. of Sci. and Eng., Konan Univ.)

PF-063 Secondary cell wall is essential to form G-layer under tension stress in poplar

PF-064 Functional analyses of PECTIN METHYLESTERASE 11 in the detachment of the outermost root cap layer in Arabidopsis thaliana

PF-065 Analysis of Cell Wall Polysaccharides in Transgenic Poplar Trees with an Introduced Pectin Methylesterase Gene
Koichi Kakegawa1, Mitsuhiro Nishiguchi1 (1Dept. Forest Resources Chemistry, Forest and Forest Products Res. Inst., 2Dept. Forest Molecular Genetics and Biotechnology, Forest and Forest Products Res. Inst.)

PF-066 Pectin functions of root border cells in protecting root from Al toxicity
Teruki Nagayama1, Atsuko Nakamura1, Naoki Yamazaki2, Shinobu Satoh1, Jun Furukawa1, Hiroaki Iwai1 (1Faculty of Life and Environmental Sciences, University of Tsukuba, Tsukuba, 2Research Institute for Bioresources, Okayama University, Chuo, Kurashiki)

PF-067 Monitoring of metal nano ink-coated cotyledon epidermal cell morphogenesis with metal microscopy
Kazuki Yoshimura1, Akira Watanabe2, Takumi Higaki1 (1IROAST, Kumamoto Univ., 2IMRAM, Tohoku Univ.)

Vegetative growth

PF-068 The promotive effect of light irradiation on somatic embryogenesis in carrot is mediated by reactive oxygen species
Katsumi Higashig, Yoshiki Maeyama, Shohei Soeda (Department of Life & Health Sciences, Teikyo University of Science)

PF-069 Enhancement of somatic embryo inducing elements
Ryota Sato1, Hironori Takasaki2, Miho Ikeda3, Masaru Ohme-Takagi2 (1Sci. Univ. Saitama, 2Grad. Sch. Sci. and Eng., Univ. Saitama)

PF-070 Identification of a novel regulator of gemma cup development in the liverwort Marchantia polymorpha
Hirota Kato1, Yukiko Yasui1,2, Hidehiro Fukaki1, Tetsuro Mimura1 (1Grad. Sch. Sci., Kobe Univ., 2Grad. Sch. Biostudies, Kyoto Univ.)

PF-071 Molecular mechanism of plant callus formation accelerated by Promoter of Plant Growth (PGG)

PF-072 Two R2R3-MYB Transcription Factors Promote Reproduction in Marchantia polymorpha
Yukiko Yasui1,2, Hirota Kato1, Sakiko Ishida2, Ryuichi Nishihama2, Hidehiro Fukaki1, Tetsuro Mimura1, Takayuki Kohchi2, Kimitsuie Ishizaki1 (1Grad. Sch. Sci, Kobe Univ., 2Grad. Sch. Biostudies, Kyoto Univ.)

PF-073 Environmental control of cellular reprogramming in plant regeneration
Yu Chen, David S Favoro, Ayako Kawamura, Keiko Sagimoto (CSRS, Riken)

PF-074 Analysis of shoot regeneration mechanism in vegetative propagation of Rorippa aquatica
Emi Omata1, Rumi Amano8, Shuka Ikematsu, Risa Momoi, Tomoaki Sakamoto, Seisuke Kimura (Facul. Life Sci., Kyoto Sangyo Univ.)
PF-075 BEN3 and BIG family ARF GEFs redundantly regulate root growth in Arabidopsis

Kosuke Ogita\textsuperscript{1}, Saeko Kitakura\textsuperscript{2}, Tatsuo Kakimoto\textsuperscript{2}, Hirokazu Tanaka\textsuperscript{1} (\textsuperscript{1}Sch. Agri., Meiji Univ., \textsuperscript{2}Grad. Sch. Sci., Osaka Univ.)

PF-076 Isolation and analysis of lateral root pre-patterning mutants using the luminescence reporter gene

Ayaka Ozasa\textsuperscript{1}, Tatsuki Goh\textsuperscript{2}, Kimisute Ishizaki\textsuperscript{1}, Tetsuo Mimura\textsuperscript{1}, Hidehiro Fukaki\textsuperscript{1} (\textsuperscript{1}Grad. Sch. Sci., Kobe Univ., \textsuperscript{2}Grad. Sch. Sci. Tech., NAIST)

PF-077 Analysis of Mutants Showing an Altered Response to TOLS2 Peptide That Negatively Regulates Arabidopsis Lateral Root Initiation

Riku Nishimaru\textsuperscript{1}, Yuka Aoki\textsuperscript{1}, Koichi Toyokura\textsuperscript{1,2}, Akinori Shinoda\textsuperscript{1}, Tatsuki Goh\textsuperscript{1,3}, Kimisute Ishizaki\textsuperscript{1}, Tetsuo Mimura\textsuperscript{1}, Hidehiro Fukaki\textsuperscript{1} (\textsuperscript{1}Grad. Sch. Sci., Kobe Univ., \textsuperscript{2}Fac. Sci. Eng., Konan Univ., \textsuperscript{3}Grad. Sch. Sci. Tech., NAIST)

PF-078 Developmental regulation involving the TGN-localized membrane trafficking component BEN2/VPS45 in Arabidopsis

Kyoko Ohashi-Ito\textsuperscript{1}, Kuninori Iwamoto, Hiroo Fukuda (Grad. Sch. Sci., Univ. Tokyo)

PF-079 Roles of nucleolar proteins in establishment of leaf polarity mediated by AS2 and gene body methylation of the AS2 target gene in Arabidopsis

Masato Iwai\textsuperscript{1,2}, Shuta Nishii\textsuperscript{1}, Tatsuaki Goh\textsuperscript{1,2}, Yasuhiro Enami\textsuperscript{1,2}, Hirokazu Tsukaya\textsuperscript{1,2} (Grad. Sch. Sci., Univ. Tokyo, \textsuperscript{1}JST Sakigake, \textsuperscript{2}ExCELLS)

PF-080 Elucidation of the Mechanism How Cytokinin Signaling Promote Radial Growth

Masatomo Ohyama\textsuperscript{1}, Nobutaka Matsuda\textsuperscript{1,2}, Yuki Kondo\textsuperscript{1}, Masaru Ohme-Takagi\textsuperscript{2,4}, Masaki Ito\textsuperscript{1,5}, Takafumi Yamashino\textsuperscript{1} (\textsuperscript{1}Grad. Sch. Bioagr. Sci., Nagoya Univ., \textsuperscript{2}Bioprod. Res. Inst., Nat. Inst. of Adv. Ind. Sci. Tech., \textsuperscript{3}Grad. Sch. Sci., Univ. Tokyo, \textsuperscript{4}Grad. Sch. Sci. Eng., Saitama Univ., \textsuperscript{5}Grad. Sch. Nat. Sci. and Tech., Kanazawa Univ.)

PF-081 Control of Cell Proliferation in Leaf Meristem Under Polar Auxin Transport Inhibition

Makiko Naito\textsuperscript{1}, Hirokazu Tsukaya\textsuperscript{1,2} (\textsuperscript{1}Grad. Sch. Sci., Univ. Tokyo, \textsuperscript{2}ExCELLS)

PF-082 Elucidation of the Mechanism of How Cytokinin Signaling Promote Radial Growth

Masato Iwai\textsuperscript{1}, Shuta Nishii\textsuperscript{1}, Runa Morita\textsuperscript{1,2}, Mahiro Mizuno\textsuperscript{1}, Michiko Sasabe\textsuperscript{2}, Yasunori Machida\textsuperscript{3} (\textsuperscript{1}Sch. Biosci. Biotech., Chubu Univ., \textsuperscript{2}Facul. Agri. Life Sci., Hirosaki Univ., \textsuperscript{3}Grad. Sch. Sci., Nagoya Univ.)

PF-083 Function of AS2 domain of ASYMMETRIC LEAVES2 in the establishment of leaf polarity in Arabidopsis thaliana

Chiyoko Machida\textsuperscript{1}, Tetsunori Hibino\textsuperscript{1}, Kohei Mitani\textsuperscript{1}, Yuto Mizutani\textsuperscript{1}, Simon Vial-Pradel\textsuperscript{1}, Hiro Takahashi\textsuperscript{2}, Shoko Kojima\textsuperscript{1}, Yasunori Machida\textsuperscript{3} (\textsuperscript{1}Grad. Sch. Biosci. Biotech., Chubu Univ., \textsuperscript{2}Grad. Medical Sci., Kanazawa Univ., \textsuperscript{3}Grad. Sch. Sci., Nagoya Univ.)

PF-084 Analysis of Mutants Showing an Altered Response to TOLS2 Peptide That Negatively Regulates Arabidopsis Lateral Root Initiation

Riku Nishimaru\textsuperscript{1}, Yuka Aoki\textsuperscript{1}, Koichi Toyokura\textsuperscript{1,2}, Akinori Shinoda\textsuperscript{1}, Tatsuki Goh\textsuperscript{1,3}, Kimisute Ishizaki\textsuperscript{1}, Tetsuo Mimura\textsuperscript{1}, Hidehiro Fukaki\textsuperscript{1} (\textsuperscript{1}Grad. Sch. Sci., Kobe Univ., \textsuperscript{2}Fac. Sci. Eng., Konan Univ., \textsuperscript{3}Grad. Sch. Sci. Tech., NAIST)

PF-085 Control of Cell Proliferation in Leaf Meristem Under Polar Auxin Transport Inhibition

Makiko Naito\textsuperscript{1}, Hirokazu Tsukaya\textsuperscript{1,2} (\textsuperscript{1}Grad. Sch. Sci., Univ. Tokyo, \textsuperscript{2}ExCELLS)

PF-086 The longevity of stem cell population in primary shoot apex of Arabidopsis

Yukun Wang, Makoto Shirakawa, Toshiro Ito (Graduate School of Biological Science, Nara Institute of Science and Technology)
**Plant hormones/Signaling molecules**

PF-092 Phenylalanine production is a rate-limiting step of phenylacetic acid biosynthesis in Arabidopsis

PF-093 Auxin synthesized from the indole-3-pyruvate pathway regulates root growth and high temperature response in the lycophyte Selaginella moellendorffii
Shutaro Kaneko¹, Sam David Cook², Ken-ichiro Hayashi³, Hiroyuki Kasahara³,⁴,⁵ (¹Grad. Sch. Agric., Tokyo Univ. Agric. Tech., ²Inst. Agric., Tokyo Univ. Agric. Tech., ³Dep. Biochem., Okayama Univ. Sci., ⁴GIR, Tokyo Univ. Agri. Tech., ⁵RIKEN CSRS)

PF-094 An Indole-3-acetic acid carboxyl methyltransferase 1 gene influences nodule formation in Lotus japonicus
Takashi Goto¹,², Takashi Soyano³,², Meng Liu⁴, Takuya Suzaki⁵, Masayoshi Kawaguchi⁴,³ (²National Institute for Basic Biology, ³Life Science, SOKENDAI, ⁵Life and Environmental Sciences, Univ. Tsukuba)

PF-095 Dissecting structure-function relationships of ARF-AuxRE genetic switches
Keita Tanaka¹, Alejandro Freire-Rios¹, Isidro Crespo¹, Roeland Boer¹, Victoria Mironova², Dolf Weijers¹ (¹Laboratory of Biochemistry, Wageningen University & Research, ²Laboratory of Cell Biology, Wageningen University & Research, ³ALBA Synchrotron Light Source, ⁴Novosibirsk State University)

PF-096 The mechanisms of action for 4-PBA analog, novel inhibitor of gravitropism
Youchi Kondou¹, Issei Takashashi, Takahiro Sato, Rei Matsumoto, Ke Takahashi, Hirokazu Iida (¹Dept. Biosci., Kanto Gakuin Univ., ²RIKEN CSRS, RIKEN, ³Laboratory of Cell Biology, Wageningen University & Research, ⁴ALBA Synchrotron Light Source, ⁵Novosibirsk State University)

PF-097 Vascular pattern formation in the presence of polar auxin transport inhibitor in C4 Flaveria bidentis
Mei Osawa¹, Yukimi Taniguchi¹, Tammy Sage², Yuri Munekage² (¹Department of Bioscience, School of Science and Technology, Kwansei Gakuin University, ²Department of Ecology & Evolutionary Biology, University of Toronto)

PF-098 Bioactive GAs synthesized by OsGA3ox1 regulate the starch accumulation of rice pollen
Minami Morii¹, Akihiko Sugihara¹, Kyosuke Kawai, Toru Kashio, Aya Ito, Sayaka Takehara, Makoto Matsuoka, Miyako Ueguchi-Tanaka (¹Bioscience and Biotechnology Center, Nagoya Univ.)

PF-099 The Function of Gibberellin-Related Diterpenoids in Sexual Reproduction of the Liverwort Marchantia polymorpha
Rui Sun, Ryunosuke Kusunoki, Ran Wang, Keisuke Inoue, Ryuichi Nishihama, Shohei Yamaoka, Takayuki Kohchi (Grad. Sch. Biostudies, Kyoto Univ.)

PF-100 Functional analysis of brassinosteroid signaling factor BSHs
Rina Su¹,²,³, Ayumi Yamagami²,³, Tomoko Miyaji², Masaaki Sakuta³, Tadao Asami², Kazuo Shinozaki²,³, Takeshi Nakano²,³ (¹Grad. Biostudies, Univ. kyoto, ²CSRS., Riken, ³Univ. Ochanomizu, ⁴Dept. Appl. Biol. chem., Univ. Tokyo)

PF-101 Arabidopsis transcription factors in BR signaling by CRES-T method
Yuichiro Tanaka¹,²,³, Reika Hasegawa¹,²,³, Ayumi Yamagami¹,²,³, Miho Ikeda¹,²,³, Nobutaka Mitsuoka¹,²,³, Tetsuo Kusako¹,²,³, Kazuo Shinozaki²,³, Tadao Asami²,³, Masaru Takagi²,³, Takeshi Nakano¹,²,³ (¹Dept. Biostudies., Kyoto Univ., ²CSRS, RIKEN, ³Dept. Agric. Chem., Meiji Univ., ⁴Grad. Sch. Science. Technol., Saitama Univ., ⁵AIST, ⁶Dept. Appl. Biol. Chem., Univ. of Tokyo)

PF-102 Expression of the ACC Synthase Gene in the Vine Tissue on the Side in the Touch with a Pole in Morning Glory
Tomoe Yofuji, Tuyoshi Kaneta (Grad. Sch. Sci. & Eng., Ehime Univ.)

PF-103 Screening for the novel cytokinin transporter
Takuya Uragami, Takatoshi Kiba, Hitoshi Sakakibara (Grad. Sch. Bioagr. Sci., Univ. Nagoya)

PF-104 Functional Analysis of Arabidopsis DFL2 in Its Putative Involvement in JA-Ile Biosynthesis

PF-105 Functional analysis of COI1 homologs in rice
Hideo Inagaki¹, Hibiaki Ito¹, Yuki Fukumoto³, Ayaka Yajima³, Xi Chen³, Masanobu Ishitsuka³, Tomoko Sakazawa³, Emi Yumoto³, Masashi Asahina³,³, Kenichi Uchida³,³, Kengo Hayashi³, Sakri Oura³, Rina Saitou³, Takuya Kaji³, Masanobu Ishitsuka³, Ryouma Kajii³,枝沼里和³, Tetsuo Kusako³, Kazuo Shinozaki³, Tadao Asami³, Masaru Takagi³, Takeshi Nakano³ (³Grad. Sch. Sci., Tohoku Univ., ³Grad. Sch. Life Sci., Tohoku Univ., ³Grad. Sch. Eng., Tohoku Univ.)

PF-106 Comprehensive phytohormone quantification analysis by liquid chromatography-mass spectrometry
Mikiko Koijima¹, Yumiko Takebayashi¹, Hitoshi Sakakibara² (¹CSRS., RIKEN, ²Grad. Sch. Bio., Nagoya. Univ)
Photoreceptors/Photoresponses

PF-107 Functional characterization of novel compounds that affect signaling pathway in stomatal opening
Gwangchol Sin1, Yusuke Aihara1, Shigeo Toh2, Shinpei Inoue1, Ayato Sato3, Toshinori Kinoshita1,3 (1Grad. Sch. Sci., Univ. Nagoya, 2Grad. Sch. Agr., Univ. Meiji, 3WPI-ITBM, Univ. Nagoya)

PF-108 The Role of Dephosphorylation of NPH3 in the Hypocotyl Phototropism of Arabidopsis

PF-109 Analysis of photomorphogenesis based on the total amount of irradiated light
Momoko Nakaya1, Takahiro Hamada2, Shizue Yoshihara1, Hayato Tokumoto1 (1Sci., Univ. Osaka pref, 2Sci., Okayama Univ. Sci.)

PF-110 Involvement of phyB_N26 peptide in the control of hypocotyl elongation by light in the presence of sucrose
Shoi Takayama, Shizue Yoshihara, Hayato Tokumoto (Sci., Univ. Osaka Pref.)

PF-111 Control of seed germination in transgenic Arabidopsis expressing Adiantum chimeric photoreceptor phytochrome3
Mina Horisuchi1, Izumi Kimura2, Yuki Kimura2, Takeshi Kanegae1,2 (1Dept. of Biol. Sci., Grad. Sch. of Sci., Tokyo Metropolitan Univ., 2Dept. of Biol. Sci., Grad. Sch. of Sci. and Eng., Tokyo Metropolitan Univ.)

PF-112 Functional analysis of carotenoids in Euglena gracilis for the cell structure and photomovement using carotenoid-deficient mutants

PF-113 A Light signal transduction pathway involved in Cul4 ubiquitin ligase complex in the unicellular red alga Cyanidichyson merolae
Miyako Kitagawa1,2, Yuki Kobayashi3, Toko Yoshikawa1,2, Hikaru Ohara1, Mitsumasa Hanaoka1, Sousuke Imamura1, Kan Tanaka2 (1School of Life Science and Technology, Tokyo Institute of Technology, 2Laboratory for Chemistry and Life Science, Tokyo Institute of Technology, 3Graduate School of Horticulture, Chiba University)

PF-114 Gene expression analysis of microbial rhodopsin-like genes from marine algae Guillardia theta
Yumeka Yamada1, Masae Konno1,2, Keiichi Inoue1,2, Hideki Kandori1,2 (1Life Sci. Appl. Chem., Grad. Sch. Eng., NIT, 2ISSP, Univ. Tokyo, 3OBTRC, NIT)

Flowering/Clock

PF-115 [Cancelled]

PF-116 Chemical regulation of flowering by inhibition of florigen activation complex
Ken-ichiro Taoka1,2, Ikumi Kawahara2, Zempei Shimatani1,4, Rie Terada4, Hiroyuki Tsuji1, Chojiro Kojima1 (1Kihara Institute for Biological Research, Yokohama City University, 2Institute for Protein Research, Osaka University, 3Graduate School of Science, Technology and Innovation, Kobe University, 4Graduate School of Agriculture, Meijo University, 5Faculty of Engineering, Yokohama National University)

PF-117 A biochemical approach to identify co-regulatory proteins that interact with florigen activation complex
Eri Furuyama, Ken-ichiro Taoka, Hiroyuki Tsuji (Kihara Institute for Biological Research, Yokohama City University)

PF-118 Effect of Low Temperature and Photoperiod to
Lemna minor

PF-119 Possible roles of PT17 in the GA-dependent flowering pathway under continuous light in Arabidopsis thaliana
Aya Sakamoto, Kana Miyata, Ryosuke Hayama, Tsuyoshi Mizoguchi (Grad. Sch. Sci., ICU)

PF-120 Dynamic change in the shoot apical meristem during floral transition in Arabidopsis thaliana
Atsuko Kinoshita1,2, Alice Vayssieres2, Rene Richter2, George Coupland2 (1Tokyo Metropolitan University, 2Max Planck Institute for Plant Breeding Research)

PF-121 Functional analysis of SnRK2 substrate 1 as a regulator of flowering time
Sotaro Kataegi, Risa Suzuki, Yoshiaki Kamiyama, Taishi Umezawa (BASE Tokyo Univ. Agric, Thec. UmezawaLab)

PF-122 Analysis of gene expression during photoperiodic and stress-induced flowering responses on Lemma minor 5512
Shogo Ito, Tokitaka Oyama (Department of Botany, Division of Biological Sciences, Graduate School of Science, Kyoto University)

PF-123 [Cancelled]
**Environmental responses A**

**PF-124** Analyses Of A Novel Gene That Enhances Ozone Tolerance Of Plants  
Shoko Saji, Hikaru Saji, Kimiyo Sage-Ono, Michiyouki Ono, Nobuyoshi Nakajima, Tomomi Inoue, Mitsuko Aono (Fac. Biosci. Bioindust., Tokushima Univ.)

**PF-125** Visualization of Arabidopsis root system by X-ray Micro-CT at SPring-8: Manual 3D-Modeling and automatic segmentation  
Tomofumi Kurogane, Daisuke Tamaoki, Sachiko Yano, Humiaki Tanigaki, Toru Shimazu, Haraou Kasahara, Daisuke Yamauchi, Kentaro Uesugi, Makoto Hoshino, Seiichiro Kamisaka, Yoshinobu Mineyuki, Ichirou Karahara (Grad. Sch. of Sci. Eng., Univ. of Toyama, Fac. of Sci., Univ of Toyama, JAXA, Japan Space Forum, Grad. Sch. of Life Sci., Univ. of Hyogo, JASRI)

**PF-126** Nodal rule of root-cut response in Arabidopsis thaliana  
Xin Li, Masahiko Watahiki (Grad. Sch. Life. Sci., Univ. Hokkaido)

**PF-127** The influence of sucrose on Arabidopsis root diameter and mechanics  

**PF-128** Imaging stress-responsive rapid long-distance Ca$^{2+}$ signaling in Marchantia  
Kota Hasegawa, Hiroki Shindo, Takeru Itabashi, Hiroku Mizoe, Kenji Hashimoto, Kazuyuki Kuchitsu (Dept. of Appl. Biol. Sci., Tokyo Univ. of Sci., Imaging Frontier Center, Tokyo Univ. of Sci.)

**PF-129** Spatiotemporal imaging of wound-induced ROS production and ROS signal propagation in Marchantia polymorpha  
Kenshiro Watanabe, Kota Hasegawa, Hiroki Shindo, Takeru Itabashi, Hiroku Mizoe, Kenji Hashimoto, Kazuyuki Kuchitsu (Dept. Appl. Biol. Sci., Tokyo Univ. of Science, Imaging Frontier Center, Tokyo Univ. of Science)

**Environmental responses B**

**PF-130** Functional analysis of the D14 knockout in Fragaria vesca by using CRISPR/Cas9 system  
Tomoko Miyaji, Shoya Tagami, Kohei Sakaguchi, Kanari Shimada, Eiko Nakashima, Syuki Fujii, Keiko Shinhara, Yoko Harada, Keishi Osakabe, Yuriko Osakabe, Yoshiharu Y. Yamamoto (Faculty of Bioscience and Bioindustry, Tokushima University, Tokushima Agriculture, Forestry, and Fisheries Technology Support Center, RIKEN, BZP)

**PF-131** Isolation and analyses of potential transcriptional repressors that are involved in drought stress responses  
Yoshimi Nakano, Keiko Kigoshi, Sumire Fujiwara (Bioprod. Res. Inst., AIST)

**PF-132** Design of ABA-responsive synthetic promoters  
Takumi Tsuichiya, Cheng Li Zhao, Smita Sahoo, Sanjib K. Panda, Natsuki Hayami, Kyonoshin Maruyama, Satoshi Iuchi, Ryoya Tanabe, Yoshihara Y. Yamamoto (Faculty of Applied Biological Sciences, Gifu University, Indian Institute of Technology, Guwahati, JICAS, RIKEN BRC, RIKEN CSRS)

**PF-133** Effects of water deficit and high temperature stresses on the sugar compositions in the soluble sugar and cell wall polysaccharide fractions in a semi-shade bryophyte (Plagiomnium acutum)  
Ryousuke Nakashita, Yoh Sakuma, Masahiro Inoue (Biology, Sci., Ehime Univ., Biology, Grad. sch. sci. & Eng., Ehime Univ.)

**PF-134** Analysis of transcription factors involved in the drought response of Klebsormidium nitens  
Koichi Hori, Noriaki Tounosu, Kanami Sesoko, Mie Shimojima, Hiroyuki Ohta (School of Life Science and Technology, Tokyo Institute of Technology)

**PF-135** Functional analysis and generation of knockout plants of tomato NAD kinase2 by using CRISPR/Cas9 system  
Ryousuke Hashimoto, Kohji Yamada, Keishi Osakabe, Yuriko Osakabe (Fac. Biosci. Bioindust., Tokushima Univ.)

**PF-136** Functional analysis of AB15-related bZIP transcription factors in drought tolerance of Marchantia polymorpha  
Yuta KidoKoro, Daisuke Takezawa, Teruaki Taji, Yoichi Sakata, Izumi Yotsui (Dept. of Bioscience Tokyo Univ. of Agriculture, Dept. of Regulatory Biology, Saitama Univ.)

**PF-137** [Cancelled]

**PF-138** Role of a Class I Fructose-1,6-Bisphosphate Aldolase for Salt Stress Tolerant Mechanism in a Halotolerant Cyanobacterium  

**PF-139** Identification of salt-responsive ubiquitin ligases in Arabidopsis thaliana  
Yasuhiro Takami, Masahiro Tamoi, Kaori Sako (Dept. Adv. Biosci., Kindai Univ.)
PF-140 Modifications of water status, growth rate and antioxidant system in two wheat cultivars as affected by salinity stress and salicylic acid
Naglaa Loutfy\(^2\), Yoh Sakuma\(^1\), Dharmendra Kumar Gupta\(^1\), Masahiro Inouhe\(^1\) (\(^1\)Biology, Grad. Sch. & Eng., Ehime Univ., \(^2\)Dept. Botany, South Valley Univ.)

PF-141 Anatomical and Sub-cellular Changes in Growing Rice Plants in Response to Drought and First Phase Salt Stresses
MD. Nesar Uddin\(^1,2\), Yashuo Kaneko\(^1\) (\(^1\)Department of Natural Sciences, Faculty of Education, Graduate School of Science and Engineering, Saitama University, Saitama 338-8570, \(^2\)Department of Crop Botany, Bangladesh Agricultural University, Mymensingh 2202, Bangladesh)

PF-142 Mechanisms of salt tolerance in wild accessions *Lotus japonicus*, and their effect on local adaptation
Yoshiko Isomura\(^1\), Shusce Sato\(^1\), Yusdar Mustamin\(^1\), Madihah Manggabarani\(^1\), Stig Andersen\(^2\) (\(^1\)Graduate School of Life Sciences, Tohoku University, \(^2\)Aarhus University)

PF-143 Exploration of genes involved in different responses of barley and tomato to alkaline-nutrient solution
Kotono Tomita\(^1\), Sho Nishida\(^2\), Haruka Shirai\(^1\), Akihiro Saitou\(^1\), Takuji Ohyama\(^2\), Kyoko Higuchi\(^3\) (\(^1\)Apli. Bio., Tokyo univ. Agri., \(^2\)Agri., Saga Univ.)

PF-144 Overexpression of MATE transporter FRD3 attenuate toxicity of Sr on growth of *Arabidopsis thaliana*
Masaki Araizuma\(^1\), Kouta Kawase, Takeshi Nagata (Setsunan University Faculty Science and Engineering)

PF-145 Damage of bismuth on root of IRT1 defective *Arabidopsis thaliana*
Takeshi Nagata\(^1\), Makoto Nishimura\(^1\), Satsuki Kimito\(^1\), Natsumi Yamano\(^1\) (\(^1\)Graduate School of Science and Engineering, Setsunan University, \(^2\)Graduate School of Science and engineering, Saitama University)

PF-146 The relationship between the gene expressions of SUF machinery and the accumulation of the photosystem I reaction center in iron-deficient barley leaves
Maya Katori\(^1\), Akihiro Saito\(^2\), Takuji Ohyama\(^2\), Kyoko Higuchi\(^3\) (\(^1\)Grad. Sch. Agri. Chem., Tokyo Univ. Agri., \(^2\)Agri. Chem., Tokyo Univ. Agri.)

PF-147 Effects of salicylic acid and heavy metal ions (Fe\(^{2+}\), Cu\(^{2+}\), Zn\(^{2+}\)) on rice seed germination and seedling growth
Yutaro Daido\(^1\), Satomi Hori\(^1\), Yoh Sakuma\(^2\), Masahiro Inouhe\(^2\) (\(^1\)Dept. Biol., Ehime Univ., \(^2\)Biology, Grad. Sch. Sci & Eng., Ehime Univ.)

**Environmental responses C**

PF-148 CoHT regulates mRNA splicing at high-temperature in *Arabidopsis thaliana* accessions
Kazuho Isono\(^1\), Keisuke Tanaka\(^2\), Kousuke Hanada\(^3\), Izumi Yotsui\(^1\), Yoichi Sakata\(^1\), T eruaki Taji\(^3\) (\(^1\)Dept. of Bioscience, Tokyo Univ. of Agriculture, \(^2\)NODAI Genome Research Center, \(^3\)Dept. of Bioscience and Bioinformatics, Kyushu Institute of Technology)

PF-149 Analysis of Protein Kinases in the Post-translational Regulation of the Stress-responsive Transcription Factor DREB2A
Junya Mizoi\(^1\), Ryosuke Takahashi\(^2\), Norihito Nakamichi\(^3\), Toshinori Kinoshita\(^2\), Kazuo Shinozaki\(^3\), Kazuko Yamaguchi-Shinozaki\(^3\) (\(^1\)Grad. Sch. Agr. Life Sci., Univ. Tokyo, \(^2\)ITbM, Nagoya Univ., \(^3\)Grad. Sch. Sci. Nagoya Univ., \(^4\)Center for Sustainable Resource Science, RIKEN)

PF-150 Development of gene expression-based prediction technique of grain filling impairment in rice
Takeshi Shiraya\(^1\), Sayuri Ota\(^1\), Toshiaki Mitsui\(^2,3\), Yoichihiro Fukao\(^4\), Toru Tsuchida\(^5\) (\(^1\)Niigata Agr. Res. Inst., \(^2\)Grad. Sch. Sci. & Tech., Niigata Univ., \(^3\)Dept. Applied Biol. Chem., Niigata Univ., \(^4\)Grad. Sch. Life Sci., Ritsumeikan Univ., \(^5\)Niigata Crop Res. Center)

PF-151 Expression of the Anthor-Specific Transcription Factor OsMYB80 is Down-Regulated under High-Temperature-Induced Male Sterility Conditions in Rice
Makiko Kawagishi-Kobayashi\(^1\), Ryuji Kuroda\(^2\), Yuzuru Tozawa\(^2\), Atsushi Higashitani\(^3\) (\(^1\)NIAS, NARO, \(^2\)Grad. Sch. Sci. Eng., Saitama Univ., \(^3\)Grad. Sch. Life Sci., Tohoku Univ.)

PF-152 Relationships of SGs formation and HSPs expression in plants
Akiie Miura\(^1\), Takahito Takei\(^2\), Yuichihiro Watanabe\(^3,2\), Takahiro Hamada\(^4\) (\(^1\)Okayama University of Science, \(^2\)Grad. Sch. Sci. Univ. Tokyo, \(^3\)Grad. Sch. Art and Sci., Univ. Tokyo, \(^4\)JST PRESTO)

PF-153 Cold-induced degradation of PIF4 is mediated by ubiquitin E3 ligase HOS1 with ICE1 as a scaffold protein to regulate cold signaling
Renhu Na\(^1\), Hiroki Okuda\(^1\), Taketo Ogawa\(^2\), Takuya Suzuki\(^1\), Tsuyoshi Furumoto\(^2\), Kenji Miura\(^1\) (\(^1\)Grad. Sch. Life. Sci., Univ. Tsukuba, \(^2\)Grad. Sch. Sci., Hiroshima Univ.)
PF-154 Effects of Gajyumaru Latex and various chitosanes on cell growth and cell wall formation in fission yeast

Monoko Terao1, Hironori Niki2, Yoh Sakuma1, Masahiro Inoue1 (1Biology, Grad. Sch. Sci. & Eng., Ehime Univ., 2Nat, Ins, Genetics.)

PF-155 Characterization of Sll1558 in Environmental Stress Tolerance of Synecocystis sp. PCC 6803


PF-156 The effect of cell differentiation and gene expression in Anabaena sp. PCC7120 under acid stress

Masanori Sato1, Kouichi Takahashi1, Yukino Sakai1, Junji Uchiyama1,2,3, Hisataka Ohta1,2,3 (1Dept. of Math. and Sci. Educ., Grad. Sch. of Sci., Tokyo Univ. of Sci., 2Dept of Biol., Fac. of Sci., Tokyo Univ. of Sci.)

PF-157 Evolutional implication of sulfur dioxide-resistant mechanisms in plants

Lia Ooi, Yoko Ikeda, Izumi C. Mori (Institute of Plant Science and Resources, Okayama University)

PF-158 Mutagenic screening for Arabidopsis thaliana mutants altered with callose deposition during phosphate starvation response

Tan Anh Nhi Nguyen, Koei Yachi, Kentaro Okada, Tae-Hong Lee, Kei Hiruma, Yusuke Saijo (Nara Institute of Science and Technology (NAIST))

PF-159 Atmospheric nitrogen dioxide inhibits binding of PIF4 to the promoter region of auxin pathway genes to inhibit hypocotyl elongation in Arabidopsis

Misa Takahashi, Atsushi Sakamoto, Hiromichi Morikawa (Graduate School of Integrated Science for Life, Hiroshima Univ.)

PF-160 Comparison of the effect of allantoin and allantoic acid on stress gene expression in Arabidopsis

Taiki Fujibayashi1, Yuhi Hashiguchi2, Yiping Han2, Hiroshi Shimada1,2,3, Atsushi Sakamoto1,2,3 (1Sch. Sci., Hiroshima Univ., 2Grad. Sch. Sci., Hiroshima Univ., 3Grad. Sch. Int. Sci. Life, Hiroshima Univ.)

PF-161 Analysis of glutathione metabolism and xenobiotic detoxification by γ-glutamyltransferase and phytochelatin synthase in Arabidopsis

Ryota Inoue, Naoto Nakamura, Yusuke Kadota, Takeru Yamane, Hisabumi Takase, Jiro Sekiya, Rafael Prieto (Department of Bioscience and Biotechnology, Kyoto University of Advanced Science)

Plant-organism interaction A

PF-162 Peptidomics approach to identify natural forms of microbial-associated molecular patterns

Sayaka Matsui1, Kiyotera Nakamura1, Keiko Kuwata2, Hidefumi Shinozaka1, Yoshikatsu Matsubayashi1 (1Grad. Sch. Sci., Nagoya Univ., 2ITbM, Nagoya Univ.)

PF-163 Analysis of receptor for flagellin derived from pathogenic bacteria in rice

Yuva Katsuragi1, Takamasa Yasuda2, Takehito Furukawa1, Hiroyuki Hirai1, Fang-Sik Che1,2 (1Nagahama Inst. of Bio-Sci. and Tech., 2Grad. Sch. of Biosci. Nagahama Inst. of Bio-Sci. and Tech.)

PF-164 Recognition mechanism of EFa50 derived from bacterial EF-Tu by receptor like kinase ERC1 in rice


PF-165 Dissection of chitin signaling pathway in the moss Physcomitrella patens using a forward genetic approach

Yuki Ambe, Teruki Tajii, Yoichi Sakata, Izumi Yotsui (Dept. of Bioscience Tokyo Univ. of Agriculture)

PF-166 Elicitor-active Pep peptide modulation of root system architecture and root-associated microbiome under phosphate deficiency in rice

Masako Fujii1, Yuniar Devi Utami1,2, Shigetaka Yasuda2, Renao Tani2, Yuichi Hongoh2, Yutaka Sato2, Yusuke Saijo1 (1Grad. Sch. Sci. and Tech., NAIST, 2Grad. Sch. Biosci. Biotech., Tokyo Institute of Technology, 3National Institute of Genetics)

PF-167 NPR-mediated immune system in the model monocot Brachypodium distachyon

Kohei Shimizu1, Takuya Uemura1, Ryosuke Hoshino1, Hitomi Suzuki2, Akira Nozawa2, Tatsuya Sawasaki2, Ayako Yoshida2, Makoto Nishiyama1,2, Chiharu Nishiyama1, Gen-icho Arimura1, (1Dept. Bio. Sci. Tech., Tokyo Univ. Sci., 2PROS., Univ. Ehime, 3BRC., Univ. Tokyo, 4CRIM., Univ. Tokyo)

PF-168 Characterization of novel putative plant defense activators that promote resistance against Pseudomonas syringae, and accumulation of jasmonic acid in Arabidopsis

Masatake Nakano1, Keito Yasue2, Taiki Funahashi2, Ippei Yamasaki2, Yuho Saito2, Nobutaka Kitahata2,3, Takako Ishida4, Yasuhiro Ishiga4, Hiroshi Abe5, Seisuke Kimura2, Kazuyuki Kuchitsu1,2 (1Imaging Frontier
In Silico Detection of Novel Leaf Rust Responsive microRNAs and Their Target Genes In Wheat (Triticum aestivum L.)

Uzma Afreen, Kunal Mukhopadhyay, Manish Kumar (Department of Bioengineering, Birla Institute of Technology)

PF-169 Epigenetic regulation

Transcription profiling of sugar-responsive modulation of pattern-triggered immunity in Arabidopsis plants

Xingwen Li1, Kotaro Kusaka1, Linnan Jie1, Shigetaka Yasuda2, Yusuke Saio2, Takeo Sato1, Junji Yamaguchi1 (1Fac. Sci. and Grad. Sch. Life Sci., Hokkaido Univ., 2Grad. Sch. Biol. Sci., NAIST)

PF-170 Plant-organism interaction

Proteomic Study of Plant Leaf Epidermis Challenged with Fusarium graminearum

Yasir Sidiq1, Daisuke Tamaoki2, Takumi Nishiuchi3 (1Graduate School of Natural Science and Technology, Kanazawa University, 2Graduate School of Science and Engineering, University of Toyama, 3Institute for Gene Research, Advanced Science Research Center, Kanazawa University)

PF-171 Functional analyses for candidate secretion effector proteins of plant growth-promoting endophytic fungi in Arabidopsis thaliana

Kazuki Tsurukawa1, Shigetaka Yasuda2, Kei Hiruma1,2, Hong Ye1, Kazuhiko Samba1, Motsumi Watanabe1, Keisuke Tanaka1, Teruki Taji1, Takayuki Tohge1, Yoshiaki Nakao1, Yusuke Saio2 (1Grad. Sch. Sci. Tech., NAIST, 2Grad. Sch. Eng., Kyoto Univ., 3NODAI Genome Research Center, Tokyo Univ. Agric., 4Dept. Biosci., Tokyo Univ. Agric.)

PF-172 Histone modification-mediated control of systemic defense priming in Arabidopsis thaliana

Yi Ting Yeh, Yuri Tajima, Eliza Po-Iian Loo, Natsuki Shiraishi, Yusuke Saio (NAIST)

PF-173 Functional analyses for candidate secretion effector proteins of plant growth-promoting endophytic fungi in Arabidopsis thaliana

Kazuki Tsurukawa1, Shigetaka Yasuda2, Kei Hiruma1,2, Hong Ye1, Kazuhiko Samba1, Motsumi Watanabe1, Keisuke Tanaka1, Teruki Taji1, Takayuki Tohge1, Yoshiaki Nakao1, Yusuke Saio2 (1Grad. Sch. Sci. Tech., NAIST, 2Grad. Sch. Eng., Kyoto Univ., 3NODAI Genome Research Center, Tokyo Univ. Agric., 4Dept. Biosci., Tokyo Univ. Agric.)

Plant-organism interaction B

PF-174 Single-cell RNAseq analysis of Lotus japonicus roots to elucidate the genetic mechanisms of cell division reactivation in legume cortical cells

Kai Battenberg1,2, Thomas Kelly2, Nicola A. Hetherington3, Aki Minoda2, Makoto Hayashi1 (1RIKEN CSRS, 2RIKEN IMS)

PF-175 The legume-rhizobial gene-for-gene interaction based on the Lotus japonicus and Mesorhizobium loti co-expression network

Tsuneo Hakoyama1, Atsuko Hirota1, Yoshikazu Shimoda2, Makoto Hayashi1 (1RIKEN CSRS Plant Symbiosis RT, 2NARO NIAS)

PF-176 Exploring Genes Regulating To Host Specificity Of Legumes In Nodule Symbiosis By GWAS

Makoto Taniuchi1, Stig Andersen2, Tomomi Wakabayashi1, Yasuyuki Kawaharada1,4 (1Grad. Sch. Art. Sci., Iwate Univ., 2Dept. MBG, Aarhus Univ., 3CORE of STEM, Nara Women’s Univ., 4Dpt. Agr., Iwate Univ.)

PF-177 Reactive sulfur species interacts with small signal molecules in the root nodule symbiosis


PF-178 Analysis of santhopine-mediated tobacco-Arthrobacter interaction

Tomohisa Shimasaki1, Takashi Kawasaki1, Yuichi Aoki1, Kazufumi Yazaki1, Akifumi Sugiyama1 (1RISH, Kyoto Univ., 2ToMMo, Tohoku Univ.)

PF-179 Elucidation Of Gall Cells’ Morphology, Using Arabidopsis thaliana

Megumi Matsumawa, Tomoko Hirano, Masa H. Sato (Life and Environ., Kyoto Pref. Univ.)

Epigenetic regulation

PF-180 Cell cycle-dependent epigenetic regulation of KNUCKLES for floral meristem determinacy in Arabidopsis thaliana

Margaret Anne Pelayo, Haruka Sawada, Katsumi Matsushita, Liang-Sheng Looi, Nobutoshi Yamaguchi, Toshiro Ito (Nara Institute of Science and Technology)

PF-181 Genome-wide seasonal dynamics of various histone modifications in natural environments

Haruki Nishio1, Tasuku Ito1, Mic N. Honjo1, Tomoki Muranaka1, Naoko Emura1,2, Hiroshi Kudoh1 (1CER, Kyoto Univ., 2Fac. Agri. Kagoshima Univ.)

PF-182 Analysis for Gene Silencing Mechanism by Plant Mobile Domain Proteins in Arabidopsis

Yoko Ikeda1, Olivier Mathieu2 (1IPSR, Okayama Univ., 2CNRS, Inserm, Univ. Clermont Auvergne, France)

PF-183 Functional Analysis of RNA Polymerase IV, V in Marchantia polymorpha

Hikari Ikeda1, Masayuki Tsuzuki1, Mario Arteaga-Vazquez2, Yuichi Watanabe1 (1Grad. Sch. Arts Sci., Univ. Tokyo, 2Universidad Veracruzana)
Functional analysis of a RNA-binding protein regulating the alternative splicing event of chloroplastic ascorbate peroxidase
Koh Yamada1, Mariko Kato1, Tomohiko Tsuge1, Takuku Wada2, Rumi Tominaga-Wada2, Li-Jia Qu3, Takashi Aoyama1 (1ICR, Univ. Tokyo, 2Grad. Sch. Integrated Sciences for Life., Univ. Hiroshima, 3Univ. Peking)

Forward genetics approach to elucidate the UPR-associated root growth regulation

Indeterminate Domain Transcription Factors And Gras Protein Cooperatively Control Gene Expression
Takuya Aoyanagi1, Shun Ikeya1, Aiko Kozaki2 (1Grad. Sch. Sci tec., univ. Shizuoka, 2Fac of Sci., univ. Shizuoka)

Analyses of integration-dependent transcriptional and epigenetic alterations of the foreign genes in the plant genome
Kohei Kawaguchi1, Mei Kizama1, Takayuki Hata1, Naoto Takada1, Chihiro Hayakawa1, Kazuki Mukae2, Mitsuhito Matsu1, Junichiro Obokata1,2, Soichiro Satoli1,2 (1Grad. Sch. Life Env. Sci., Kyoto Pref. Univ., 2Fac. Life Env. Sci., Kyoto Pref. Univ.)

Post-transcriptional Expression Regulation of S, hZIP Family Genes in Arabidopsis
Shugo Sugawara1, Hitoshi Onouchi1, Satoshi Naito1,2, Yui Yamashita1 (1Grad. Sch. Agr., Hokkaido Univ., 2Grad. Sch. LifeSci., Hokkaido Univ.)

Functional analysis of a RNA-binding protein regulating the alternative splicing event of chloroplastic ascorbate peroxidase

Study on the evolutionaly conserved AT-AC type introns
Takamasa Suzuki (Col. Biosci. Biotech., Chubu Univ.)

DYW domains also contribute selection of RNA editing site in plant organelles
Ayako Maeda, Sachi Takenaka, Mizuki Takenaka (Grad. Sch. Sci., Kyoto Univ.)

Neighbor GWAS: incorporating neighbor genotypic identity into genome-wide association studies of field herbivory on Arabidopsis thaliana
Yasuhiro Sato1,2, Eiji Yamamoto1,3, Kenato K Shimizu4,5, Atsushi J. Nagano1 (1JST PRESTO, 2Ryukoku University, 3Kazusa DNA Research Institute, 4University of Zurich, 5Yokohama City University)

Assembly and comparative analysis of Rorippa aquatica chromosome
Tomokazu Sakamoto1, Takuya Sakamoto2, Sachihito Matsunaga3, Seisuke Kimura1 (1Life Sci., Kyoto Sangyo Univ., 2Sci. and Tech., Tokyo Univ. of Sci.)

Integrative systems biology approach to understand dynamics of grafting in Nicotiana benthamiana
Amit Rai1, Megha Rai2, Tetsuya Mori2, Mami Yamazaki3, Michitaka Notaguchi2, Ryo Nakabayashi2 (1Department of Molecular Biology and Biotechnology, Graduate School of Pharmaceutical Sciences, Chiba University, 2RIKEN CSRS, 3Nagoya University)

Diversity of developmental trajectories in barley under field conditions
Keiichi Mochida1,2,3, Kotaro Takahagi1,2, Yukiko Uehara-Yamaguchi1, Komaki Inoue1, Asaka Kanatani1, Minami Shimizu2, Daisuke Saisho3, Takashi Hiramayam3 (1RIKEN CSRS, 2Yokohama City U., KIBR, 3Okayama Univ., IPSR)

Diversity of physiological states in diverse barley accessions under field conditions
Takashi Hiramayam3, Kotaro Takahagi1, Komaki Inoue1, Yukiko Uehara-Yamaguchi1, Asaka Kanatani1, Daisuke Saisho1, Takakazu Matsuura1, Satoshi Okada2, Jun Ito2, Yoko Ikeda1, Yasuhiro Matsunaga1, Hirouyuki Tsujii3, Keiichi Mochida1,2,3 (1IPSR, Okayama Univ., 2KIBR, YCU, 3CSRS, RIKEN, 4SET Software Co., Ltd.)

Comparing technologies for single-cell transcriptome analysis in Arabidopsis thaliana root tissue
Thomas Kelly1, Nicola A. Hetherington1, Kai Battenberg1,2, Miho Kihira1, Shiori S Aki1, Haruka Yabukami1, Tsukasa Kouno1, Masaaki Umeda1, Makoto Hayashi2, Aki Minoda1 (1RIKEN Center for Integrative Medical Sciences, 2RIKEN Center for Sustainable Resource Science, 3Nara Institute of Science and Technology)
PF-198 Novel Method of Agroinfiltration in Arabidopsis thaliana
Jun Nakayama, Miho Ikeda, Masaru Ohme-Takagi (Grad. Sch. Sci. and Eng., Univ. Saitama)

PF-199 Efficient agroinfiltration method for Amaranthaceae
Choyo Tai, Shigeo S. Sugano, Tatsuya Kageyama, Yoichiro Fukao (Bioproduction I., AIST, 2R-GIRO, Ritsumeikan U., 3Grad. Sch. Life Sci., Ritsumeikan U., 4Dept. Life Sci., Ritsumeikan U.)

PF-200 A space-saving visual screening method, Glycine max FAST, for generating transgenic soybean

PF-201 Functional analyses of TRYPTICHON homologues of Solanum lycopersicum
Takashi Fujiwara, Kazufumi Yazzaki, Takashi Aoyama (1ICR, Univ. Kyoto, 2RISH, Univ. Kyoto)

PF-202 Genome editing in commercial tomato cultivars by geminivirus-mediated CRISPR/Cas9 vector
Katsuhisa Yamada, Chihiro Hara, Yuriko Osakabe, Keishi Osakabe (Fac. Biosci. Bioindust., Tokushima Univ.)

PF-203 A brochure for understanding of genome-edited foods
Nozomu Koizumi (Grad. Sch. Life&Sci. Osaka Pref. Univ.)

PF-204 Visualization of common structures in cyanobacteria Prochlorococcus cells by using X-ray diffraction imaging with X-ray free-electron laser

PF-205 Designing iron-sulfur protein based nitric oxide sensing indicators
Jiro Nomata, Toru Hisabori (LCLS, Tokyo Tech.)

PF-206 Detection of DNA damage from radiation by Arabidopsis callus harboring an alternative beta-glucuronidase reporter gene in field of Fukushima
Shinya Takahashi, Masanori Tamaoki (Univ. Tsukuba, Natl. Inst. Env. Stud.)

■ Others

PF-207 Collection and Maintenance of Plant Cell Lines at RIKEN BRC in FY2020
Toshihiro Kobayashi, Masatomo Kobayashi (RIKEN BRC)

PF-208 The Search Function of the Plant BioResource Database, Exp-Plant Catalog, in RIKEN BRC
Satoshi Iuchi, Masatomo Kobayashi (RIKEN BRC Experimental Plant Division)

PF-209 Updated resources in the National BioResource Project Lotus / Glycine
Shusei Sato, Yoshiko Isomura, Yusdar Mustamin, Madihang Manggabarani, Stig Andersen, Nadia Kamal, Klaus Mayer, Masatsugu Hashiguchi, Hidenori Tanaka, Ryo Akashi (Grad. Sch. Life Sci., Tohoku Univ., 2Aarhus Univ., 3Helmholtz Zentrum Munchen, 4Fac. Agri., Univ. Miyazaki)

PF-210 Genome-wide association study identifies candidate SNPs that contribute to the growth and exudation of rice root
Yunsu Wang, Zhihang Feng, Ting Yang, Mengyao Wang, Qing Wang, Biao Bian, Shota Teramoto, Yufang Lu, Takehiro Kamiya, Weiming Shi, Toru Fujiwara (Grad. Sch. Agri., Univ. Tokyo, 2State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences, Nanjing, China, 3Beijing Key Laboratory of Growth and Developmental Regulation for Protected Vegetable Crops, College of Horticulture, China Agricultural University, Beijing, China)

PF-211 [Cancelled]

PF-212 [Cancelled]

PF-213 Chromosome-level genome assembly of liverwort Marchantia polymorpha and updates of the genome database MarpolBase
Yasuhiro Tanizawa, Masaru Yagura, Mika Sakamoto, Takako Mochizuki, Sean A. Montgomery, Ben Galik, Shohei Yamaoka, Ryuichi Nishimura, Katsumi T. Yamato, Takayuki Kohchi, Frederic Berger, Chang Liu, Yasukazu Nakamura (Genome Informatics Lab., NIG, 2GMI, 3Grad. Sch. of Biostudies, Kyoto Univ., 4B.O.S.T., Univ. Kindai, 4ZMBP, Univ. Tubingen)

PF-214 Robust analysis using GC/MS for crude samples which cause reduce the sensitivity
Aya Anegawa, Hitokaze Hanzawa, Sadao Nakamura (Agilent Technologies Japan, Ltd)
Reproductive growth

PF-215  Effects of mechanical forces on floral development in *Arabidopsis thaliana*

Akitoshi Iwamoto¹, Yuna Yoshioka², Ryuta Karube¹, Yohei Tanoue³ (¹Dept. Biol. Sci., Fac. Sci., Kanagawa Univ., ²Dept. Biol., Tokyo Gakugei Univ.)
**Photosynthesis**

**PL-001** Time-resolved spectroscopy of energy and electron transfer processes in the reaction center from *Heliothecium modesticaldum*  
Risa Kojima\(^1\), Hayata Yamamoto\(^2\), Chihiro Azai\(^1\), Daisuke Kosumi\(^3\), Hirozo Ohoka\(^4\)  

**PL-002** Chloroplasts inside leaves and differentiated cyanobacterial cells analyzed by Raman scattering spectral microscopy with a fast line-scanning parallel acquisition in the near infrared region  
Kouto Tamamizu\(^1\), Mitsunori Katayama\(^2\), Masahide Terazima\(^1\), Takashi Shina\(^3\), Shigeichi Kumazaki\(^1\)  
\(^1\)(Grad. Sch. Sci., Kyoto Univ., \(^2\)Coll. Ind. Tech., Nihon Univ., \(^3\)Grad. Sch. Life and Environ., Kyoto Pref. Univ.)

**PL-003** Spatial Heterogeneity in the Mode of State Transition within Single *Chlamydomonas reinhardtii* Cells Observed by High Resolution Cryogenic Optical Microscope  
Yuki Fujita, Xianjun Zhang, Yutaka Shibata (Organic Physical Chemistry Lab., Tohoku Univ.)

**PL-004** Response to far-red light in the primary process of photosynthesis using red-shifted chlorophyll a  
Hiroto Matsuzaka\(^1\), Yoshifumi Ueno\(^2\), Jian-Ren Shen\(^3\), Ryo Nagao\(^3\), Ryo Wang\(^3\), Hideaki Miyashita\(^4\), Seiji Akimoto\(^1,2\)  

**PL-005** Kinetic analysis of the NADP\(^+\) reduction reaction catalyzed by the ferredoxin-NAD(P)\(^+\) reductase in the presence of ferredoxin  
Daisuke Seo\(^1\), Masaharu Kitashima\(^2\), Kazuhiro Inoue\(^2\)  

**PL-006** The regulation of the pmf by the NDH complex and KEA3  
Leonardo Bass0\(^1\), Wataru Yamori\(^2\), Toshiharu Shikanai\(^2\)  
\(^1\)(Grad. Sch. Sci., Univ. Kyoto, \(^2\)Grad. Sch. Sci., Univ. Tokyo)

**PL-007** Activity of novel membrane proteins involved in maintenance of chloroplast H\(^+\) homeostasis  
Akira Hashimoto\(^1\), Yoichi Nakahira\(^2\), Masaru Tsuji\(^3\), Nobuyuki Uozumi\(^4\), Shinni Masuda\(^4\)  
\(^1\)(School of Life Sciences and Technology, Tokyo Institute of Technology, \(^2\)College of Agriculture, Ibaraki University, \(^3\)Department of Biomolecular Engineering, Graduate School of Engineering, Tohoku University, \(^4\)Center for Biological Resources & Informatics, Tokyo Institute of Technology)

**PL-008** Characterization of novel factors controlling light-dependent proton homeostasis in cyanobacteria  
Haruya Inago\(^1\), Shinni Masuda\(^2\)  
\(^1\)(Department of Life Sciences and Technology, Tokyo Institute of Technology, \(^2\)Center for Biological Resources and Informatics, Tokyo Institute of Technology)

**PL-009** Characterization of cyanobacterial variants lacking photosynthetic growth ability isolated by long-term adaptation to chemoheterotrophic conditions in the dark  
Shintaro Hida\(^1\), Haruki Yamamoto\(^1\), Kazuma Uesaka\(^2\), Kunio Ibara\(^3\), Shinichi Takaichi\(^2\), Yuichi Fujita\(^1\)  
\(^1\)(Grad. Sch. Bioagricultural Sci., Nagoya Univ., \(^2\)Center for Gene Research., Nagoya Univ., \(^3\)Fac. Life Sci., Tokyo Univ. Agric.)

**PL-010** Reveal Of Selective Use Of Photosynthetic Electron Transport Pathway In *Synechocystis* sp. PCC 6803 Under Different Spectral Light Conditions By FBA Simulation  
Masakazu Toyoshima\(^1\), Chiaki Yamamoto\(^1\), Yoshifumi Ueno\(^2\), Yoshihiro Toy\(^3\), Seiji Akimoto\(^2\), Hiroshi Shimizu\(^4\)  
\(^1\)(Department of Bioinformatic Engineering, Graduate School of Information Science and Technology, Osaka University, \(^2\)Department of Chemistry, Graduate School of Science, Kobe University)

**PL-011** Diverse physiological roles of the two routes of cyclic electron flow around photosystem I in *C. Flaveria bidentis*  
Takako Ogawa, Kana Kobayashi, Yuri Munekage (Grad. Sch. Sci. & Tec., Univ. Kwansei Gakuin)

**PL-012** Elucidation of photobleaching suppression mechanism by LHCSR-NPQ in the green alga *Chlamydomonas reinhardtii*  
Koishi Okajima\(^1,2\), Shinichi Takahashi\(^1,2\), Jun Minagawa\(^2\)  
\(^1\)(Department of Basic Biology, School of Life Science, Graduate University for Advanced Science, \(^2\)Division of Environmental Photobiology, National Institute for Basic Biology)

**PL-013** Reconstitution of assembly process of dark-operative protochlorophyllide oxidoreductase with BchN and BchB individually expressed in *Escherichia coli*  
Yoshiki Morimoto, Masanori Yamamoto, Hisanori Yamakawa, Haruki Yamamoto, Yuichi Fujita (Grad. Sch. Bioagricultural Sci., Nagoya Univ.)

**PL-014** The chloroplast enzymes involved in chlorophyll degradation are localized in the grana margins in *Arabidopsis thaliana*  
Kouki Fukura, Ryouichi Tanaka, Hisashi Ito (Inst Low Temp Sci, Hokkaido Univ)
Subcellular immunogold localization of chlorophyllase in the leaves of *Pachira macrocarpa*  
**Tin-Han Shih**, Jun-Wei Lin, Szu-Hsien Lin, Chi-Ming Yang (Biodiversity Research Center Academia Sinica)

Identification of the chemical compounds that inhibit photosynthesis in dicotyledonous plants, Arabidopsis and tobacco  
**Fuuniyoshi Myouga**, Kazuo Shinozaki (RIKEN CSRS)

Phylogenetic analysis of mitochondrial pyruvate carrier homologues in *Panicum miliaceum*  
**Kazushi Nomizo**¹, Sasumu Mitsuya²,³, **Shin Koro-eda**³ (¹Dept. Biochem. Mol. Biol., Saitama Univ., ²Grad. Sch. Agric. Life Sci., Univ. Tokyo, ³Grad. Sch. Sci. and Eng., Saitama Univ.)

Construction of some mutant strains selectively expressing alternative nitrogenase in *Anabaena* sp. PCC 7120 and the availability for photobiological H₂ production  
**Takeshi Sato**¹,², Honami Mizutani², Riho Yanai¹, Minh Chau Tran¹, Chika Shibata¹, Hidehiro Sakurai³, Kazuhiro Inoue¹,²,³ (¹Dept. Biol. Sci., Kanagawa Univ., ²Dept. Biol. Sci., Grad. Sch. Sci., Kanagawa Univ., ³Res. Inst. Integr. Sci., Kanagawa Univ.)

Genomic analysis and genome editing of the diatom *Chaetoceros gracilis*  
**Minoru Kumazawa**¹, Hiroyo Nishide¹, Ikuu Uchiyama¹, Natsuko Inoue-Kashino³, Yasuhiro Kashino³, Takeshi Nakano¹,²,³, Kentaro Ifuku¹,²,³ (¹Fac. Agri., Kyoto Univ., Kyoto, ²NIBB, Okazaki, Aichi., ³Grad. Sch. Life Sci., Univ. Hyogo, Hyogo., ⁴Grad. Sch. Biostudies., Kyoto Univ., Kyoto.)

### Environmental responses of photosynthesis

Biphasic state transitions for regulating Liner and Cyclic electron flows  
**Kenji Takizawa**¹,²,³, Ryutaro Tokutsu¹,²,³, Jun Minagawa¹,² (¹NIBB, ²ABC, ³SOKENDAI)

Responses of energy-transfer processes in two diatom species to fluctuating lights with different cycles  
**Miyuki Tanabe**¹, Yoshifumi Ueno¹, Makio Yokono², Ryo Nagao³, Seiji Akimoto³ (¹Grad. Sch. Sci., Kobe Univ., ²Nippon Flour Mills Co., Ltd., ³RIIS, Okayama Univ.)

Spectral changes of *Acaryochloris marina* in response to different light qualities  
**Zhe Wang**¹, Yoshifumi Ueno¹, Reona Toyofuku², Tatsuya Tomo², Seiji Akimoto³ (¹Grad. Sch. Sci., Kobe Univ., ²Fac. Sci., Tokyo Univ. Sci.)

Evaluation of ATP and NADPH production rates in photosynthesis in *Synechocystis* sp. PCC 6803 based on¹C metabolic flux analysis  
**Chiaki Yamamoto**¹, Sayaka Kitamura¹, Masakazu Toyoshima¹, Yoshifumi Ueno¹, Yoshihiro Toya¹, Seiji Akimoto², Hiroshi Shimizu¹ (¹Grad. Sch. Inf., Univ. Osaka, ²Grad. Sch. Sci., Univ. Kobe)

Attempts to increase free fatty acid production by reducing the degree of lipid unsaturation in *Synechocystis* sp. PCC 6803  
**Sunny Keta**¹, Honoka Saruhashi¹, Yuuya Seko², Kazukata Ikeda², Tatsuo Omata³, Makiko Aichi³ (¹Biol. Chem., Chubu Univ., ²Kazusa DNA Res., ³Grad. Sch. Bioagri. Sci., Nagoya Univ.)

Phospho-proteomics analysis of Arabidopsis vitamin C deficient 3 mutant in response to light  
**Yasuhiro Tanaka**¹, Takanori Maruta¹, Takahisa Ogawa¹, Masaru Mori²,³ (¹Grad. Sch. Nat. Sci. Technol., Shimane Univ., ²Instit. Adv. Biosci., Keio Univ., ³SFC Grad. Sch. Media Govern., Keio Univ.)

Photosynthesis under low dissolved inorganic carbon condition in the amphibious plant *Hygrophila polysperma*  
**Genki Horiguchi**¹, Kaori Matsumoto², Naotsu Hirotsu¹,² (¹Grad. Sch. Life Sci., Univ. Toyo, ²Dept. Life Sci., Univ. Toyo)

Molecular basis of persulfide sensing involved in sulfide-mediated regulation of physiological activities  
**Takayuki Shimizu**¹, Shinji Masuda², Tatsuuro Masuda³ (¹Grad. Sch. Arts and Sci., Univ. Tokyo, ²Cent. Biol. Res. and Inform., Tokyo Inst. Technol.)

Changes in chloroplast function associated with photoautotrophic acquisition in cultured cells  
**Gen Takenaka**, **Satomi Takeda** (Dept. Biol, Grad. Sch. Sci., Osaka Prefecture Univ.)
## Primary metabolism

PL-030 Analysis of a lipid transfer protein involved in the plastid lipid metabolism in *Marchantia polymorpha*
Takashi Hiroshima, Hanuhiko Jimbo, Koichi Kobayashi, Hajime Wada (Graduate School of Arts and Sciences, University of Tokyo; Faculty of Arts and Sciences, Osaka Prefecture University)

PL-031 A heat-inducible lipase gene involves in glycerolipid remodeling in plant leaves
Yasuhiro Higashi, Yozo Okazaki, Kouji Takano, Kazuki Saito (CSRS, RIKEN, Grad. Sch. Bioresources, Mie Univ., Grad. Sch. Pharm. Sci., Chiba Univ.)

PL-032 Construction of LC-PUFA synthesis system in the marine microalga *Nannochloropsis*
Chinatsu Nagai, Takashi Nobusawa, Masako Iwai, Yuko Sasaki-Sekimoto, Masakazu Saito, Hajime Wada, Mie Shimojima, Hiroyuki Ohta (School of Life Science and Technology, Tokyo Institute of Technology, Graduate School of Integrated Sciences for Life, Hiroshima University, Graduate School of Arts and Sciences, The University of Tokyo)

PL-033 A search for the regulator controlling lipid remodeling under phosphorus starvation in *Nannochloropsis*
Yunato Kuroyanagi, Hiroki Murakami, Masako Iwai, Koichi Hori, Mie Shimojima, Hiroyuki Ohta (School of Life Science and Technology, Tokyo Institute of Technology, Graduate School of Integrated Sciences for Life, Hiroshima University)

PL-034 Engineering of Arabidopsis plants to increase oil content in leaves
Eiki Yoshida, Hiroyuki Ohta, Mie Shimojima (School of Life Science and Technology, Tokyo Institute of Technology)

PL-035 Red light-induced activation of nitrate acquisition in *Arabidopsis thaliana*
Yuma Onose, Yasuhiro Higashi (Biotech. Res. Center, Univ. Tokyo)

PL-036 Analysis of the degradation mechanism of NIN-LIKE PROTEIN (NLP) transcription factors responsible for nitrate responses in plants
Takuto Ariga, Yasuhiro Higashi, Mineko Konishi, Shuichi Yanagisawa (Biotech. Res. Center, Univ. Tokyo)

PL-037 Screening of dynamic NH₄⁺ responsive rice varieties by combing the developed hydroponic culture system and ccd camera based image analysis

PL-038 Search of sucrose responsible promoter in rice callus
Hirotoshi Teramura, Mariko Ohnuma, Ibuki Aihara, Hiroaki Shimada (Department of Biological Science and Technology, Tokyo University of Science)

## Secondary (specialized) metabolism

PL-039 Elucidation of Isoflavonoid Metabolism by Omics Analyses of Genome-edited Soybean Hairy Root

PL-040 Two β-Glucosidases, BGLU28 and BGLU30, are Responsible for Sulfur Deficiency-Induced Glucosinolate Catabolism in *Arabidopsis*

PL-041 Analysis of glucose metabolism control mechanism of FLO2 gene using *Arabidopsis thaliana* flo2 mutant

PL-042 Analysis of Changes in Secondary metabolism along with Plant Growth in *Catharanthus roseus* Leaves

PL-043 Expression of an Alkaloid Transporter ND1AT1 Increases the Alkaloid Production in *Stylopine*-producing Pichia Cells
Miya Uru, Yasuuki Yamada, Hideo Oki, Nana Sumida, Hiromichi Minami, Fumihiko Sato, Nobukazu Shitan (Kobe Pharma. Univ., Ishikawa Pref. Univ., Kyoto Univ., Osaka Pref. Univ.)

PL-044 Transcriptome analysis of autumn foliage in *Egeria densa*
Takuya Harahara, Emi Okamoto, Takashi Tsujimoto, Taira Miyahara, Masahiro Nishihara, Motoki Shimizu, Yoshihiro Ozczi (Tokyo University of Agriculture and Technology, Chiba University, Iwate Biotechnology Research Center)
PL-045 Functional identification of myxol biosynthesis genes in marine flavobacteria 
*Nonlabens spongiae*

Keisuke Nakazawa1, Kenjiro Sugiyama1, Masaharu Yamada1, Susumu Yoshizawa2, Shinichi Takaichi3 (1Kogakuin Univ., 2Grad. Sch. Front. Sci., Univ. Tokyo, 3Fac. Life Sci., Tokyo Univ. Agric.,)

PL-046 Comparison of different methods and datasets for genome-wide association study -a case study in sorghum

Xu Chen1, Kiyoshi Yamazaki1, Bin Bian1, Hideki Takanashi1, Masaru Fujimoto1, Nobuhiro Tsutsu1, Hiromi Kajiyama-Kanegae1, Motoyuki Ishimori1, Hiroyoshi Iwata1, Toru Fujitake1, Junichi Yoneda2, Taichi Koshiba2, Tsuyoshi Tokunaga2, Masaomi Yamamura1, Yuki Tobimatsu2, Toshihiko Umezawa3 (Graduate School of Agricultural and Life Sciences, The University of Tokyo, 1EARTHNOTE Co., Ltd., 2Research Institute for Sustainable Humanosphere, Kyoto University)

PL-047 [Cancelled]

■ Biomembrane/Ion and solute transport

PL-048 Role of the cornichon family in plant adaptation to nutrient stress

Chang-Yi Chiu1, Tzu-Yin Liu (Institute of Bioinformatics and Structural Biology, NTHU)

PL-049 Identification of a transporter for preferential distribution of phosphorus in Arabidopsis

Guangda Ding1,2, Gui Jie Lei1, Naoki Yamaji1, Kengo Yokosho1, Namiki Mitani-Ueno1, Sheng Huang1, Jian Feng Ma1 (1IPSR, Okayama Univ., 2Huazhong Agr. Univ.)

PL-050 Short-term Magnesium Deficiency Triggers Nutrient Retranslocation in 
*Arabidopsis thaliana*

Takashi Opura1, Natsuo I. Kobayashi1, Christian Hermans2, Yoshimi Ohmae1, Yasunori Ichihashi2, Arisa Shibata2, Ken Shirasa4, Naohiro Aoki1, Ryohei Sugita1, Takahiro Ogawa1, Hisashi Suzuki1, Ken Iwata6, Tomoko M. Nakanishi1,2, Keitaro Tanii1 (1GSALS, Univ. Tokyo, 2Interfaculty Sch. Bioengineers, ULB, 3BRC, RIKEN, 4CSRS, RIKEN, 5NIRS, QST, 6CYRIC, Tohoku Univ., 7Hoshi Univ.)

PL-051 Contribution of Root Hair to Sulfate Uptake in Arabidopsis

Akiho Maruyama-Nakashita1, Yuki Kimura1, Tsukasa Uchiwata1, Akiko Suyama1, Rumi Tominaga-Wada2, Takaji Wada2 (1Fac. Agr. Kyushu Univ., 2Grad. Sch. Biosphere Sci. Hiroshima Univ.)

PL-052 A search for flavin transporters in plants


PL-053 Characterization of photosynthesis-dependent activation of plasma membrane H+-ATPase in Arabidopsis leaves

Satoru Kinoshita1, Masaki Okumura1,2, Toshinori Kinoshita1,2, Akiko Maruyama-Nakashita1 (1Grad. Sch. of Science, Nagoya Univ., 2Dep. of Plant and Microbial Biol., Univ. of Minnesota, 3WPI-ITbM, Nagoya Univ.)

■ Organelles/Cytoskeleton

PL-054 Mitochondrial genome editing by mitoTALEN: Gene disruption of ATP6 genes and inheritance of the mutated genome in 
*Arabidopsis thaliana*

Yu Tsuruta, Hajime Sugaya, Shungo Yanase, Yuta Watari, Yoshiko Tamura, Nobuhiro Tsutsu, Shin-ichi Arimura (Grad. Sch. Agri., Univ. Tokyo)

PL-055 Roles of Myosin XI-I in Mitochondrial Movement in 
*Arabidopsis thaliana*

Yingqi Wang1, Atsuki Onishi1, Md. Sayeedul Islam2, Yuki Kimura1, Hisashi Suzuki1, Ryohei Sugita1, Takahiro Ogawa1, Hisashi Suzuki1 (1Grad. Sch. Sci., Osaka Univ., 2Fac. Educ. Integrated Arts. Sci., Waseda Univ.)

PL-056 Roles of Arabidopsis DUF538 family proteins in the endoplasmic reticulum stress response

Kazue Kakehara, Chaoyuan Yu (Institute of Plant and Microbial Biology, Academia Sinica)

PL-057 Decreased Expression Of ATG8-interacting Proteins (ATI1 and ATI2) Does Not Influence Chloroplast-targeted Autophagy (Chlorophagy) In Arabidopsis


PL-058 The role of autophagy in phosphate homeostasis in Arabidopsis

Tzu-Yin Liu, Li-Yen Lin, Wen-Chun Chou (Institute of Bioinformatics and Structural Biology, National Tsing Hua University)

Abstract Book
Annual Meeting of JSPP
Mar. 2020 Osaka
2.4-Dichlorophenoxyacetic acid-induced depolymerization of actin is regulated by ROP-INTERACTIVE CRIB MOTIF-CONTAINING proteins 

Kenji Sugita\(^1\), Maho Takahashi\(^1\), Kana Umetsu\(^1\), Abidur Rahman\(^2,3\)\(^,\) Grad. Sch. Sci., Univ. Iwate, 2UGAS, Univ. Iwate, 3AIC, Univ. Iwate

Proteome analysis of protoplasts at mitotic metaphase

Yuuka Yamazaki\(^1\), Takumi Nishiuchi\(^2\), Ichirou Karahara\(^3\), Daisuke Tamaoki\(^1\)\(^,\) Dept. Biol., Sch. Sci., Univ. Toyama, ASRC, Kanazawa Univ., 3Fac. Sci., Acad. Assemb., Univ. Toyama

Live imaging of rhizoid growth and functional analysis of armadillo-repeat kinesin in Marchantia polymorpha

Asaka Kanda, Taku Takahashi, Hiroyasu Motose (Dept. Biol., Fac. Sci., Okayama Univ.)

The relationship between BFP family and SLPK1 in morphogenesis of leaf epidermal cells

Takehide Kato, Sho-ichiro Mitsui, Takashi Hashimoto (Div. of Biol. Sci., Grad. Sch. of Sci. and Tech., NAIST)

Role of histone methyltransferases ARABIDOPSIS TRITHORAX-RELATED 5/6 in cell cycle regulation


Assessment of degradation activity of FtsZ by ClpXP in Synechocystis sp. PCC6803

Hidetaka Kohga\(^1\), Yoshikazu Saito\(^1\), Junji Uchiyama\(^1,2\), Hisataka Ohta\(^1,2\)\(^,\) Graduate School of Science, Tokyo university of Science, 2Faculty of Science, Tokyo university of Science

Mechanisms of ANAC044/085-mediated G2 arrest response to DNA damage

Natsumi Mori, Naoki Takahashi, Masaaki Umeda (Grad. Sch. Tech., NAIST)

Quantitative analysis of root growth and chromosome polytenization in eupolyploids of Arabidopsis thaliana


Division mechanism of chloroplast with Quadruple envelope in marine diatom

Daisuke Wakino\(^1\), Kohei Yoneda\(^1\), Atsuko Tanaka\(^2\), Yusuke Matsuda\(^1\)\(^,\) Kwansei-Gakuin University Department of Bioscience, 2Ryukyu University

Roles of ALE2 homologues in epidermal development in Arabidopsis

Aiko Harada\(^1\), Hirotaka Kouno\(^2\), Tatsuo Kakimoto\(^2\), Hirokazu Tanaka\(^1\)\(^,\) Sch. Agr, Meiji Univ., 2Grad. Sch. Sci., Osaka Univ.

The Deterministic Role Of Plant Cell-surface Ceramides In Epidermis Differentiation


The role of DTL genes in epidermal cell differentiation in Arabidopsis thaliana shoots


Molecular genetic analyses of the rice endosperm mutants

Hirokazu Katoh\(^1\), Yuko Kobayashi\(^2\), Issei Kobayashi\(^2\), Hitomi Kitano\(^3\), Shin Takeda\(^1\), Tsukahoko Hattori\(^2\)\(^,\) Grad. Sch. Bioagric., Univ. Nagoya, 2ASRPC Univ. Mie

Genetic Factors Regulating the Number of Endosperm Cell in Rice

Nao Moriyama\(^1\), Nodoka Honma\(^2\), Tomoki Fukui\(^2\), Naoki Hirotsu\(^1,2\)\(^,\) Grad. Sch. Sci. Univ. Toyo, 2Fac. Sci, Univ. Toyo

Effect of phosphorus fertilization on phytic acid content in rice grain

Ayaka Fukushima\(^1\), Ishara Perera\(^2\), Koki Hosoya\(^2\), Tatsuki Akabane\(^3\), Naoki Hirotsu\(^1,3\)\(^,\) Grad. Sch. Life Sci., Toyo Univ., 2Grain Legumes and Oil Crops Research and Development Centre, 3Fac. Life Sci., Toyo Univ.

A putative AGAMOUS ortholog is a candidate for the gene determining ease of pericarp removal in Tartary buckwheat

Yuka Fukui\(^1\), Hana Shimoyama\(^2\), Toshikazu Morishita\(^2\), Daisuke Tsugama\(^1\), Kaen Fujino\(^3\)\(^,\) Graduate School of Agriculture, Hokkaido Univ., 2ASAFAS., Kyoto Univ., 3Institute of Crop Science, NARO, 4ANESC., Tokyo Univ., 5Research Faculty of Agriculture, Hokkaido Univ.)
Cotyledon morphogenesis in European Gesneriaceae

Distinct temperature signaling pathways are involved in thermoinhibition of Arabidopsis seeds in the light and in the dark
Eriina Takayama, Asuka Watanabe, Yuki Nakazawa, Shigeo Toh, Naoto Kawakami (Grad. Sch. Agric., Univ. Meiji)

Function of MAPK cascade in the regulation of gibberellin action during Arabidopsis seed germination

Sdr4-like (SFL) genes positively regulate seed germination and seeding development in Arabidopsis
LiPeng Zheng1, Masahiko Otani1, Kazuhiro Sugimoto2, Naoto Kawakami1 (1Grad. Sch. Agric., Univ. Meiji, 2Inst. Crop Science, NARO)

Effect of ribosomal protein-expression level on ribosome stress response
Kei Kondo1, Seidai Takamatsu2, Hitoshi Onouchi1, Satoshi Naito1,2, Yui Yamashita1 (1Grad. Sch. Agr., Hokkaido Univ., 2Grad. Sch. Life Sci., Hokkaido Univ.)

Senescence and cell death in meta-caspase gene knock-down plants
Rika Shimamoto, Miku Chiba, Hiroshi Hayashi (Fac. Biosci. Biotec., Fukui Pref. Univ.)

Creation of rsx1 null mutants by genome editing
Chaomurilege Bai1, Fumiya Iwazaki1, Fenglin Deng2, Youngsook Lee2, Yuki Fujiki1, Ikuo Nishida1 (1Grad. Science and enginnering, Univ. Saitama, 2Tec. Sci. Univ. Pohang)

Search for factors which are important for cell-to-cell communication or cell polarity regulation by chemical screening in the moss Physcomitrella patens

Characterization of the RAPID ALKALIZATION FACTOR (RALF) in the moss Physcomitrella patens
Eggie Febrianto Ginanjar1, Ooi-Kock Teh3, Tomomichi Fujita2 (1Grad. Sch. of Life Sci. Hokkaido Univ, 2Fac. of Sci. Hokkaido Univ)

NIN-like protein homologs are involved in the longevity of diploid meristem in Physcomitrella patens
Emiko Yoro, Keiko Sakakibara (Dep. of Life Science, Rikkyo Univ.)

Analysis of a rice tiller elongation defective1 mutant that shows a defect in axillary shoot elongation
Manami Namiki1, Hiro-Yuki Hirano1, Wakana Tanaka1,2 (1Grad. Sch. Sci., Univ. Tokyo, 2Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

Reproductive growth

Oryza sativa orthologue of ELONGATION OF SILIQUES WITHOUT POLLINATION 3 plays a role in regulation of ovary enlargement through the accumulation of starch in rice
Saku Kijima1, Shingo Sakamoto1, Miho Ikeda2, Hironori Takasaki2, Masaru Takagi2, Nobutaka Mitsuda1, Yoshimi Ohshima1 (1Bioprod. Res. Inst., AIST, 2Grad. Sch. of Sci. and Eng., Saitama Univ.)

Development of pollen tube attraction assay system in tomato
Kana Hisabayashi1,2, Masahiro Kanaoka1,2 (1Grad Sch Science, Nagoya Univ., 2ITbM, Nagoya Univ.)

Analysis of growth dynamics of sexual organs in Marchantia polymorpha
Hirovasu Motose, Taku Takahashi (Dep. Biol., Fac. Sci., Okayama Univ.)
Plant hormones/Signaling molecules

PL-092 Screening of small molecules for activating SNK2
Shoko Matsuoka1, Karin Sato1, Ryio Imamura2, Yoshiteru Noutoshi3, Takayoshi Okabe2, Taishi Umezawa1 (1Grad. Sch. BASE, Tokyo Univ. Agric. Tech., 2DDI, Univ. Tokyo, 3Grad. sch. Env. Life. Sci., Okayama Univ.)

PL-093 Strigolactone Biosynthetic Pathway Catalyzed by Sulfotransferase LGS1
Akiyoshi Yoda1, Narumi Mori2, Xiaowan Xie3, Kaori Yoneyama4, Kenji Miura5, Kohki Akiyama2, Koichi Yoneyama3, Takahito Nomura1,2 (1United Grad. Sch. of Agri. Sci., Tokyo Univ. of Agri. and Tech., 2Grad. Sch. of Life & Environ. Sci., Osaka Pref. Univ., 3Ctr. for Biosci. Res. & Educ., Utsunomiya Univ., 4Fac. of Agri., Ehime Univ., 5Fac. of Life and Environ. Sci./T-PIRC, Univ. of Tsukuba)

PL-094 Expression patterns of KAI2-Ligand signaling genes in Marchantia polymorpha
Kyochi Kodama1, Aino Komatsu2, Shota Shimazaki2, Youhei Mizuno2, Satoshi Naramoto2, Junko Kyozuka2 (1Fac. Sci., Tohoku Univ., 2Grad. Sch., Life Sci., Tohoku Univ.)

PL-095 Establishment of highly sensitive bioassay system to detect karrikin-like compounds
Hiromu Kameoka2, Wenxiu Ye2, Fuminori Takahashi1,3,4, Allen Yi-Lun Tsai, Mitsunori Seo (CSRS, Riken CSRS Biomolecular Characterization Unit)

PL-096 Evaluation of abamine derivatives as strigolactone biosynthesis inhibitors
Kyoji Uda1,2,3,4,5, Keiko Torii1,2,3,4,5, Naoyuki Uchida1,2,3,4,5, Kazuo Shinozaki1,2,3,4,5, Riken CSRS Gene Discovery Research Group, 5RIKEN CSRS Biomedical Characterization Unit

PL-097 Comprehensive analysis of small proteins and peptides in xylem sap
Satoru Okamoto3,4, 5RIKEN BRC, 2DDI, Univ. Tokyo, 1NIBB, 3RIKEN CSRS Biomolecular Characterization Unit

PL-098 Identification and Functional Characterization of Peptide Hormones Secreted from the Seed Coat to the Spermosphere
Shoko Matsuoka1,2,3,4,5, Keiko Torii1,2,3,4,5, Naoyuki Uchida1,2,3,4,5, Riken CSRS Gene Discovery Research Group, 5RIKEN CSRS Biomedical Characterization Unit

PL-100 Novel Receptor Kinase Family Acting For Senescence Regulation
Koji Uda1,2, Keiko Torii1,3, Naoyuki Uchida1,2,3,4, ITbM Nagoya Univ., 2Grad. Sch. Sci. Nagoya Univ., 3UT Austin (HHMI)

PL-101 A Small Molecule That Induces Cell Mass Formation With A Shoot Regeneration Competency
Yuki Nakashima1,2, Keiko Torii1,3, Naoyuki Uchida1,2,3,4, ITbM Nagoya Univ., 2Dept. Sci., Nagoya Univ., 3UT Austin, HHMI

PL-102 A Small-Compound-Based Approach To Dissect Mechanisms Coordinating Hypocotyl Growth
Mizuki Murao1,2, Rika Kato1,2,3, Hitoshi Endo1, Rina Hisamatsu1, Keiko Kuwata1, Ayato Sato1, Shinya Hagihara1, Kenichiro Itami1,2, Keiko Torii1,2,3, Naoyuki Uchida1,4, Nagoya Univ. ITbM, 2Nagoya Univ. Grad. Sci., 3Riken CSRS, 4UT Austin, HHMI

PL-103 Screening for novel growth-accelerating substances derived from plants
Tomokazu Tsutsui1, Tomoaki Kato1, Takumi Nishiuchi1,2,3, Flora Co., Ltd.

PL-104 Cytosolic Ca2+ signal in guard cells is not essential for inhibition by allyl isothiocyanate of light-induced stomatal opening
Wenxiu Ye1,2,3, Eigo Ando1,4, Eiji Okuma1, Yoshimasa Nakamura2, Toshinori Kinoshita3,4, Yoshiyuki Murata2 (1School of Agriculture and Biology, Shanghai Jiao Tong University, 2Graduate School of Environmental and Life Science, Okayama University, 3Institute of Transformative Bio-Molecule, Nagoya University, 4Graduate School of Science, Nagoya University)

PL-105 A simple method to establish an efficient medium suitable for potato regeneration
Mariko Ohnuma1, Hiroshi Teramura1, Hiroaki Shimada1 (Dept. of Biol. Sci. & Tech., Tokyo University of Science)

PL-106 Construction of in vitro grafting system of Nicotiana benthamiana
Yaeichi Kawakatsu1,2, Katsuhiro Shiratake1, Michitaka Notaguchi1 (Biosci. & Biotech. Center, Nagoya Univ., 2Grad. Sch. Bioagri. Sci., Nagoya Univ.)

PL-107 Characterization of growth and environmental adaptation of Mongolian plants Chlors virgata and Arabidopsis mongolica
Bolortuya Byambajav1,2, Ayumi Yamagami1, Davaapurev Bekh-Ochir2, Udval Gombosuren1, Jigjidsuren Sodnomdarjaa3, Battogtokh Tugsjargal1, Batkhuyjav Javan2, Tadao Asami1, Takeshi Nakano1,2 (1Grad. Biostudies. Kyoto Univ, 2National Univ. of Mongolia, 3Res. Ins. of Ani. Husb, 4Dept. Appl. Biol. Chem., Univ of Tokyo)
**Flowering/Clock**

PL-108 Search for proteins involved in the degradation of KaiC and the effect on rhythm by turnover

Keiko Imai\(^1\), Yohko Kitayama\(^2\), Masayuki Fujiwara\(^3\), Kenyo Kaneko\(^4\), Hiroshi Ito\(^5\), Takao Kondo\(^6\) (\(^1\)Cell Biology, Kansai Med. Univ., \(^2\)Div. Biol. Sci., Grad. Sch. Sci., Nagoya Univ., \(^3\)Institute for Advanced Biosciences, Keio Univ., \(^4\)Labotary for Biological Rhythms, Kyushu University)

PL-109 Deletions of sufR and ntrC recover growths of circadian clock mutants

Naohiro Kawamoto, Shunya Ezo, Kyoko Baba, Hideo Iwasaki (Department of Electrical Engineering and Bioscience, Waseda university)

PL-110 Ubiquitin Carboxyl-terminal Hydrotases Are Required For Period Maintenance Of The Circadian Clock At High Temperature In Arabidopsis

Ryosuke Hayama\(^1,2\), Peizhen Yang\(^1\), Federico Valverde\(^2\), Tsuyoshi Mizoguchi\(^1,2\), Ikuyo Furutani-Hayama\(^1\), Richard Vierstra\(^3\), George Coupland\(^2\) (\(^1\)ICU, \(^2\)Max Planck Institute for Plant Breeding Research, \(^3\)University of Wisconsin-Madison)

PL-111 Monitoring uncoupled circadian rhythms in individual cells of duckweed by co-transfection of luciferase reporters with different colors

Emiri Watanabe, Shogo Ito, Tokitaka Oyama (Grad. Sch. Sci., Kyoto Univ.)

PL-112 Circadian regulation influences the water use efficiency of Arabidopsis

Noriane Simon\(^2\), Calum Graham\(^1\), Nicholas Comben\(^2\), Alistair Hetherington\(^2\), Anthony Dodd\(^1\) (\(^1\)John Innes Centre, UK, \(^2\)University of Bristol, UK)

PL-113 Analysis of the stability of cellular circadian rhythms of Arabidopsis isolated cells

Shunji Nakamura, Shogo Ito, Tokitaka Oyama (Grad. Sci., Univ. Kyoto)

PL-114 Regulation of seasonal sensing mechanism by circadian clocks

Atsuhiko Hironaka\(^1\), Yuta Yamatsuta\(^2\), Takashi Araki\(^1\), Motomu Endo\(^1\) (\(^1\)Grad. Biostudies, Kyoto University, \(^2\)Grad. Biological Sciences, Nara Institute of Science and Technology)

PL-115 Molecular Mechanism For Day-length Perception In The Basal Land Plant Marchantia polymorpha

Keisuke Inoue, Yuki Kanesaka, Shohei Yamaoka, Ryuichi Nishihama, Takayuki Kohchi, Takashi Araki (Grad. Sch. Biostudies, Univ. Kyoto)

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**Environmental responses A**

PL-116 Effects of Glutathione Feeding on the Contents of Amino Acids and Potassium in Crown Daisy

Kenji Henmi, Ken’ichi Ogawa (RIBS Okayama)

PL-117 ROS quantification in Arabidopsis root grown on Zn deficient condition

Haruna Hirokawa\(^1\), Sachie Kimura\(^2\), Shigeo S. Sugano\(^2,3\), Sayuri Nakayama\(^1\), Wrazek Michael\(^4\), Yoichiro Fukao\(^1\) (\(^1\)Grad. Sch. Life Sci., Ritsumeikan U., \(^2\)R-GIRO, Ritsumeikan U., \(^3\)Bioproduction I., AIST, \(^4\)Organismal and Evolutionary Biology Research Programme, Univ. Helsinki)

PL-118 Identification and characterization of interactors of AtNUDX6 and 7 involved in stress responses

Masashi Notsu\(^1\), Tomohiro Nonaka\(^2\), Momoko Ueki\(^2\), Takahito Maruta\(^1,2\), Kazuya Yoshimura\(^1\), Shigeru Shigeoka\(^1\), Takahisa Ogawa\(^1,2\) (\(^1\)Grad. Sch. Nat. Sci. Technol., Shimane Univ., \(^2\)Dept. Life Sci. Biotechnol., Fac. Life Environ. Sci., Shimane Univ., \(^3\)Dept. Food Nutr. Sci., Coll. Biosci. Biotech., Chubu Univ., \(^4\)Exp. Farm, Kindai Univ.)

PL-119 Transcriptional regulation of chloroplast genes depending on diverse photosynthetic environments

Hikaru Ohara\(^1\), Akira Yasuda\(^1\), Mitsumasa Hanaoka\(^1,2\) (\(^1\)Grad. Sch. Horticul., Chiba Univ., \(^2\)Plant Mol. Sch. Cent., Chiba Univ.)

PL-120 Screening of a mutant with altered light/dark response of the expression of VTC2 gene encoding a rate-limiting enzyme for ascorbate biosynthesis


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**Environmental responses B**

PL-121 Towards a multi-approach study focused on Improving Resource Use Efficiency in Cereals under climate change (IRUEC)

Toshihiro Nagamori\(^1\), Marouane Baslam\(^1,2\), Takeshi Takamatsu\(^1,2\), Kentaro Kaneko\(^2\), Eckart Priesack\(^1\), Bertrand Gakière\(^1\), Maria Dolores Serret\(^2\), Jose Luis Araus\(^1\), Iker Aranjuelo\(^4\), Toshiaki Mitsui\(^1,2\) (\(^1\)Dept. Applied Biol. Chem., Niigata Univ., \(^2\)Grad. Sch. Sci. & Tech., Niigata Univ., \(^3\)Helmholtz Center-Munich, Munich, Germany, \(^4\)Institute of Plant Sciences Paris-Saclay (IPS2), CNRS)
Physiological analysis of hydroxyoesteroid dehydrogenase 1 in Arabidopsis

Rina Ibayah

Yoshi Nishihata

Kousuke Shimazaki

Yukiko Kurosawa

Hiroyuki Ohta

Mie Shimojima

School of Life Science and Technology, Tokyo Institute of Technology, Tokyo

Organization for the Strategic Coordination of Research and Intellectual Properties, Meiji university

Improvement of growth and yield in stress tolerant plants by gene stacking

Toshiki Kato

Satoshi Kidokoro

Madoka Kudo

Kazuo Shinozaki

Kazuko Yamaguchi-Shinozaki

Grad. Sch. Agr. Life Sci., Univ. Tokyo

Center for Sustainable Resource Science, RIKEN

Analysis of transcription factors that down-regulate expression of the PIF4 gene in response to abiotic stress Arabidopsis

Hidetoshi Hisamune

Satoshi Kidokoro

Jin-Seok Moon

Miki Osugi

Kazuo Shinozaki

Kazuko Yamaguchi-Shinozaki

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Functional analysis of Arabidopsis MAPKKKs under drought stress conditions

Haruka Kameoka

Fumiyuki Soma

Azusa Fukui

Kazuo Shinozaki

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Functional Analysis of Group C Raf-like Protein Kinases in Arabidopsis ABA Signaling

Yoshikiko Kamivama

Misaki Hirotani

Shinosuuke Ishikawa

Fuku Minegishi

Conner Rogan

Sotaro Katagiri

Fuminori Takahashi

Mika Nomoto

Kazuya Ishikawa

Yutaka Kodama

Yasuomi Tada

Yoichi Sakata

Daisuke Takezawa

Jeffrey Anderson

Scott Peck

Kazuo Shinozaki

Taishi Umezawa


Metabolic diversities of rice under salt stress responses

Ayanfu Toba

Takeyuki Tohge

Takefumi Shimizu


Effect of NaCl on activities of cell wall degrading enzymes in Amaranthaceae plants with different salinity tolerance

Keiichi Ishikuma

Shoko Yoshimura

Mizuho Ishii

Mariko Oka


Cyanobacterial lipid remodeling and its molecular mechanism under phosphorus-starved conditions

Tatsunori Hiyoshi

Norihiro Sato

Tokyo University of Pharmacy and Life Sciences

Differences in components of biofilm and importance of protein under various environmental stresses of Synechocystis sp. PCC6803

Kouichi Takahashi

Haruna Ishikawa

Ayako Itagaki

Yukiko Sakai

Junji Uchiyama

Hiyuki Ohta


The role of hexosamine pathway in environmental stress tolerance in Arabidopsis thaliana

Yousuke Matoba

Kaeda Adachi

Yasuhiro Sato

1Department of Biology, Faculty of Science, Ehime University, 2Graduate School of Science and Engineering, Ehime University

The relationship between asymptomatic virus infection and abiotic stress tolerance in Arabidopsis halleri

Midori Tabara

Shimpei Uruguchi

Hideki Takahashi

Hideki Takahashi


Analysis Of The Relationship Between Reactive Oxygen Species And Callose In Low-Calcium Response In Arabidopsis

Yusuke Shikanai

Takehiro Kamiya

Toru Fujiwara

Grad. Sch. Agr., Univ. Tokyo

The Arabidopsis PrmC/MQT2/HemK homolog physically associates with an ER-localized Mg transporter and is required for the low-Mg adaptation

Zhihang Feng

Hirosi Nagao

Takehiro Kamiya

Toru Fujiwara

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Novel CDKA function in the regulation of potassium ion transporters in the moss Physcomitrella patens

Menaka Ariyarathne

Brody Frink

Ooi-Kock Teh

Tomomichi Fujita

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De novo transcriptome analysis revealed an imperturbable transcriptome under high Cd conditions in the hyper Cd-tolerant fern Athyrium yokoscense

Yuko Uka

Komaki Inoue

Manaka Kamata

Hiroshi Teramura

Shunsuke Yanagisawa

Kazuyoshi Kitazaki

Kazuhiro Shoji

Fumiyuki Goto

Keiichi Mochida

Toshihiro Yoshihara

Hiroaki Shimada

1Dept. Biol. Sci. Techno., Tokyo University

PL-137 Identification of the plasma membrane and tonoplast localized new cesium transporters
Keita Itō1, Arif Ashraf2, Keitaro Tanoi3, Abidur Rahman1,3,4 (1Grad. Sch. Sci., Univ. Iwate, 2Grad. Sch. Agri., Univ. Tokyo, 3UGAS., Univ. Iwate, 4AIC., Univ. Iwate)

PL-138 Natural Variation of a MATE family gene contributes to differential cadmium accumulation in rice
Hua Xiao1, Nobuhiro Takana1, Zhihang Feng1, Bian Bian1, Kiyoshi Yamazaki1, Mayuki Tanaka1, Qing Wang1,2, Takehiro Kamiya1, Toru Fujiwara1 (1Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo, 2Beijing Key Laboratory of Growth and Developmental Regulation for Protected Vegetable Crops, College of Horticulture, China Agricultural University)

Environmental responses

PL-139 Potential systemic mobile mRNAs involving in chilling stimulation
Wenqian Liu (Beijing Key Laboratory of Growth and Developmental Regulation for Protected Vegetable Crops)

PL-140 Identification of coactivators for cold inducible gene expression regulated by circadian clock
Izumi Konoura1, Satoshi Kidokoro1, Kentaro Hayashi1, Kazuo Shinozaki2, Kazuko Yamaguchi-Shinozaki1 (1Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2Center for Sustainable Resource Science, RIKEN)

PL-141 Diverse changes in cell wall structure and composition in response to cold and sub-zero acclimation
Daisuke Takahashi1, Arun Sampathkumar2, Kim L. Johnson3, Antony Bacie3, Ellen Zuther2, Dirk K. Hincha2 (1Graduate School of Science and Engineering, Saitama University, 2Max-Planck-Institute of Molecular Plant Physiology, 3La Trobe Institute for Food and Agriculture, La Trobe University)

PL-142 Analysis of plant adaptation to temperature using metabolome and transcriptome
Natsuki Hayami1, Miyako Kusano1,2, Kyonoshin Maruyama2, Mieko Higuchi-Takeuchi2, Kousuke Hanada1, Minami Matsui2, Yoshiharu Y. Yamamoto1,2 (1United Grad. Sch. Agric. Sci., Gifu Univ, 2CSRS, RIKEN, 3Grad. Sch. Life and Envi. Sci., Tsukuba Univ., 4JIRCAS, 5Frontier Research Academy for Young Researchers, Kyushu Inst. of Tech.)

PL-143 Functions and Long-distance Transport of MiRNAs to Root upon Dormancy Induction by Short-day in Poplar
Shinya Hirooka, Kumiyo Sage-Ono, Jyun Furukawa, Michiyuki Ono, Shinobu Satoh (Grad. Sch. Life and Envi. Sci., Univ. Tsukuba)

PL-144 Functional analysis of OsNLPs in rice
Bian Bian, Mengyao Wang, Hua Xiao, Zhihang Feng, Xu Chen, Kiyoshi Yamazaki, Kenji Yano, Takehiro Kamiya, Toru Fujiwara (The University of Tokyo, Graduate School of Agricultural and Life Sciences)

PL-145 Fructan metabolism and snow resistance in barley
Masaru Nakata, Masako Seki, Hideyuki Aoki, Takashi Nagamine (CARC, NARO)

PL-146 Identification of novel transcription factors involved in negative correlation between growth and defense by using Arabidopsis semi-dominant mutant uni-1D
KwiMi Chung1, Masaru Ohme-Takagi2, Nobutaka Mitsuda1 (1Bioprod. Res. Inst., AIST, 2Green-bio research center, Grad School Sci Tech, Saitama University)

PL-147 Characterization of Shr2006-2009 involved in pH homeostasis in Synechocystis sp. PCC6803
Yukino Sakai1, Kouichi Takahashi1, Masanori Sato1, Junji Uchiyama1,2, Hisatake Ohta1,2 (1Dept. of Math. and Sci. Edu., Grad. Sch. of Sci., Tokyo Univ of Sci, 2Dept of Biol., Fac. of Sci., Tokyo Univ. of Sci)

PL-148 Search for an environmental trigger to induce a barrier to radial oxygen loss in rice
Yuto Sawazaki, Xuan Nguyen, Katsuhiro Shiono (Res. Plant Eco. Dept. Biosci., Univ. Pref. Fukui)

PL-149 Two kinases regulated by MYB36 are essential for correct localization of lignin deposition in the Casparian strip domain
Qi Wu, Toru Fujiwara, Takehiro Kamiya (The Laboratory of Plant Nutrition and Fertilizers, Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo)

PL-150 Diel and seasonal transcriptome dynamics of Arabidopsis halleri in a natural environment
Tomoaki Muranaka, Mie N. Honjo, Hiroshi Kudoh (Center for Ecological Research, Kyoto University)
■ Plant-organism interaction A

PL-152 Cysteine-rich receptor-like kinase CRK2 and C-terminus phosphorylation of NADPH oxidase RBOHD regulates ROS production in Arabidopsis

Sachie Kimura1,2, Kerri Hunter2, Aleksia Vaattovaara2, Anne Hokka3, Sarah Christina Stolze4, Anne Harzen4, Yoichiro Fukao1, Masatsugu Toyota5, Hirofumi Nakagami6, Michael Wrzacek2 (1Ritsumeikan Global Innovation Research Organization, Ritsumei Univ., 2Organismal and Evolutionary Biology Research Programme, Univ. Helsinki, 3Turku Centre for Biotechnology, Univ. Turku and Åbo Akademi Univ., 4Protein Mass Spectrometry Group, Max-Planck Institute for Plant Breeding Research, 5Department of Biochemistry and Molecular Biology, Saitama Univ., 6Department of Botany, Univ. Wisconsin-Madison)

PL-153 Handmade leaf cutter for efficient and reliable ROS assay

Hanae Kaku1, Yoshitake Desaki1,2, Hikaru Shimada1, Shohei Takahashi1, Chisa Sakuyama1, Mika Kawai1, Naoto Shibuya1 (1Dept. Life Sciences, Sch. Agriculture, Meiji University, 2Dept. Biological Science and Technology, Fac. Industrial Science and Technology, Tokyo University of Science)

PL-154 HAK, receptor-like kinase (RLK), is involved in the defense responses to herbivore-secreted oligosaccharide elicitor in Arabidopsis

Yuka Sano1, Takuya Uemura1, Ayaka Ito1, Ryosuke Hoshino1, Yoshitake Desaki1, Akira Nozawa2, Akira Sawazaki2, Gen-ichiro Arimura1 (1Dept. Bio. Sci. Tech., Tokyo. Univ. Sci., 2PRIS., Univ. Ehime)

PL-155 AtPBL27, receptor-like cytoplasmic kinase, involved in herbivore danger signal response through AtHAK1 in Arabidopsis

Ayaka Ito1, Takuya Uemura1, Yuka Sano1, Ryosuke Hoshino1, Yoshitake Desaki1, Galis Ivan2, Mujirono Kadis2,4, Akira Nozawa2, Tatsuya Sawazaki1, Gen-ichiro Arimura1 (1Dept. Bio. Sci. Tech., Tokyo Univ. Sci., 2IPS.R., Univ. Oyama, 3PROS., Univ. Ehime, 4Fac. Agric. Mulawarman Univ. Indonesia)

PL-156 Characterization of Tetranychus urticae-derived elicitor (Tetratin) recognition system

Kaori Tanimura1, Ayano Yasuno1, Kento Takafuli1, Junya Iida1, Hiroshi Abe2, Yoshitake Desaki1, Gen-ichiro Arimura1 (1Dept. Bio. Sci. Tech., Tokyo Univ. Sci., 2BRC, RIKEN)

PL-157 Evaluation of menthol derivatives’ effects on induced defense responses of soybean


PL-158 Characterization of a novel Jasmonic acid-induced amino acid-like transporter in rice

Tilisa Tohi1, Yuko Hojo, Tonomori Shinya1, Ivan Galis (IPS.R, Okayama Univ)

PL-159 Plant response to flooding stress impairs rice defense systems against herbivores

Kadis Mujirono1,2, Yuko Hojo1, Tonomori Shinya1, Ivan Galis1 (1IPS.R, Okayama Univ., 2Fac. Agric., Mulawarman Univ., Indonesia)

PL-160 Investigation of mechanisms of host plant selection by rice brown planthopper (Nilaparvata lugens)

Nhan Thanh Ho1,2, Tonomori Shinya1, Ivan Galis1 (1IPS.R, Okayama Univ., 2Cuu Long Delta Rice Res Inst, Vietnam)

PL-161 ER-body-glucosinolate chemical defense suppresses feeding motivation of predators through olfactory and taste organs


■ Plant-organism interaction B

PL-151 Analysis of malate synthesis in guard cells during stomatal opening

Kohei Fukatsu1, Yuki Hayashi1, Keiko Kuwata2, Takamasa Suzuki3, Toshinori Kinoshita1,2 (1Grad. Sch. Sci., Nagoya Univ., 2ITbM, Nagoya Univ., 3Dep. Biol. Chem., Chubu Univ.)

PL-162 Promotion of arbuscular mycorrhizal symbiosis in plants treated with chitins


PL-163 Relationships between plant rhizosphere environment and microbiota

Shinichi Yamazaki1, Yuichi Aoki1, Hossein Mardani Korra1, Rumi Kaida2, Yoshinobu Fujii2, Masaru Kobayashi3, Akifumi Sugiyama4 (1ToMMo, Univ. of Tohoku, 2Grad. Sch. of Agri., TUAT, 3Grad. Sch. of Agri., Univ. of Kyoto, 4RISH, Univ. of Kyoto)
PL-164 Visualization of plant-plant communication through green leaf volatile
Yuri Aratani1, Masatsugu Toyota1, Kenji Matsui2 (1Department of Biochemistry and Molecular Biology Saitama University,
2Yamaguchi university)

PL-165 Reevaluation of allelopathic potential of goldenrod (Solidago altissima) naturalized in Japan
Atsushi Sakai, Yuiko Ushikoshi, Akiko Sasaki (Nara Women’s Univ.)

PL-166 Haustorium inducing activity for parasitic plants in plant exudates incubated with 2,6-dimethoxy-p-benzoquinone (DMBQ)
Natsumi Aoki, Syogo Wada, Songkui Cui, Satoko Yoshida (NAIST)

PL-167 Effects of nutrient conditions on haustorium formation in a parasitic plant Phtheirospermum japonicum
Xiang Zhang, Songkui Cui, Satoko Yoshida (Naist)

■ Transcriptional, post-transcriptional or translational, post-translational regulations

PL-168 Nascent peptide-mediated ribosome stalling in eukaryotes: What we see from pulse-chase experiments
Tomoya Inamichi1, Shugo Sugawara2, Seidai Takamatsu1, Hitoshi Onouchi2, Yui Yamashita2, Satoshi Naito1,2 (1Grad. Sch. Life Sci., Univ. Hokkaido, 2Grad. Sch. Agr., Univ. Hokkaido)

PL-169 Translation complex containing an upstream ORF-encoded nascent peptide senses cellular magnesium levels to regulate translation

PL-170 Ribosome profiling analysis upon blue light exposure from darkness in Arabidopsis
Yukio Kurihara1, Yuko Makita1, Haruka Shimohira1, Tomoya Fujita2, Shintaro Iwasaki2, Minami Matsui1 (1RIKEN CSRS, 2RIKEN CPR)

PL-171 Phenotypic features of Arabidopsis mutants related to tRNA wobbleU34* modification
Yumi Nakai (Biochemistry, Osaka Medical College)

PL-172 Analyses of aggregation-prone proteins for design of artificial membrane-less organelle in plants

PL-173 Does WSRK, a regulatory factor of wax ester fermentation in Euglena gracilis, control pyruvate:NADP+ oxidoreductase as a downstream target?

PL-174 Analysis of functions of close homologs of B’-family subunits of protein phosphatase 2A
Hyuk Sung Yoon1, Kaien Fujino2, Tetsuo Takano1, Daisuke Tsugama1 (1ANESC, Univ. Tokyo, 2Res. Fac. Agr., Hokkaido Univ.)